

08:00 - 08:20	Opening Remarks (Convention Hall A+B)	
08:20 - 08:50	Free Paper: Lumbar I	Moderator: Chul-Hyung Kang (Korea), Sang-Bum Kim (Korea)
08:20 - 08:25	Effect of Muscularity and Fatty Infiltration of Paraspinal Muscles on Outcome of Lumbar Interbody Fusion	Ki-Han You (Korea)
08:25 - 08:30	Minimally Invasive Transforaminal Lumbar Interbody Fusion- Clinical and Radiological Outcomes in 312 Patients and Review of Literature with Fusion Rates of Open TLIF, Oblique Lateral Interbody Fusion (OLIF), Lateral Lumbar Interbody Fusion (LLIF), Anterio	Rajendra Sakhrekar (India)
08:30 - 08:35	Ten-Year Outcomes of Minimally Invasive Versus Open Transforaminal Lumbar Interbody Fusion	Ji-Won Kwon (Korea)
08:35 - 08:40	Comparative Prospective Study Reporting Intraoperative Parameters, Pedicle Screw Perforation, and Radiation Exposure in Navigation-Guided Versus Non-navigated Fluoroscopy-Assisted Minimal Invasive Transforaminal Lumbar Interbody Fusion	Vishal Kumar Kundnani (India)
08:40 - 08:50	Discussion	
08:50 - 09:20	Free Paper: Lumbar II	Moderator: Hwan-Mo Lee (Korea), Hwa-Yeop Na (Korea)
08:50 - 08:55	Index Episode-of-Care Propensity-Matched Comparison of Transforaminal Lumbar Interbody Fusion (TLIF) Techniques: Open Traditional TLIF Versus Midline Lumbar Interbody Fusion (MIDLIF) Versus Robot-Assisted MIDLIF	Mikhail Lew Perez Ver (Philippines)
08:55 - 09:00	New Onset Sacroiliac Pain Following Transforaminal interbody fusion: what are the culprits?	Kuldeep Bansal Bansal (India)
09:00 - 09:05	Efficacy and Safety of Escherichia Coli-Derived Recombinant Human Bone Morphogenetic Protein-2 in Additional Posterolateral Lumbar Fusion: Minimum 1 Protein-2 in Additional Posterolateral Lumbar Fusion: Minimum 1	Chang-Nam Kang (Korea)
09:05 - 09:10	Sarcopenic Obesity Is Associated with an Acute Vertebral Osteoporotic Compression Fracture in Female	Young-Hun Lee (Korea)
09:10 - 09:20	Discussion	
09:20 - 09:50	Free Paper: Lumbar III	Moderator: Chang Hwa Hong (Korea), Yang Jae Hyuk (Korea)
09:20 - 09:25	Patient-Reported Outcome of Lower Extremity Improved After Posterior Decompression and Lumbar Interbody Fusion for Degenerative Lumbar Disease	Joong-Hyun Ahn (Korea)
09:25 - 09:30	The Comparative Radiographic Parameters and Perioperative Complications Between Using Single Versus Bilateral PEEK Cage for Posterior Lumbar Interbody Fusion in Degenerative Lumbar Disease	Nattawat Srichandraphan (Thailand)
09:30 - 09:35	Prospective Outcome Study of Lumbar Microdiscectomy Based on MSU Classification: Does MSU Classification Helps in Better Patient Selection and Decrease Morbidity??	R S Chahal (India)
09:35 - 09:40	Feasibility of Non-Window 3D-Printed Cage in Lumbar Interbody Fusion: Preliminary Report	Kwang-Sup Song (Korea)
09:40 - 09:50	Discussion	
09:50 - 10:20	Free Paper: Lumbar IV	Moderator: Young-Bae Kim (Korea), Yong-Chan Kim (Korea)
09:50 - 09:55	Neglected Cauda Equina Syndrome Secondary to Lumbar Disc Herniation or Degenerative Canal Stenosis: Does Surgical Decompression Help?	Sulaiman Sath (India)
09:55 - 10:00	Transforaminal Endoscopic (TFE) Discectomy Decompression in Migrated(M) Disc Prolapse(DP): A Study of 89 Patients	Ajay Krishnan (India)
10:00 - 10:05	Efficacy of Indirect Oblique Lumbar Interbody Fusion for Recurrent Spinal Stenosis	Hyoungyeon Seo (Korea)
10:05 - 10:10	Factors Associated with a Greater Disc Angle Restoration in Oblique Lateral Interbody Fusion at L5-S1	Nam-Su Chung (Korea)
10:10 - 10:20	Discussion	
10:30 - 10:50	Coffee Break (Convention Hall Lobby)	
10:40 - 11:30	Plenary Lecture I (Convention Hall A+B)	Moderator: Kyu-Jung Cho (Korea)
10:40 - 11:00	A New DRU Classification for Assessing Skeletal Maturity in Scoliosis Management	Keith Dip Kei Luk (Hong Kong)
11:00 - 11:20	The Fusion Block Concept in Scoliosis Fusion	Keith Dip Kei Luk (Hong Kong)
11:20 - 11:30	Discussion	
11:30 - 12:30	Asian Spine Society Presidential Session (Convention Hall A+B)	Moderator: Yong-Soo Choi (Korea)
11:30 - 11:40	Accuracy of the Adjustable Aiming Device for Caspar Pin Insertion in Anterior Cervical Spine Surgery: Human Cadaveric Study	Torpong Bunmaprasert (Thailand)
11:40 - 11:50	The Profile of Spine Surgeons in the Philippines	Francisco P. Altarejos (Philippines)
11:50 - 12:00	Comparison of Mid- to Long Term Follow-Up of Patient-Reported Outcomes Measures After Single-Level Lumbar Total Disc Replacement, Multi-Level Lumbar Total Disc Replacement and Lumbar Hybrid Procedure for the Treatment of Degenerative Disc Disease	Matthew Scott-Young (Australia)
12:00 - 12:10	The Surgical Management for Thoracic and Lumbar Spinal Tuberculosis: The One Stage Surgery Combined Anterior and Posterior Approaches in Lateral Position of the Patient	Vo Van Thanh (Vietnam)
12:10 - 12:20	Drug Resistance Spinal Tuberculosis: The Challenging Spinal Infections in Near Future	Syaifullah Asmiragani (Indonesia)
12:20 - 12:30	Discussion	
12:30 - 13:30	Sponsored Luncheon Symposium A: Amgen	Moderator: Yong-Soo Choi (Korea)
12:30 - 13:30	New Treatment Paradigm in the Fight Against OP	Kyung Chung Kang (Korea)
13:30 - 14:30	Symposium: Lumbar	
13:30 - 14:00	Surgical Strategies for Three or Four Levels Lumbar Decompression and Fusion with Instrumentation	Moderator: Young-Woo Kim (Korea)
13:30 - 13:38	Basic and Cutting Edge Principle Considering Better Fusion	Sang Bum Kim (Korea)
13:38 - 13:46	Basic and Cutting Edge Principle Considering Sagittal Balance	Tae-Hoon Kim (Korea)
13:46 - 13:54	Tip or Pitfall to Prevent ASD in the Pedicle Screw Fixation and Interbody Cage Insertion	Byung Ho Lee (Korea)
13:54 - 14:00	Discussion	
14:00 - 14:20	6 Weeks-Conservative Treatment for Severe Lumbar HNP without Neurologic Deficit	Moderator: Bong Soon Chang (Korea)
14:00 - 14:08	Always Wait?	Seong Jun Ahn (Korea)
14:08 - 14:16	Always Not Wait	Dae-Hyun Park (Korea)
14:16 - 14:20	Discussion	
14:20 - 14:30	Future-Oriented Special Issue	Moderator: Young Do Koh (Korea)
14:20 - 14:27	Spine-Hip-Knee-Ankle Complex-I	Yong-Chan Kim (Korea)
14:27 - 14:30	Discussion	
14:30 - 14:50	Coffee Break (Convention Hall Lobby)	
14:50 - 15:10	Invited Lecture I	Moderator: Hak Sun Kim (Korea)
14:50 - 15:05	Spinal Osteotomies for Correction of Adult Spinal Deformities	Shu Hua Yang (Taiwan)
15:05 - 15:10	Discussion	
15:10 - 15:30	Invited Lecture III	Moderator: Dong-Jun Kim (Korea)
14:50 - 15:05	The Use of Single-Stage Posterior Spinal Fusion in Severe Adolescent Idiopathic Scoliosis (AIS) with Cobb angle ≥ 90 degrees	Kwan Mun Keong (Malaysia)
15:05 - 15:10	Discussion	
15:30 - 16:00	Free Paper: Lumbar V	Moderator: Young-Hoon Kim (Korea), Ho-Joong Kim (Korea)
15:30 - 15:35	Adjacent Segment Pathology Following Posterior Lumbar Interbody Fusion for Lumbar Degenerative Spondylolisthesis: A Comparison Between Minimally Invasive and Conventional Open Approach	Tetsuhiko Mimura (Japan)
15:35 - 15:40	Comparison of Subchondral Signal Change on Fat-Suppressed MRI and Endplate Activity on SPECT/CT in Degenerative Disc Disease	Tae Wook Kang (Korea)
15:40 - 15:45	Relationship Between Patient's Preoperative Chief Complaint and Postoperative Satisfaction Following Lumbar Decompression Surgery	Sang Yun Seok (Korea)
15:45 - 15:50	Comparison of Efficacy Between Caudal Neuroplasty and Trans-Foraminal Epidural Block for Lumbar Radiculopathy	Jihun Park (Korea)
15:50 - 16:00	Discussion	
16:00 - 16:30	Free Paper: Lumbar VI	Moderator: Kee-Won Rhyu (Korea), Jae Chul Lee (Korea)
16:00 - 16:05	The Catastrophization Effects of an MRI Report on the Patient and Surgeon and the Benefits of 'Clinical Reporting' - Results from an RCT and Blinded Trials	S Dilip Chand Raja (Korea)
16:05 - 16:10	Proper Height and Location of PEEK Cage to Obtain Appropriate Indirect Lumbar Decompression; Very Short Term Clinical and Radiologic Results	Jong Hyun Ko (Korea)
16:10 - 16:15	Percutaneous Pedicle Screw for Thoracolumbar Spine Fracture without Zig (without Special Instrument)	Pashupati Chaudhary (Nepal)
16:15 - 16:20	A study comparing standard microdiscectomy and minimally invasive discectomy using tubular retractor in lumbar intervertebral disc prolapse	Shyamasunder Bhat Neerkaje (India)
16:20 - 16:30	Discussion	
16:30 - 17:00	Free Paper: Infection	Moderator: Dong Eun Shin (Korea), Kyung Chung Kang (Korea)
16:30 - 16:35	Comparative Analysis of Long Term Outcome in Anterior Reconstruction of Thoracic Tuberculosis by Direct Anterior Approach VS Posterior Approach	Aditya Raj (India)
16:35 - 16:40	Selection of Surgical Approach in Spinal Tuberculosis: Experience of 715 Cases	Md. Shah Alam (India)
16:40 - 16:45	Surgical Outcomes of Transpedicular Decompression with or without Global Reconstruction in Thoracic/Thoracolumbar Potts Spine: A 7-Year Institutional Retrospective Study	Kuldeep Bansal (India)
16:45 - 16:50	Involvement of L5-S1 Level as an Independent Risk Factor for Adverse Outcome After Surgical Treatment of Lumbar Pyogenic Spondylitis	Sung Cheol Park (Korea)
16:50 - 17:00	Discussion	

08:00 - 08:20	Opening Remarks (Convention Hall A+B)	
08:20 - 08:50	Free Paper: Cervical I	Moderator: Kyung-Soo Suk (Korea), Byung Wan Choi (Korea)
08:20 - 08:25	The Comparion of Crossing or Not the Cervicothoracic Junction in Multilevel Posterior Cervical Fusion: A Systematic Review and Meta-Analysis	Gun Woo Lee (Korea)
08:25 - 08:30	Head Injury as Predictor of Cervical Spine Injury: A 5 Year Review	Jeremiah Ravelo Morales (Philippines)
08:30 - 08:35	Do Cervical Sagittal Parameters Change After Single-Level Anterior Cervical Discectomy and Fusion Differently by the Level?	Sang-Il Kim (Korea)
08:35 - 08:40	Full-Endoscopic Anterior Odontoid Screw Fixation: A Novel Technique	Vit Kotheeranurak (Thailand)
08:40 - 08:50	Discussion	
08:50 - 09:20	Free Paper: Cervical II	Moderator: Jong-Beom Park (Korea), Bo-Gun Suh (Korea)
08:50 - 08:55	Clinical Outcome After Posterior Cervical Surgery Laminoplasty VS Posterior Fusion	Jae-Won Shin (Korea)
08:55 - 09:00	Increased C7 Tilt Is Associated with Higher Risk of Shoulder Imbalance in Adolescent Idiopathic Scoliosis Patients Receiving Posterior Spinal Fusion: Correlation Analysis Between Cervicothoracic Vertebral Tilt and Shoulder Balance	Jui-Yo Hsu (Taiwan)
09:00 - 09:05	Sky is the Limit in MIS Surgery !! Feasibility and Efficacy of Minimally Invasive-Microscopic Assisted Stand-Alone Trans-Articular Screw Fixation (MIS-TAS) in the Management of 82 Cases of Mobile Atlanto-Axial Instability	Vishal Kumar Kundnani (India)
09:05 - 09:10	Diagnostic Utility and Effectiveness of Cervical Medial Branch Block in Chronic Neck Pain	Keon-Rok Kim (Korea)
09:10 - 09:20	Discussion	
09:20 - 09:50	Free Paper: Cervical III	Moderator: Kyung-Jin Song (Korea), Woo-Kie Min (Korea)
09:20 - 09:25	Reoperation Rates After Surgery for Degenerative Cervical Spine Disease According to Different Surgical Procedures with Follow-Up of Ten Years: Korean National Population-Based Cohort Study	Moon Soo Park (Korea)
09:25 - 09:30	Feasibility of Lateral Mass Screw Insertion in the Risky Triad of C1: An Evaluation of the Over the Arch Technique	Hyung Rae Lee (Korea)
09:30 - 09:35	Characteristics of Cervical Sagittal MRI in Dropped Head Syndrome	Takuya Kusakabe (Japan)
09:35 - 09:40	Relating Factors of Time Delay Between Injury to Emergent Surgical Management	Byung Wan Choi (Korea)
09:40 - 09:50	Discussion	
09:50 - 10:20	Free Paper: Cervical IV	Moderator: Jin Sup Yeom (Korea), Moon Soo Park (Korea)
09:50 - 09:55	Relationship of Post-Operative Handgrip Strength and Risk of Falling in Cervical Spondylotic Myelopathy	Kathryn Jimenez (Philippines)
09:55 - 10:00	An Analysis of 49 Cases with Pedicle Fractures of the C2 Axis;Is Surgery Necessary?	Sung-Kyu Kim (Korea)
10:00 - 10:05	Free Hand Technique for Cervical Pedicle Screw Insertion - Is It Safe?	Bidre Upendra (India)
10:05 - 10:10	Crowned Dens Syndrome (CDS) with Odontoid Fracture Nonunion Mimicking Pathological Fracture of C2 with Osteolytic Bone Lesion: A Case Report	Wan Zainuddin Wan Ab Rahman (Malaysia)
10:10 - 10:20	Discussion	
10:30 - 10:50	Coffee Break (Convention Hall Lobby)	
10:40 - 11:30	Plenary Lecture I (Convention Hall A+B)	Moderator: Kyu-Jung Cho (Korea)
10:40 - 11:00	A New DRU Classification for Assessing Skeletal Maturity in Scoliosis Management	Keith Dip Kei Luk (Hong Kong)
11:00 - 11:20	The Fusion Block Concept in Scoliosis Fusion	Keith Dip Kei Luk (Hong Kong)
11:20 - 11:30	Discussion	
11:30 - 12:30	Asian Spine Society Presidential Session (Convention Hall A+B)	Moderator: Yong-Soo Choi (Korea)
12:30 - 13:30	Sponsored Luncheon Symposium B: Daewon	Moderator: Kyu-Jung Cho (Korea)
12:30 - 13:30	What's the Difference Between Teriparatide and Romosozumab	Ho-Joong Kim (Korea)
13:30 - 14:30	Symposium: MISS	
13:30 - 14:30	Lateral Lumbar Interbody Fusion: Complications- How to Avoid It	Moderator: Chang-Nam Kang (Korea), Yung Park (Korea)
13:30 - 13:42	Insufficient Indirect Decompression after Lateral Lumbar Interbody Fusion : How to Avoid and Treat It?	Ho-Jin Lee (Korea)
13:42 - 13:54	How to Minimize Complications-Subsidence and Adjacent Segment Disease	Jae-Young Hong (Korea)
13:54 - 14:06	Lumbar Plexus & Ureter Injury	Sang-Min Park (Korea)
14:06 - 14:18	Vessel Injury for L5-S1	Jaewan Soh (Korea)
14:18 - 14:30	Discussion	
14:30 - 14:50	Coffee Break (Convention Hall Lobby)	
14:50 - 15:10	Invited Lecture II	Moderator: Byung-Joon Shin(Korea)
14:50 - 15:05	How to Do Osteotomy and Prevent Complications	Yukihiro Matsuyama (Japan)
15:05 - 15:10	Discussion	
15:10 - 15:30	Invited Lecture IV	Moderator: Chong-Suh Lee (Korea)
15:10 - 15:25	Atlantoaxial Instability	Kam Kwong Wong (Hong Kong)
15:35 - 15:30	Discussion	
15:30 -16:00	Free Paper: MISS I	Moderator: Deuk Soo Jun (Korea), Jae Hyup Lee (Korea)
15:30 - 15:35	New Classification for the Position of Left Common Iliac Vein to Select Operative Corridor in Minimally Invasive Oblique Lumbar Interbody Fusion at L5-S1	Hae-Dong Jang (Korea)
15:35 - 15:40	Endoscopic Lumbar Interbody Fusion: Comparison Between Uniportal and Biportal Approach	Harmantya Mahadhipta (Indonesia)
15:40 - 15:45	Risk Factors for Conversion to Open Spinal Surgery After Percutaneous Epidural Neuroplasty	Hyung-Youl Park (Korea)
15:45 - 15:50	Comparative Analysis of Mid to Long-Term Outcomes in Minimally Invasive and Conventional TLIF	Jae-Young Hong (Korea)
15:50 - 16:00	Discussion	
16:00 - 16:30	Free Paper: MISS II	Moderator: Keun-Ho Park (Korea), Si-Young Park (Korea)
16:00 - 16:05	Comparison of Uniportal and Biportal Full-Endoscopic Posterior Cervical Foraminotomy for Unilateral Cervical Foraminal Disc Herniation	Min Seok Kang (Korea)
16:05 - 16:10	The Clinical and Radiological Outcomes of Minimally Invasive Transforaminal Lumbar Interbody Fusion Spine Surgery for High-Grade Spondylolisthesis: Study Of 24 Patients	Rajendra Sakhrekar (India)
16:10 - 16:15	Clinical Outcome of Biportal Endoscopic Revisional Lumbar Discectomy for Recurrent Lumbar Disc Herniation	Hyun-Jin Park (Korea)
16:15 - 16:20	Learning Curve Parameters Observed in the Early Percutaneous Endoscopic Lumbar Discectomy Cases in Single Institution	Yudha Mathan Sakti (Indonesia)
16:20 - 16:30	Discussion	
16:30 - 17:00	Free Paper: Tumor	Moderator: Jae-Sung Ahn (Korea), Jun-Seok Lee (Korea)
16:30 - 16:35	Incidence of and Risk Factors for Postoperative Respiratory Failure Following Spinal Metastasis Surgery	Thamrong Lertudomphonwanit (Thailand)
16:35 - 16:40	Does the Resected Tumor Volume Affect Local Recurrence Following Surgical Treatment for Spinal Metastasis?	Jin-Sung Park (Korea)
16:40 - 16:45	Surgical Intervention in Spinal Tumour - Personal Experience	Md. Shah Alam (Bangladesh)
16:45 - 16:50	Resection of Sacral Chordoma - A Technical Note	Vishnu Senthil Kumar (India)
16:50 - 17:00	Discussion	

May 29(Sat) ✦ Convention Hall A

08:00 - 08:30	Best Paper Candidates Presentation I (Domestic) Moderator: Ye-Soo Park (Korea), Woo Dong Nam (Korea)	
08:00 - 08:05	Effects of Bone Cement Augmentation for Upper Instrumented Vertebra on Adjacent Segment Degeneration in Lumbar Fusions	Young-Hoon Kim (Korea)
08:05 - 08:10	Exosome from Mesenchymal Stem Cell for Regeneration After Spinal Cord Injury (SCI) in Rat Model	Gun Woo Lee (Korea)
08:10 - 08:15	Fusion and Subsidence Rates of Vertebral Body Sliding Osteotomy: Comparison of 3 Reconstructive Techniques for Multilevel Cervical Myelopathy	Sehan Park (Korea)
08:15 - 08:20	Numerical Evaluation of Spinal Stability After Posterior Spina Fusion with Various Fixation Segments and Screw Types using Finite Element Analysis	Seung Min Son (Korea)
08:20 - 08:30	Discussion	
08:30 - 09:00	Best Paper Candidates Presentation II (Domestic) Moderator: Tae Kyun Kim (Korea), Hong-Moon Sohn (Korea)	
08:30 - 08:35	A Study on the Prevalence and Surgery Rate of Idiopathic Scoliosis Using Data from the Korea Health Insurance Corporation	Jae Hyuk Yang (Korea)
08:35 - 08:40	Relationship Between Semispinalis Cervicis Preservation and C2 Spinous Process Morphology During C3 Laminectomy	Sang Yun Seok (Korea)
08:40 - 08:45	The Impact of Lordosis Distribution on Acute Proximal Junctional Fracture in Adult Spinal Deformity	Sang-Kyu Im (Korea)
08:45 - 08:50	Augmented Reality-Guided Pedicle Screw Fixation: An Experimental Study	Sang-Min Park (Korea)
08:50 - 09:00	Discussion	
09:00 - 09:30	Best Paper Candidates Presentation III (Domestic and International) Moderator: Jae-Hyuk Shin (Korea), Jae Jun Yang (Korea)	
09:00 - 09:05	The Cumulative Incidence and Associated Factors of Subsequent Vertebral Compression Fractures: A Nationwide Population-Based Study	Sung Hoon Choi (Korea)
09:05 - 09:10	Risk of Reoperation and Infection After Percutaneous Endoscopic Lumbar Discectomy and Open Lumbar Discectomy: A Nationwide Population-Based Study	Taewook Kang (Korea)
09:10 - 09:15	Efficacy of Analgesic Cocktail on Epidural Gelatin Patch for Post-Operative Anti-Analgesic Effect f or Posterior Operation in Degenerative Spine Case (A Double Blind Prospective Randomized Control Trial Study)	Surawut Ruchirawan (Thailand)
09:15 - 09:20	Indications and limitations of Minimally Invasive Lateral Lumbar Interbody Fusion without Osteotomy for Adult Spinal Deformity	Tetsuro Ohban (Japan)
09:20 - 09:30	Discussion	
09:30 - 10:00	Best Paper Candidates Presentation IV (International) Moderator: Seok Woo Kim (Korea), Hun Kyu Shin(Korea)	
09:30 - 09:35	Variations in Segmental Lordosis, Location of the Lumbar Apex and Sagittal Alignment in Asymptomatic Adults: Correlation with Pelvic Parameters	Kuldeep Bansal Bansal (India)
09:35 - 09:40	Perioperative Outcome of AIS patients Underwent Single-Stage Posterior Spinal Fusion: A Single-Centre Review of More Than 1000 Consecutive Cases	Kwong Weng Loh (Malaysia)
09:40 - 09:45	Progression of Ossification of the Posterior Longitudinal Ligament in Upper Cervical Spine Following Laminoplasty	Hao-Wen Chen (Taiwan)
09:45 - 09:50	Sublaminar Mersilene Tape Augmented Pedicle Screws Fixation for Osteoporotic Vertebral Compression Fracture: A Novel and Low Cost Modality	Ghanshyam Kakadiya (India)
09:50 - 10:00	Discussion	
10:00 - 10:30	Best Paper Candidates Presentation V (International) Moderator: Hyoung-Yeon Seo (Korea), Jeong-Hyun Yoo (Korea)	
10:00 - 10:05	Development of a Prediction Model for Postoperative Lumbar Cobb Angle Following Selective Thoracic Fusion in Patients with Adolescent Idiopathic Scoliosis	I-Hsin Chen (Taiwan)
10:05 - 10:10	Does Forced-Air Warming Increase Surgical Site Infections in Spine Surgery? A Propensity Score-Matched Analysis	Kyoichi Handa (Japan)
10:10 - 10:15	Analysis of Cervical Canal and Spinal Cord Morphometric Parameters in Dynamic Magnetic Resonance Imaging (MRI) in Cervical Spondylotic Myelopathy Patients	Gururaj Gururaj (India)
10:15 - 10:20	Comparative Analysis of Long Term Outcome in Anterior Reconstruction of Thoracic Tuberculosis by Direct Anterior Approach VS Posterior Approach	Aditya Raj (India)
10:20 - 10:30	Discussion	
10:30 - 10:50	Coffee Break (Convention Hall Lobby)	
10:50 - 11:10	Invited Lecture V Moderator: Kyu-Yeol Lee (Korea)	
10:50 - 11:05	Management Strategies in Osteoporotic Fractures of Spine	Shankar Acharya (India)
11:05 - 11:10	Discussion	
11:10 - 12:00	Plenary Lecture II (Convention Hall A+B) Moderator: Bong Soon Chang (Korea)	
11:10 - 11:30	Cervical Deformity Analysis and Surgical Planning	Han Jo Kim (USA)
11:30 - 11:50	Decreasing Cost and Improving the Cost-Effectiveness of Adult Spinal Deformity Surgery	Han Jo Kim (USA)
11:50 - 12:00	Discussion	
12:00 - 13:00	Sponsored Luncheon Symposium A: Dong-A Moderator: Hak Sun Kim (Korea)	
12:00 - 13:00	The Evidence of Limaprost in the Treatment, Lumbar Spinal Stenosis	Si-Young Park (Korea)
13:00 - 14:00	Symposium Deformity Moderator: Chong-Suh Lee (Korea), Chang Ju Hwang (Korea)	
13:00 - 14:00	Early Onset Scoliosis (EOS) Moderator: Chong-Suh Lee (Korea), Chang Ju Hwang (Korea)	
13:00 - 13:12	Growth of the Spine and Lung Development	Kun-Bo Park (Korea)
13:12 - 13:24	How to Approach EOS Patient at First Visit	Sam Yeol Chang (Korea)
13:24 - 13:36	Non-Operative Treatment of EOS: Bracing and Casting	Se-Jun Park (Korea)
13:36 - 13:48	Surgical Treatment and Complications of EOS	Seung-Woo Suh (Korea)
13:48 - 14:00	Discussion	
14:00 - 14:20	Coffee Break (Convention Hall Lobby)	
14:20 - 14:50	Free Paper: Miscellaneous I Moderator: Dong Soo Kim (Korea), Gwangil Ko (Korea)	
14:20 - 14:25	EOS Analysis of Sagittal Alignment of Spine and Pelvis in Korean Adult Population	Min-Gu Jang (Korea)
14:25 - 14:30	Osteopenia and Osteoporosis in Patients with Vertebral Compression Fracture	Jin-Hyung Kim (Korea)
14:30 - 14:35	Efficacy and Safety of Nucleo-Annuloplasty Using Radiofrequency Ablation for Discogenic Back Pain in a Local Hong Kong Population	Joyce Yam (Hong Kong)
14:35 - 14:40	Dural Repair - Efficacy Assessment of Different Techniques, A Cadaveric Study Comparing the Naked Eye and Surgical Loupes	Roongrath Chitragran (Thailand)
14:40 - 14:50	Discussion	
14:50 - 15:20	Free Paper: Miscellaneous II Moderator: Jaewan Soh (Korea), Hyoungmin Kim (Korea)	
14:50 - 14:55	Usefulness of Atelocollagen in Bone Graft in Spinal Posterolateral Fusion (Prospective Controlled Trial Results, in Terms of Validity and Safety)	Young-Yul Kim (Korea)
14:55 - 15:00	Design and Implementation of an Enhanced Recovery After Surgery (ERAS) Protocol in Elective Lumbar Spine Fusion: A Retrospective, Comparative Study	Bhavuk Garg (India)
15:00 - 15:05	Correlation Between Osteoporotic Compression Vertebral Fracture and Hip, Spine BMD Dissociation	Jong-Min Baik (Korea)
15:05 - 15:10	Finding an Inexpensive, MRI Compatible, Surface Fiducial Marker for Use in Both the Clinical and Research Setting	Maree Therese Izatt (Australia)
15:10 - 15:20	Discussion	
15:20 - 15:50	Free Paper: Miscellaneous III Moderator: Weon Wook Park (Korea), Jae-Young Hong (Korea)	
15:20 - 15:25	Anatomical Consideration for Total En Bloc Spondylectomy of the Upper Thoracic Spine by Anterior Approach: A Computed Tomography Image Analysis	Eugene J. Park (Korea)
15:25 - 15:30	Treatment Options in Giant Sacral Schwannomas: A Scoping Review of Literature	Romel Paredes Estillore (Philippines)
15:30 - 15:35	A Retrospective Study of Safety, Accuracy and Reliability in Placement of Over 1500Thoracolumbar Pedicle Screws Using O-Arm and StealthStation Navigation in 200 Consecutive Patients	Rajendra Sakhrekar (India)
15:35 - 15:40	Reprospective Study of 20 Cases of Tandem Stenosis with Single Stage Surgical Outcome	Sanjoy Biswas (India)
15:40 - 15:50	Discussion	
15:50 - 16:10	Best Paper Awards (Convention Hall A+B)	
16:10 - 16:20	Closing Remarks (Convention Hall A+B)	

May 29(Sat) : Convention Hall B

08:00 - 08:30	Free Paper: Basic Research I	Moderator: Byung Ho Lee (Korea), Jin Hwan Kim (Korea)
08:00 - 08:05	Long-Term Efficacy and Safety of Escherichia Coli Derived rhBMP - 2/Hydroxyapatite Carrier in Lumbar Posterolateral Fusion: A Multicenter Comparative Study	Min Joon Cho (Korea)
08:05 - 08:10	Artificial Intelligence for Automatic Measurement of Sagittal Vertical Axis Using ResUNet Framework	Chih-Li Wang (Taiwan)
08:10 - 08:15	The Trabecular Bone Score for the Prediction of Vertebral Fragility Fractures in Postmenopausal Women	Tae Sik Goh (Korea)
08:15 - 08:20	The Lateral Annulus: A Much-Neglected Site for the Initiation of Herniation	Vonne M Van Heeswijk (New Zealand)
08:20 - 08:30	Discussion	
08:30 - 09:00	Free Paper: Basic Research II	Moderator: Seong-Hwan Moon (Korea), Gun-Woo Lee (Korea)
08:30 - 08:35	Why do Modic Changes Result in Poor Clinical Outcomes? - Novel Insights from Proteomic analysis of Lumbar Discs with Modic Changes	S Dilip Chand Raja (India)
08:35 - 08:40	Effect of Parathyroid Hormone on Degeneration of Intervertebral Disc: In Vivo Rat Tail Puncture Model	Jun-Seok Lee (Korea)
08:40 - 08:45	Morphological Characteristics of the Kangaroo Lumbar Intervertebral Discs and Comparisons with Other Animal Models Used in Spine Research	Uphar Chamoli (Australia)
08:45 - 08:50	Pullout Strength of Pedicle Screws Using Cadaveric Vertebrae with or without Artificial Demineralization	Suk-Joong Lee (Korea)
08:50 - 09:00	Discussion	
09:00 - 09:30	Free Paper: Deformity I	Moderator: Eung-Ha Kim (Korea), Nam-Su Chung (Korea)
09:00 - 09:05	The Criteria of Severe Dynamic Sagittal Imbalance in Adult Spinal Deformity	Sung-Min Kim (Korea)
09:05 - 09:10	Severe Angular Kyphosis: How to Predict Patients Who Are at Risk of Developing Post-Operative Neurological Deterioration	Sulaiman Sath (India)
09:10 - 09:15	Predicting the Progression of Thoracolumbar Kyphosis in Achondroplasia Patients after Walking Age: Generalized Estimating Equation Analysis	SuJung Mok (Korea)
09:15 - 09:20	The Advantages and Pitfalls in Surgical Treatment of Ankylosing Spondylitis	Byeong Jik Kang (Korea)
09:20 - 09:30	Discussion	
09:30 - 10:00	Free Paper: Deformity II	Moderator: Whoan Jeang Kim (Korea), Dong-Gune Chang (Korea)
09:30 - 09:35	Validity of the Global Alignment Proportion (GAP) Score in Predicting Mechanical Complications After Adult Spinal Deformity Surgery in Elderly Patients	Dae-Woong Ham (Korea)
09:35 - 09:40	Outcome Analysis of Vertebroplasty in Osteoporotic Vertebral Fractures	Vishnu S (India)
09:40 - 09:45	Comparison of Complications and Clinical Outcomes of Primary and Revision Surgery in Patients with Adult Spinal Deformity with Sagittal Imbalance Using Combined Anterior and Posterior Procedure	Hyun-Min Shin (Korea)
09:45 - 09:50	Incidence and Risk Factors of Rod Fracture After Pedicle Subtraction Osteotomy for Degenerative Sagittal Imbalance: A Consecutive Series Using Side-Tightening Pedicle Screw Instrumentation	Sang-Il Kim (Korea)
09:50 - 10:00	Discussion	
10:00 - 10:30	Free Paper: Deformity III	Moderator: Jung Hee Lee (Korea), Dong-Ju Lim (Korea)
10:00 - 10:05	Retrospective Comparison of Surgical Techniques to Maximize Lordosis Restoration by Interbody Fusion for L5-S1	Hae-Dong Jang (Korea)
10:05 - 10:10	Who Will Require Revision Surgery Among Neurologically Intact Patients with Proximal Junctional Failure After Surgical Correction of Adult Spinal Deformity?	Byeong Jik Kang (Korea)
10:10 - 10:15	Surgical Correction for Scoliosis by Sing Posterior Dynamic Approach - When To Do & How To Do?	Md. Shah Alam (Bangladesh)
10:15 - 10:20	Should Pedicle Subtraction Osteotomy be Always Needed for Fixed Sagittal Deformity? Comparison Between Pedicle Subtraction Osteotomy and Lateral Lumbar Interbody Fusion	Hyung-Youl Park (Korea)
10:20 - 10:30	Discussion	
10:30 - 10:50	Coffee Break (Convention Hall Lobby)	
10:50 - 11:10	Invited Lecture VI	Moderator: Hwan Mo Lee (Korea)
10:50 - 11:05	Subcrestal Iliac Screw a New Lumbosacral Fixation Technique	Gabriel Liu (Singapore)
11:05 - 11:10	Discussion	Gabriel Liu (Singapore)
11:10 - 12:00	Plenary Lecture II (Convention Hall A+B)	Moderator: Bong Soon Chang (Korea)
11:10 - 11:30	Cervical Deformity Analysis and Surgical Planning	Han Jo Kim (USA)
11:30 - 11:50	Decreasing Cost and Improving the Cost-Effectiveness of Adult Spinal Deformity Surgery	Han Jo Kim (USA)
11:50 - 12:00	Discussion	
12:00 - 13:00	Sponsored Luncheon Symposium B: Viatrix Korea	Moderator: Bong Soon Chang (Korea)
12:00 - 13:00	Practical Management of Neuropathic Pain with Pregabalin	Byung Ho Lee (Korea)
13:00 - 14:00	Symposium: All about Chronic Neck Pain	Moderator: Dong-Ho Lee (Korea), Young-Yul Kim (Korea)
13:00 - 13:12	Pathophysiology, Differential Diagnosis and Characteristics	Jae Jun Yang (Korea)
13:12 - 13:24	Ideal Conservative Treatment and Surgical Indication	Gun Woo Lee (Korea)
13:24 - 13:36	Proper Cervical Position(Alignment) and Accessible Exercise	Yong-Gon Seo (Korea)
13:36 - 13:48	Ideal Pillow and Sleeping Position	Kyung Chung Kang (Korea)
13:48 - 14:00	Discussion	
14:00 - 14:20	Coffee Break (Convention Hall Lobby)	
14:20 - 14:50	Free Paper: Deformity IV	Moderator: Seung-Woo Suh (Korea), Sung-Soo Kim (Korea)
14:20 - 14:25	Which Classification and Radiographic Views Are Appropriate for the Development of Machine-Learning Based Classification for Idiopathic Scoliosis? A Retrospective Cohort Study	Kun-Bo Park (Korea)
14:25 - 14:30	Is There Any Difference in the Perioperative Outcome Between Male and Female Adolescent Idiopathic Scoliosis Patients Undergoing Posterior Spinal Fusion? A Propensity Score Matching Study of 570 Patients	Chee Kidd Chiu (Malaysia)
14:30 - 14:35	Comparison of Surgical Outcomes Between Early Definitive Spinal Fusion and Growing Rod in Patients with Early Onset and Dystrophic Scoliosis in Neurofibromatosis Type 1: A Multicenter Study	Ryoji Tauchi (Japan)
14:35 - 14:40	Perioperative Outcome of Three-Rods Technique in Severe Adolescent Idiopathic Scoliosis (Cobb Angle $\geq 90^\circ$) Underwent Single-Stage Posterior Spinal Fusion	Yu Jie Lee (Malaysia)
14:40 - 14:50	Discussion	
14:50 - 15:20	Free Paper: Trauma I	Moderator: Dong Ki Ahn (Korea), Se-Jun Park (Korea)
14:50 - 14:55	What Are the Risk Factors for Implant Failure in Posterior Long Level Fixation of Thoracolumbar Fractures?	Han-Dong Lee (Korea)
14:55 - 15:00	Accuracy of Physical Examinations for Diagnosis of Acute Vertebral Fragility Fracture: Comparative Study with Plain Radiograph	Jeongik Lee (Korea)
15:00 - 15:05	Comparison of Thoracolumbar & Lumbar Fractures Between by In-Car Accident & by Fall from Height	Eui Hwan Choi (Korea)
15:05 - 15:10	One-Stage Posterior/Anterior Combined Surgery with Pedicle Screw Fixation and Interbody Bone Graft for the Treatment of Unstable Denis Type B Thoracolumbar Burst Fracture	Dechun Wang (China)
15:10 - 15:20	Discussion	
15:20 - 15:50	Free Paper: Trauma II	Moderator: Jin-Hyok Kim (Korea), Kwang-Sup Song (Korea)
15:20 - 15:25	Incomplete Cauda Equina Syndrome Caused by Penetrating Rebar Injury	Jong Hyun Ko (Korea)
15:25 - 15:30	The Impact of Smoking and Alcohol Consumption on Healing Rates of Non-Pathological Fractures - A Systematic Review and Meta-Analysis	Bin Xu (China)
15:30 - 15:35	Comparison of Mini Open Wiltse Approach with Conventional Posterior Approach in Patients with Single Segment Unstable Thoracolumbar Fracture	Muhammad Siddique Hamid (Pakistan)
15:35 - 15:40	Prevalence and Characteristics of Vertebral Fractures in Patients with Recent Hip Fractures	Sung-Soo Kim (Korea)
15:40 - 15:50	Discussion	
15:50 - 16:10	Best Paper Awards (Convention Hall A+B)	
16:10 - 16:20	Closing Remarks (Convention Hall A+B)	