entation Type	#	Abstract No.	Торіс	Title	Presenter	Ses	sion	Date/Time
	1	ABS-0251	Pediatric Spine	The Amount of Proximal Thoracic Curve Correction May Not Affect Postoperative Lateral Shoulder Imbalance in Lenke Type 1 and 2 Adolescent Idiopathic Scoliosis	Hyung Rae Lee (Uijeongbu Eulji Medical Center, Korea)			
odium	2	ABS-0299	Pediatric Spine	Rotational Changes Following Use of Direct Vertebral Rotation in Adolescent Idiopathic Scoliosis	Ji Su Kim (Inje University Sanggye Paik Hospital, Korea)			
	3	ABS-0105	Adult Spinal Deformity	Time-Dependent Changes in Stiffness-Related Functional Disability (SRFD) after Long Segmental Fusion in Elderly Patients with Adult Spinal Deformity - Minimum 2-Year Follow-Up Results -	Se-Jun Park (Samsung Medical Center, Sungkyunkwan University School of Medicine, Korea)	Bost	Paper 1	Aug. 17 (Thu), 15:25-16:25
	4	ABS-0112	Adult Spinal Deformity	Selective Thoracolumbar Fusion in Adult Spinal Deformity (ASD) Double Curves with Circumferential Minimally Invasive Surgery (CMIS): 2-Year Minimum Follow Up	Neel Anand (Cedars Sinai Medical Center, USA)	Dest	uper i	Nug. 17 (110), 15:25 10:25
	5	ABS-0211	MIS	Stable Long-Term Regional and Global Alignment in Patients Treated with Minimally Invasive Lateral Retropleural Thoracic Discectomy Without Fixation	Steve Cho (Barrow Neurological Institut, USA)			
	6	ABS-0163	Lumbar Degenerative	The Corrective Criteria to Avoid Adjacent Segment Degeneration Following Surgical Correction for Lumbar Spondylolisthesis	Sung-Min Kim (Kyung Hee University Hospital at Gangdong, Kyung Hee University, Korea)			
	1	ABS-0115	Adult Spinal Deformity	Proximal Junction Uninstrumented Bone Fusion as a Feasible Additive Procedure to Delay or Prevent Proximal Junctional Kyphosis/Failure	Sungjae An (Korea University Anam Hospital, Korea)			
	2	ABS-0083	Lumbar Degenerative	Comparison of Fusion, Subsidence, and Clinical Results Between 3D-Printed Porous Titanium Cage and Polyetheretherketone (PEEK) Cage in Posterior Lumbar Interbody Fusion: A Minimum of 2-Years Follow-Up	Sehan Park (Department of Orthopedic Surgery, Asan Medical Center, University of Ulsan College of Medicine, Korea)			
	3	ABS-0075	Cervical Degenerative	Revision Surgery of Upper Cervical Fusion to Correct Atlantoaxial Instability: A Retrospective Study of 19 Cases	Donghun Kim (Eunpyeong St. Mary's Hospital, Korea)	Bost	Paper 2	Aug. 17 (Thu), 15:25-16:25
-	4	ABS-0284	Emerging Technologies & Techniques	Design and 3D Printing of Novel Titanium Spine Rods with Lower Flexural Modulus & Stiffness Profile with Optimised Imaging Compatibility	Naresh Kumar (National University Health System, Singapore)	Destri		Aug. 17 (11u), 13.23-10.23
-	5	ABS-0265	MIS	Advancements in Cervical Myelopathy Treatment: Exploring Minimally Invasive Laminoplasty Through Comparative Analysis	Wataru Narita (Kameoka Municipal Hospital, Japan)			
	6	ABS-0252	Regenerative Medicine	Efficacy of a Newly Designed Helical-Shaped 3D-Printed Titanium Cage For Cervical Vertebral Defect Healing in Rabbits	Mosharraf Hossain (Soonchunhyang University, College of Medicine, Bucheon hospital, Bangladesh)			
	1	ABS-0108		Risk Factors for Radiographic Progression of Proximal Junctional Fracture in Patients Undergoing Surgical Treatment for Adult Spinal Deformity	Se-Jun Park (Samsung Medical Center, Sungkyunkwan University School of Medicine, Korea)			
	2	ABS-0258	Adult Spinal	Influence of Negative Sagittal Imbalance and Upper Cervical Malalignment on Clinical Outcomes in Patients with Craniovertebral Junction Kyphosis	Jae Taek Hong (Eunpyung St. Mary's Hospital, The Catholic University of Korea, Korea)	<b>Frag. Damer. 1</b>	Adult Spinal Deformity 1	I Aug. 17 (Thu), 08:00-08:30
-	3	ABS-0110	Deformity	Is There an Association between Psychiatric Disorders and Adolescent Idiopathic Scoliosis? A Large-Database Study	Soo-Bin Lee (Catholic Kwandong University International St.Mary's Hospital, Korea)	Free Paper 1		
-	4	ABS-0208		Can Intraoperative C2 Slope Predict Postoperative Standing Sagittal Alignment Following Cervical Deformity Correction?	Namhoo Kim (Yonsei University College of Medicine, Korea)	a)		
	1	ABS-0120	Endoscopic	Biportal Endoscopic Paraspinal Decompressive Foraminotomy for Lumbar Foraminal Stenosis: Clinical Outcomes and Factors Influencing Unsatisfactory Outcomes	Ki-Han You (Hallym University College of Medicine, Kangnam Sacred Heart Hospital, Korea)		Endoscopic 2 Technologies & Techniques 1	Aug. 17 (Thu), 08:00-08:30
-	2	ABS-0174	Technologies	Minimally Invasive Transforaminal Lumbar Interbody Fusion Using the Biportal Endoscopic Techniques Versus Microscopic Tubular Technique.	Hyun-Jin Park (Hallym university Kangnam Sacred Heart Hospital, Korea)	<b>Face Demon 2</b>		
-	3	ABS-0084	&	Learning Curve and Clinical Outcome of Biportal Endoscopic-Assisted Lumbar Interbody Fusion	Kim Ju Eun (Baroseomyeon Hospital, Korea)	Free Paper 2		
-	4	ABS-0132	Techniques	Anterior Cervical Discectomy and Fusion Versus Cervical Biportal Endoscopic Spine Surgery: A Retrospective Comparison with a Five-Year Experiences.	Seok Bong Jung (Jinju Bon Hospital, Korea)			
-	1	ABS-0209		Learning Curve for Biportal Endoscopic Posterior Cervical Foraminotomy Determined Using the Cumulative Summation Test	Jin-Tak Hyun (Kangnam Sacred Heart Hospital, Hallym University College of Medicine, Korea)			
	2	ABS-0227	N 41C	Cost-Utility Analysis of Endoscopic Lumbar Discectomy Following a Uniform Clinical Pathway in the Korean National Health Insurance System	Chi Heon Kim (Seoul National Univeristy Hospital, Korea)			
-	3	ABS-0058	MIS	Fusion Success in Patients with Degenerative Lumbar Disease without Spondylolisthesis: A Global Study Comparing Anterolateral Versus Posterior MIS Approaches at 2-Years Follow-Up	Yoonjoong Hwang (Korea University Ansan Hospital, Korea)	Free Paper 3	MIS 1	Aug. 17 (Thu), 08:00-08:30
-	4	ABS-0235		Mini Open Retropleural Approach Based on Microneurospinal Surgical Anatomy Focusing on Membranes and Layers	Takashi Moriwaki (Osaka Gyoumeikan Hospital, Japan)			
	1	ABS-0153		Decision of Pedicle Subtraction Osteotomy Vertebra in Surgical Correction for Ankylosing Spondylitis with Thoracolumbar Kyphosis	Xiongjie Li (Kyung Hee University Hospital at Gangdong, Kyung Hee University, China)			
-	2	ABS-0162	Adult Spinal	Use of Iliac Screw Associated with More Correction of Lumbar Lordosis than S2-Alar-Iliac Screw for Adult Spinal Deformity	JunBum Park (Kyung Hee University Hospital at Gangdong, Kyung Hee University, Korea)		Adult Spinal	
-	3	ABS-0262	Deformity	Distal Junctional Failure after Long Fusion Surgery Stopping at L5 in Patients with Adult Spinal Deformity	Ho Yong Choi (Kyung Hee University Hospital at Gangdong, Korea)	Free Paper 4	Deformity 2	Aug. 17 (Thu), 08:30-09:00
	4	ABS-0281		Custom Interbody Cage Design and Manufacturing for Correction of Lumbar Spine Deformity	David Edis (Monash University, Australia)			
	1	ABS-0149	- I ·	Clinical Analysis of of Biportal Endoscope and Tubular Microscope for Single-Level Lumbar Discectomy in Obese Patients: A Multicenter, Retrospective Analysis	Sang-Min Park (Seoul National University Bundang Hospital, Korea)			
-	2	ABS-0218	Endoscopic Technologies	Single-Level Endoscopic TUF Achieves Similar 1-Year Clinical and Radiological Outcomes Compared to Conventional MIS-TUF With Reduced Surgery Duration, Blood Loss and Length of Hospital Stay	David Shaoen Sim (Singapore General Hospital, Singapore)		Endoscopic	
-	3	ABS-0166	&	Comparison of Primary Versus Revision Lumbar Discectomy Using a Biportal Endoscopic Technique	Jae Yeun Hwang (Kangnam Sacred Heart Hospital, Hallym University School of Medicine, Korea)	Free Paper 5	5	Aug. 17 (Thu), 08:30-09:00
-	4	ABS-0173	Techniques	Effectiveness of the Two-Way BESS Decompression in Central to Extraforaminal Stenosis Patients with Facet Joint Preservation: Minimum 1 Year Short-Term Follow Up	Young-Hyun Yoon (Yonsei University College of Medicine, Korea)	Techniques 2	rechniques 2	
		ABS-0118		Ten-Year Outcomes of Minimally Invasive Versus Open Transforaminal Lumbar Interbody Fusion in Patients with Single-Level Lumbar Spondylolisthesis	Young Hyun Yoon (Yonsei University College of Medicine, Korea)			
-		ABS-0098		Slip Reduction in Oblique Lateral Interbody Fusion for Degenerative Spondylolisthesis	Hee-Woong Chung (Ajou University Hospital, Korea)			
-		ABS-0048	MIS	Decompression without Fusion in Degenerative Lumbar Spondylolisthesis : Biportal Endoscopic Spinal Surgery	Ho-Jin Lee (Chungnam National University College of Medicine, Korea)	Free Paper 6	MIS 2	Aug. 17 (Thu), 08:30-09:00
-		ABS-0178			Yu-Ching Hsiao (National Cheng Kung University, Taiwan)			

e #	Abstract No.	Торіс	Title	Presenter	Ses	sion	Date/Time
1	ABS-0042	Biologics	The Relationship between Spino-Pelvic Alignment and Primary Dysmenorrhea	Juehan Wang (West China Hospital, Sichuan University, China)			
2	ABS-0123	Biologics	Comparative Experimental Study on Changes in Serum Bone Turnover Markers and Bone Mineralized Density According to Osteoporosis Drugs after Bony Manipulation in Rabbit Model	Ji-Won Kwon (Yonsei University College of Medicine, Korea)	Free Paper 7	Miscellaneous 1	Aug. 17 (Thu), 15:25-15:55
3	ABS-0312	Material Science	Applying Bioglue® After Durotomy in Intradural Spinal Cord Tumor Causing Neurologic Deterioration	Sun Woo Jang (Asan Medical Center, Korea)	The Tuper 7	Wiscellaneous 1	Mag. 17 (110), 13.23 13.33
4	ABS-0286	Material Science	Monolithic 3D-Printed Silicon Nitride-PEEK Composite Cervical Cages Demonstrate Antimicrobial Effects In Vitro	Ryan Bock (SINTX Technologies, USA)			
1	ABS-0311	Lumbar Degenerative	Does Posterior Lumbar Interbody Fusion Using 16 Degree Rectangular Shape 3-D Cage with Modified Smith-Peterson Osteotomy Provides Proper Segmental Lordosis?	Sung Bum Kim (Kyung-Hee University Medical Center, Korea)			
2	ABS-0125	Lumbar Degenerative	Comparative Analysis of the Occurrence Factors for Adjacent Segment Disease -With Patients Followed More than 10 Years after Lumbar Spinal Fusion-	Taejong Jeong (Sahmyook Seoul Medical Center, Korea)	Free Paper 8	Miscellaneous 2	Aug. 17 (Thu), 15:55-16:25
3	ABS-0198	Lumbar Degenerative	Short-Term Outcomes of B-Dyn Dynamic Fixation System in Treatment of Lumbar Degenerative Diseases.	Ngoc Quyen Nguyen (108 Military Central Hospital, Viet Nam)	nee Faper o	Miscellarieous 2	Aug. 17 (110), 15.55-10.2.
4	ABS-0195	Sacroiliac Joint	Sacroiliac Joint Injection for Management Sacroiliac Joint Pain after Lumbosacral Spinal Fusion Surgery: A Retrospective Study at One Center in Vietnam	Vo Thanh Nghia (Neurosurgery, Viet Nam)			
1	ABS-0257		The Treatment of Syringomyelia: How Much Does Etiology and Surgical Technique Affect Outcomes?	Hyun Jun Jang (Gangnam Severance Hospital, Korea)			
2	ABS-0220	Trauma, Tumor &	Trends in Survival and Surgical Methods in Patients Surgically Treated for Metastatic Spinal Tumors: 25-Year Experience in a Single Institution	Han-Seok Yang (Samsung Medical Center, Sungkyunkwan University School of Medicine, Korea)	Free Deper 0	Trauma, Tumor &	Ave. 17 (Thu) 10:25 10:5
3	ABS-0140	Infection	Bone Bridge Effect for the Treatment of Acute Osteoporosis Vertebral Compression Fractures: Multistrategic Approach Using Anabolic Versus Anti-Resorptive Agents	Ja-Yeong Yoon (Sun General Hospital, Korea)	Free Paper 9	Infection 1	Aug. 17 (Thu), 16:25-16:5
4	ABS-0049	intection	Clinical Outcomes of Surgical Debridement Only in Pyogenic Spondylitis	Ohsang Kwon (Seoul National University Bundang Hospital, Korea)			
1	ABS-0213		Determining the Instantaneous Center of Rotation of the Cervical Spine via Computer-Assisted Radiographic Analysis	Jae Hyuk Shin (St. Vincent's Hospital, The Catholic University of Korea, Korea)		Biomechanics	
2	ABS-0111	D: I .	Biomechanical Comparison of Posterior Fixation Combinations with an Allograft Spacer between the Lateral Mass and Pedicle Screws	Soo-Bin Lee (Catholic Kwandong University International St.Mary's Hospital, Korea)	Free Paper 10		
3	ABS-0179	Biomechanics	Exploring the Correlation between MRI Degenerative Stages of Intervertebral Discs, Chemical Composition, and Biomechanical Properties of the Nucleus Pulposus	Kuo-Yuan Huang (National Cheng Kung University Hospital, College of Medicine, National Cheng Kung University, Taiwan)			Aug. 17 (Thu), 16:25-16:5
4	ABS-0230		The Effect of a New Tethering Device on the Biomechanics of Short-Segment Fusion of the Lumbar Spine: A Finite Element Analysis	Natthaphat Viriya (Chulalongkorn University, Thailand)			
1	ABS-0015	Spinal Arthroplasty	Lumbar Arthroplasty for Treatment of Primary or Recurrent Lumbar Disc Herniation	Joseph Maalouly (Spine Ortho Clinic, Australia)			
2	ABS-0057	Cervical Degenerative	The Result of Treating Myelopathy due to Cervical Disc Herniation with Anterior Cervical Discectomy and Fusion Surgery	Duy Nguyen Nhat (University of Medicine and Pharmacy at Ho Chi Minh City, Viet Nam)	F D 11		
3	ABS-0095	Cervical Degenerative	Unconstrained Cervical Total Disc Replacement Not One Design Suits Every Patient. Case Report	Juan Amaya (Spine Ortho Clinic, Colombia)	Free Paper 11	Miscellaneous 3	Aug. 17 (Thu), 16:25-16:55
4	ABS-0280	Regenerative Medicine	Injectable Nanomaterial-Based Peptide Hydrogel: A Novel Therapeutic Approach for Intervertebral Disc Regeneration	Inbo Han (CHA Univ. School of Medicine, Korea)			
1	ABS-0127		Effect of Preoperative Acupuncture and Epidural Steroid Injection on Postoperative Infection after Lumbar Spinal Surgery	Sahyun Sung (College of Medicine, Ewha Womans University Seoul Hospital, Korea)		Trauma, Tumor & Infection 2	Aug. 17 (Thu), 16:55-17:25
2	ABS-0298	Trauma,	Pharmacokinetic Interpretation of Applying Local Drug Delivery System for the Treatment of Deep Surgical Site Infection in the Spine	Ahmad Khalid Madadi (Inje University, Afghanistan)	F D 43		
3	ABS-0124	Tumor & Infection	Which Factors Are Associated with the Risk of Re-Operation after Perculamences Wetebroplacy or Kyphoplacy for Thoracolumbar Ventebral Facture? Analysis of the National Health Insurance Service Claims Data in Kones (2006-2017)	Jae Sin Lee (Yonsei University College of Medicine, Korea)	Free Paper 12		
4	ABS-0203		Anatomical Consideration for Anterior Approach of Cervicothoracic Junction: A CT Image Analysis	Eugene Park (Kyungpook National University Hospital, Korea)			
1	ABS-0116	Value,	The Comprehensive Enhanced Recovery after Surgery (ERAS) Protocol in the Entire Spinal Surgery: A Comparative Analysis of Clinical Outcomes and Medical Costs between Primary Spinal Tumors and Degenerative Spinal Diseases	Woon Tak Yuh (Hallym University Dongtan Sacred Heart Hospital, Korea)			
2	ABS-0047		Risk of Reoperation and Infection Rate after Spine Osteotomy and Fusion Compare with Spinal Fusion Alone	Jaewon Shin (National Health Insurance Service, Korea)	F D 12	Value, Outcomes	
3	ABS-0129	Healthcare	The Modified Frailty Index Can Predict the Postoperative Complications after Lumbar Spine Surgery	Jiwon Park (Korea University Ansan Hospital, Korea)	Free Paper 13	& Healthcare Economics	Aug. 17 (Thu), 16:55-17:2
4	ABS-0160	Economics	Does Epidural Steroid Injection Affect Osteoporosis in Patients with Denosumab Therapy?	JunHan Kim (CHA Bundang Medical Center, CHA University, Korea)		Leonomies	
1	ABS-0204	Pediatric Spine	The Role of Rhizotomy in Surgery for Cerebral Palsy in Children	Normurod Zekriyayev (Republican Scientific and Practical Medical Center of Neurosurgery, Uzbekistan)			
2	ABS-0277	Pediatric Spine	Case-Based Review of Surgical Treatment for Pediatric Sacrococcygeal Teratomas	Mohammad Mohsen Mosleh (Inje University Ilsan Paik Hospital, Graduate School of Medicine, Afghanistan)	5 5 44		
3	ABS-0241	Value, Outcomes & Healthcare Economics	Tandem Spinal Stenosis: A Proposed Algorithm Based on Systematic Review	Todsapon Chancharoenchai (Chulalongkorn University, Thailand)	Free Paper 14	wiscellaneous 4	Aug. 17 (Thu), 16:55-17:2
4	ABS-0031	Value, Outcomes & Healthcare Economics	Feasibility Assessment of an Expandable Lumbar Interbody Cage in Patients with High-Risk Factors for Subsidence: Preliminary Report.	Jeongik Lee (Chung-Ang University Gwangmyeong Hospital, College of Medicine, Chung-Ang University, Korea)			
1	ABS-0296		Optimal Surgical Methods for Solitary Metastasis of the Thoracolumbar Spine	Chang-Min Ha (Samsung Medical Center, Sungkyunkwan University School of Medicine, Korea)			
2	ABS-0045	Trauma,	Some Aspects of Dorsal Stabilization in Odontoid Fractures	Konstantin Semkin (Simferopol Emergency Hospital, Russia)		Trauma, Tumor &	
3	ABS-0304	Tumor & Infection	Application of Open Door Laminoplasty Following Intradural Tumor Resection in Cervical, Thoracic, and Lumbar Spine	Andhika Yudistira (Universitas Brawijaya, Indonesia)	Free Paper 15	Infection 3	Aug. 18 (Fri), 08:00-08:3
	ABS-0039		Balloon Kyphoplasty as Palliative Care for Painful Pathological Spinal Fracture Followed by Lung Cancer Metastasis: A Cohort Study	Junxin Zhang (The First Affiliated Hospital of Soochow University, China)			

pe #	Abstract No.	Торіс	Title	Presenter	Ses	sion	Date/Time
1	ABS-0089	Endoscopic	How to Manage Intraoperative and Postoperative Bleeding in Unilateral Biportal Endoscopic Spine Surgery	Yong Jin Park (Suncheon Hana Hospital, Korea)			
2	ABS-0182	Technologies & Techniques	Learning Curve and Clinical Outcome of Biportal Endoscopic Transforaminal Lumbar Interbody Fuusion	Sang Bum Kim (Sejong Cheung Nam University Hospital, Korea)	Free Paper 16	Endoscopic Technologies & Techniques 3	Aug. 10 (5-1) 00:00 00:20
3	ABS-0240		What Is the Real Cause of a Postoperative Spinal Epidural Hematoma in Hypertensive Patients?	Young Rok Go (Seoul Sacred Heart General Hospital, Korea)			Aug. 18 (Fri), 08:00-08:30
4	ABS-0040	Techniques	Analysis of the Results of Surgical Treatment of Herniated Intervertebral Discs in the Lumbar Spine Using Endoscopic Microdiscectomy and Standard Microdiscectomy.	Dostorijon Eshkulov (Republican Specialized Scientific and Practical Medical Center of Traumatology and Orthopedics, Uzbekistan)			
1	ABS-0080		The Influence on Adjacent Lumbar Segment after Oblique Lumbar Interbody Fusion for Spondylolisthesis.	. Tae Shin Kim (Champodonamu Hospital, Korea)			
2	ABS-0192	MIS	Does Direct Decompression Necessary for Lateral Lumbar Interbody Fusion (LLIF)?: A Randomized Control Trial	Worawat Limthongkul (Chulalongkorn University and King Chulalongkorn Memorial Hospital, Thailand)	Eroo Dopor 17	MIS 3	Aug. 18 (Fri), 08:00-08:30
3	ABS-0228	14112	Risk Factors for Predicting "Clinical" Indirect Decompression Failure	Kaweekrai Anusart (Chulalongkorn University, Thailand)	Free Paper 17	11113 3	Aug. 16 (FII), 06.00-06.50
4	ABS-0231		Effect of Difference Hip Positions on Lumbar Lordosis in Single Lateral Position for Lateral Lumbar Interbody Fusion.	Natavut Prasertkul (Chulalongkorn University and King Chulalongkorn Memorial Hospital, Thailand)			
1	ABS-0032	Emerging	Transpedicular Intravertebral Augmentation Using Expandable Cage in Kummell Disease: A Novel Anterior Column Support Technical Note	Kwang-Sup Song (Chung-Ang University Hospital, College of Medicine, Chung-Ang University, Korea)			
2	ABS-0066	Technologies	Frontal Channel EEG-Based Biomarkers for Pain Severity Detection: Spectral Analysis, Phase-Amplitude Coupling, And Machine Learning Integration	Seungjun Ryu (Daejeon Eulji University Hospital, Korea)	Free Deper 19	Emerging Technologies & Techniques 1	Aur 18 (Fri) 08-20 00-00
3	ABS-0205	&	Deep Learning Approach for Automatic Point Detection and Sagittal Alignment Analysis in Whole-Spine Lateral Radiographs	Sung Hyun Noh (Ajou University Hospital, Korea)	Free Paper 18		Aug. 18 (Fri), 08:30-09:00
4	ABS-0206	Techniques	Comparative Study of Sagittal And Coronal Plane balance of the Spine Measured Using a 3D Anthropometric Device and Spine X-Ray	Tae Hoon Kang (SMG-SNU BRM Medical Center, Korea)			
1	ABS-0167	Endoscopic	Expansion of Application of Unilateral Biportal Endoscopy in Degenerative Thoracic Disease	Hun-chul Kim (Daechan Hospital, Korea)	Free Paper 19	Endoscopic Technologies & Techniques 4	
2	ABS-0194		Posterior Cervical Foraminotomy Using Endoscopic Spine Surgery	Taehwan Chun (Samsung Grand Hospital, Korea)			Aur 10 (54) 00-20 00-00
3	ABS-0233		Is Surgeon's Uniportal Experience Important For Unilateral Biportal Endoscopic Laminetomy? Comparative Analysis of Learning Curve Beginner and Uniportal Expert	Young San Ko (Keimyung University, Korea)			Aug. 18 (Fri), 08:30-09:00
4	ABS-0261	Techniques	Percutaneous Endoscopic Lumbar Interbody Fusion B Transkambin r Posterolateral Approach? A Novel Technique-Expandable Tunnel or ProtectionOf Exiting RootAnd Traversing Root	Yi-Hung Huang (Chia Yi Christian Hospital, Taiwan)			
1	ABS-0172		A Comparative Analysis of Bi-Portal Endoscopic Spine Surgery and Unilateral Laminotomy for Bilateral Decompression in Multilevel Lumbar Stenosis Patients	Sub-Ri Park (Yonsei University College of Medicine, Korea)	Free Paper 20	MIS 4	Aug. 18 (Fri), 08:30-09:00
2	ABS-0190	MIC	An Expanded Surgical Corridor for Oblique Lumbar Interbody Fusion at L4/5: A Magnetic Resonance Imaging Study	Pakawas Praisamti (Chulalongkom University and King Chulalongkom Memorial Hospital, Thailand)			
3	ABS-0297	MIS	Minimally Invasive Transforaminal Lumbar Interbody Fusion for Spondylolisthesis: 2 Years Results at Vietduc Hospital	Tien Nguyen Le Bao (Orthopedic, Spine Surgeon, Viet Nam)			
4	ABS-0025		A Less Sacrifice of Stabilizing Structure Treatment by Bilateral-Contralateral Decompression for Spinal Stenosis in Degenerative Spondylolisthesis Using Unilateral Biportal Endoscopy	Dong Hyun Lee (The Leon Wiltse Memorial Hospital, Korea)			
1	ABS-0276		The Radiographic Assessments of Spino-Pelvic Compensation Using lot-Based Real-Time Ischial Pressure Adjustment	Min-Cheol Seok (Inje University Ilsan Paik Hospital, College of Medicine, Korea)			
2	ABS-0087	Non-	Spondylitis Treated with Best Effort of Conservative Therapy	Ryoo Fujisawa (Teine Keijinkai Hospital, Japan)	Free Deven 21	Neg	Aug 10 (54) 1445 1545
3	ABS-0271	Operative Care	The Effectiveness of an Aerobic Exercise Training Programme on Patients with Chronic Neck Pain During a Short and Long-Term Follow Up: A Prospective Double-Blind Randomized Control Trial.	Amira Daher (PhD, Israel)	Free Paper 21	Non-Operative Care	Aug. 18 (Fri), 14:45-15:15
4	ABS-0254		Could a Simple X-Ray be a Screening Tool for Thoracic Ossification of Ligamentum Flavum?	Hyungjoo Kwon (Nowon Eulji Medical Center, Korea)			
1	ABS-0050		Foraminal Decompression Technique during ACDF for Cervical Radiculopathy that Provides a Better Outcome: Total Uncinatectomy vs. Partial Uncoforaminotomy	JooYoung Lee (Dong-A Medical Center, University of Dong-A College of Medicine, Korea)			
2	ABS-0020	Cervical	Posterior Expansive Foraminotomy Before Laminectomy Combined Wi Th Pedicle Screw Fixation Can Decrease the Incidence of CS Palsy in Complex Surgery in Patients with Severe Myeloradiculopathy	Mahmoud Abdou (Fayoum University College of Medicine, Egypt)	F D 22		
3	ABS-0139	Degenerative	Shoulder Traction as a Possible Risk Factor for C5 Palsy in Anterior Cervical Surgery: 8 Cadaveric Study	Junhan Kwon (Yonsei University, Korea)	Free Paper 22	Cervical Degenerative 1	Aug. 18 (Fri), 15:15-15:45
4	ABS-0078		Lateral Deviation of the Hyoid Bone and Thyroid Cartilage Influences Prevertebral Soft Tissue Swelling and Dysphagia after Anterior Cervical Discectomy and Fusion	Jun-Young Choi (Dongguk University Ilsan Hospital, Korea)			
1	ABS-0214		Radiographical Pattern Following Multi-Level Anterior Cervical Discectomy and Fusion: 'Bony Buttress Formation'	Chang Hwa Ham (Korea University Guro Hospital, Korea)			
2	ABS-0046	Cervical	The Changes in Neck Range of Motion after Laminoplasty According to Cervical Foraminal Stenosis	Woo-Seok Jung (National Health Insurance Service Ilsan Hospital, Korea)	Free Deper 22		Aug 10 (54) 1545 1515
3	ABS-0088	Degenerative	Comparative Analysis of Surgically Treated Cervical Calcium Pyrophosphate Dihydrate Deposition Versus Cervical Ossification of the Yellow Ligament Presenting with Myelopathy	y Patrick Timtiman (Gangnam Severance Hospital, Yonsei University College of Medicine, Philippines)	Free Paper 23	Cervical Degenerative 2	Aug. 18 (Fri), 15:45-16:15
4	ABS-0097		Reciprocal Changes in Radiological Parameters of Patients after Expansive Open-Door Laminoplasty: Preoperative Cervical Lordosis Is Inconsequential in K-Line Positive Cases	Junseung Lee (Inje University Haeundae Paik Hospital, Korea)			

• # /	Abstract No.	Торіс	Title	Presenter	Ses	sion	Date/Time	
1	ABS-0029		Evaluation of the Efficacy and Safety of 3D Printing Porous Titanium Cage with Non-Window Vesus Window Type in a Single-Level Posterior Lumbar Interbody Fusion: A Prospective, Randomized, Multicenter Study	Dae-Woong Ham (Chung-Ang University Hospital , Korea)				
2	ABS-0060	Lumbar	Acute Phase Side Effects of Escherichia Coli-Derived Bone Morphogenetic Protein-2 in Lumbar Fusion Surgery	Hee Jung Son (Nowon Eulji Medical Center, Eulji University School of Medicine, Korea)	Eroo Dapor 24	Lumbar Degenerative 1	Aug 10 (Ed) 101E 104	
3	ABS-0094 [	Degenerative	Comparision of Adjacent Segmental Diseases after Minimally Invasive and Open Transforaminal Lumbar Interbody Fusion for 10 Years	Han-Bin Jin (National Health Insurance Service Ilsan Hospital, Korea)	Free Paper 24	Lumbar Degenerative 1	Aug. 16 (FII), 16.15-16.4	
4	ABS-0038		Deep Learning Model for Prediction of OVF Collapse	Sung Bae Park (Seoul National University Boramae Medical Center, Korea)				
1	ABS-0090		Effect of Bone Morphogenetic Protein (BMP) on Time-To-Fusion After One-Level Transforaminal Lumbar Interbody Fusion Surgery (TUF) Based on the Difference of Bone Density	Sang-Ho Kim (National Health Insurance Service Ilsan Hospital, Korea)				
2	ABS-0147	Lumbar	Mini-Open Intercostal Retroperitoneal Approach for Upper Lumbar Spine Lateral Interbody Fusion	Dong Wuk Son (Pusan National University Yangsan Hospital, Korea)	Free Deper 25	Lumber Deservation 2	A	
3	ABS-0069 [	Degenerative	Subsidence after L5-S1 Transforaminal Lumbar Interbody Fusion (TLIF) Using 3D-Printed Porous Titanium Interbody Cage; Single Institution Case Series	Jungwoo Hur (Eunpyeong St.Mary's Hospital, The Catholic University of Korea, Korea)	Free Paper 25	Lumbar Degenerative 2	Aug. 16 (FII), 16.45-17	
4	ABS-0219		The Influence of Rheumatoid Arthritis on Higher Reoperation Rates over Time Following Lumbar Spinal Fusion: A Nationwide Cohort Study	Jin-Sung Park (Samsung Medical Center, Sungkyunkwan University School of Medicine, Korea)				
1	ABS-0170		Impact of Uniformly Right-Side Opening Laminoplasty on Postoperative C5 Palsy in Patients with Degenerative Cervical Myelopathy	Se-Han Park (Kyung Hee University Hospital, Korea)				
2	ABS-0305	Cervical	Preliminary RCT Results Comparing Allograft and Novomax Cage in Anterior Cervical Discectomy and Fusion	Yanting Liu (Seoul St. Mary's Hospital, College of Medicine, The Catholic University of Korea, Korea)	5 5 96			
3	ABS-0177 [	Degenerative	Effectiveness of Nasotracheal Intubation in Anterior Cervical Surgery Including C3 Lesions	Jong Ho Kim (Soonchunhyang University Bucheon Hospital, Korea)	Free Paper 26	Cervical Degenerative 3	Aug. 19 (Sat), 08:00-08:3	
4	ABS-0207		Comparison of Basic Characteristics and Postoperative Outcomes of Patients with Cervical Myelopathy at an Early Age (<45 Years Old); How Is It Different from Conventional Myelopathy?	Yung Hong Lee (Hallym University Sacred Heart Hospital, Hallym University College of Medicine, Korea)				
1	ABS-0310	<b>F</b>	Multi-Pose-Based Convolutional Neural Network Model for Diagnosis of Patients with Central Lumbar Spinal Stenosis	Chang-Hyun Lee (Seoul National Univ Hospital, Korea)		Emerging Technologies & Techniques 2		
2	ABS-0145	Emerging echnologies	Surgical Complications and Incomplete Canal Widening of the Vertebral Body Sliding Osteotomy to Treat Cervical Myelopathy	Sung Tan Cho (Ilsan Paik Hospital, Inje University, Korea)	Free Paper 27			
	ABS-0273	&	Early-Stage Chronic Venous Disorder as a Cause of Leg Pain Overlooked for Lumbar Spinal Disease	DongHoon Yang (Pohang Stroke and Spine Hospital, Korea)			Aug. 19 (Sat), 08:00-08:	
4	ABS-0114	Techniques	Diagnosis of Traumatic Thoracolumbar Fracture Using Deep Learning Model with CT	Han Dong Lee (Ajou University, School of Medicine, Korea)		rechniques 2		
1	ABS-0253		Cervical Foraminal Stenosis as a Risk Factor for Cervical Kyphosis Following Cervical Laminoplasty	Joonoh Seo (Yonsei University Wonju College of Medicine, Korea)		Cervical Degenerative 4	Aug. 19 (Sat), 08:30-09:00	
2	ABS-0099	Cervical	Bladder and Bowel Dysfunction in Patients with Spinal Compressive Myelopathy	Jea Seok Park (Inje University Haeundae Paik Hospital, Korea)	Free Paper 28			
3 /	ABS-0187 [		Is It "In" Or "Out"? The Optimal Fluoroscopic Views for Intraoperative Determination of Proper Lateral Mass Screw Placement. Spine	Byounggu Lee (Sejong Cheung Nam University Hospital, Korea)				
4	ABS-0268		Restoration of Range of Motion Following Cervical Arthroplasty for Treatment of Severe Cervical Disc Degenerative Diseases: A 1-Year Follow-Up Study	Yi-Syue Tsou (Taipei Medical University, Taiwan)				
1	ABS-0161	_ ·	Advantages of L5 Lamina Hook in Surgical Correction for Adult Spinal Deformity and Its Indications	Billy Francis Hung (Kyung Hee University Hospital at Gangdong, Kyung Hee University, Philippines)				
2	ABS-0185	Emerging echnologies	Advantage of Single-Position Oblique Lumbar Interbody Fusion with Percutaneous Pedicle Screw Instrumentation	Min-Gu Jang (Konyang University Hospital, Korea)		Emerging Technologies &	Aug. 19 (Sat), 08:30-09:00	
	ABS-0082	&	Detection of Cervical Foraminal Stenosis from Oblique Radiograph Using Convolutional Neural Network Algorithm	Sehan Park (Asan Medical Center, University of Ulsan College of Medicine, Korea)	Free Paper 29			
4	ABS-0238	Techniques	Real-Time Artificial Intelligence Model for Detection and Classification of Degenerative Disc Disorders	Wongthawat Liawrungrueang (School of Medicine, University of Phayao, Thailand)		Techniques 3		
1	ABS-0055		Risk Factors for Radiologic Adjacent Segment Degeneration Following Minimally Invasive Oblique Lumbar Interbody Fusion of L4-L5 Level and Above	Dong-Ho Kang (Seoul National University College of Medicine and Seoul National University Hospital, Korea)				
2	ABS-0148	Lumbar	Postoperative Mri Analysis of more than 400 Cases of OLIF: Hidden, But Not to be Overlooked Potential Complications	Suhun Lee (Pusan National University Yangsan Hospital, Korea)				
	ABS-0054		The Fate of Pre-Existing L5-S1 Degeneration Following Oblique Lumbar Interbody Fusion of L4-L5 and Above	Sam Yeol Chang (Seoul National University College of Medicine and Seoul National University Hospital, Korea)	Free Paper 30	Lumbar Degenerative 3	Aug. 19 (Sat), 10:45-1	
4	ABS-0117		A Comparison between Cortical Bone Trajectory Screws and Traditional Pedicle Screws in Patients with Single-Level Lumbar Degenerative Spondyloiisthesis: 5 Year Results	Sung-ryul Choi (Yonsei University College of Medicine, Korea)				
	ABS-0270		Ligamentum Flavum Sparing Unilateral Laminotomy for Bilateral Recess Decompression (ULBRD): Surgical Technique and Clinical Results	Woo-Keun Kwon (Korea University Guro Hospital, Korea University College of Medicine, Korea)				
		Endoscopic echnologies	Outcomes of Patient with Lumbar Disc Herniation Undergoing Unilateral Biportal Endoscopic Surgery	Duong Tran Vu Hoang (Xuyen A General Hospital, Ho Chi Minh City, Viet Nam)		Endoscopic		
	ABS-0226	&	Endospine Surgery in Adjacent Segment Disease. A Viable Alternative to TLIF? - A Technical Note and Case Report	Dinesh Naidu (Sengkang General Hospital, Singapore)	Free Paper 31	5	Aug. 19 (Sat), 10:45-1	
_	ABS-0232	Techniques	End Plate Spur. The Forgotten Pathology in Lumbar Foraminal Stenosis and How We Handle It Using BESS(Biportal Endoscopic Spine Surgery)	Yilun Huang (Seng Kang General Hospital Singapore, Singapore)		Techniques 5		
	ABS-0156		Different Pathoanatomy of Central Stenosis in Isthmic Lumbar Spondylolisthesis - Intersegmental Stenosis	Hyuk-joon Sohn (Keimyung University Dongsan Hospital, Korea)				
	ABS-0212	Lumber	Radiographic and Clinical Outcomes after Stand-Alone Anterior Lumbar Interbody Fusion for Symptomatic L5-S1 Retrolisthesis					
		Lumbar Degenerative	A New Grading System for Endplate Spur in Lumbar Foraminal Stenosis	Sung Cheol Park (Burnin Hospital Seoul, Korea)	Free Paper 32	Lumbar Degenerative 4	Aug. 19 (Sat), 11:15-11	
5		5	Postoperative Urinary Retention after Oblique Lumbar Interbody Fusion Under the Systematic Management Protocol	Hangeul Park (Seoul National University Hospital, Korea)				

Presentation Type	# Abstract	۰۰. Topic	Title	Presenter	Session	Date/Time
	1 ABS-01	01	Factors Affecting Restoration of the Segmental Lordosis after Lateral Access Spinal Surgery	Hae-Dong Jang (Soonchunhyang University Bucheon Hospital, Korea)		
	2 ABS-00	11 MIS	Percutaneous Pedicle Screw Fixation in Lumbal Spondylosis Dissorder with Instability : Analysis of Accuracy for 500 Screws Placement	Farid Yudoyono (Hasan Sadikin Hospital, Faculty of Medicine, Universitas Padjadjaran, Indonesia)	Free Paper 33 MIS 5	Aug. 19 (Sat), 11:15-11:45
	3 ABS-02		Comparison of Prespind Maclo Degeneration and Chical Outcome between Protonic Lambar Interloody Facion will Supplement Interprisona Process Fraction and Conventional Open Transformational Lambar Interloody Facion in Low-Grade Lambar Spondylofabetesk	Jiun-Cheng Shiu (An-Nan Hospital-China Medical University, Taiwan)		Aug. 19 (3at), 11.15-11.45
	4 ABS-02	22	Clinical Outcomes of Kyphoplasty in the Treatment of Osteoporotic Vertebral Fractures - Could It Possibly Advance the Priority ?	Ruey-Mo Lin (AnNan Hospital, China Medical University, Taiwan)		

Presentation Type	#	Abstract No.	Торіс	Title	Presenter	Session	Date/Time
	1	ABS-0106	3S-0107	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)		
E-Poster	2	ABS-0107		Uppermost Instrumented Vertebro-Pelvic Tit Angle: A New Radiographic Parameter for Prediction of Proximal Junctional Failure in Patients Undergoing Thoracolumbar Fasion for Adult Spinal Deformity	Se-Jun Park (Samsung Medical Center, Sungkyunkwan University School of Medicine, Korea)	E-Poster Exhibition	Aug. 17 (thu) - Aug. 19 (Sat)
	3	ABS-0113		Midline Muscle-Sparing Approach for Circumferential Minimally Invasive Spine Surgery (cMIS) in Adult Spinal Deformity (ASD) Correction	Neel Anand (Cedars Sinai Medical Center, USA)		//ug. 15 (5ut)
	4	ABS-0256		Risk Factor Analysis of Distal Junctional Failure after Long Level Posterior Cervical Surgery and Instrumentation	Donghun Kim (Eunpyeong St. Mary's Hospital, Korea)		
	5	ABS-0272		Surgery Using an Risc Scree in Patients with Non-Antibulatory Neuromacolar Scolicols Worsens Hip Soblauation by Reducing the Palvic Tilling Angle, (Inhationship between Pelvic Parameters and Hip Soblauation in Surgery Using a Mono-Hisc Scree)	Sang-Ho Kim (College of Medicine, Yonsei University, Korea)		
	6	ABS-0152		Defining Spino-Pelvic Alignment in Adult Population over 60 Years Old: Prospective Analysis of 214 Volunteers	Sung Hyun Noh (Ajou University Hospital, Korea)		
	7	ABS-0157		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)		
	8	ABS-0141	Adult Spinal	Connecting the S2 Alar-Iliac Screw Head to the Satellite Rod for Surgical Correction of Degenerative Sagittal Imbalance	Sung Tan Cho (Ilsan Paik Hospital, Inje University, Korea)		
	9	ABS-0150	Deformity	Defining Whole Spine Sagittal Alignment Parameters in Normal 3666 Population Using Machine Learning	Sung Hyun Noh (Ajou University Hospital, Korea)		
	10	ABS-0159		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)		
	11	ABS-0138		An Anterior Supplemental Screw Can Prevent Anterior Cage Migration in Oblique Lateral Interbody Fusion at L5-S1	Hee-Woong Chung (Ajou University Hospital, Korea)		
	12	ABS-0154		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)		
	13	ABS-0184		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)		
	14	ABS-0171		Posterior Thoracic Interbody Fusion - When Is It Useful	Min-Gyu Lee (Orthopaedics, Korea)		
	15	ABS-0246		Surgical Treatment of Kimmerle Anomaly: Early Research Results	Mansur Aliev (Department of Neurosurgery of Samarkand State Medical University, Uzbekistan)		
	16	ABS-0165		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)		
	17	ABS-0283	Biologics	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)		
	18	ABS-0074		Clinical and Radiologic Outcomes of Anterior Sliding Osteotomy and Fusion (ASDF): A Single Center Experience	Donghun Kim (Eunpyeong St. Mary's Hospital, Korea)		
	19	ABS-0081		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)		
-	20	ABS-0021		Cervical Kinematic Change after Posterior Full-Endoscopic Cervical Foraminotomy for Disc Herniation or Foraminal Stenosis	Chi Heon Kim (Seoul National Univeristy Hospital, Korea)		
	21	ABS-0051		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)		
	22	ABS-0146		Comparison between Atlantoaxial Fusion and Occipitocervical Fusion: Clinical Implications of Fixating the Atlanto-Occipital Joint	Sung Tan Cho (Ilsan Paik Hospital, Inje University, Korea)		
	23	ABS-0274		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)		
	24	ABS-0151	Cervical	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)		
	25	ABS-0158	Degenerative	Which Radiographic Parameter Can Aid in Deciding Optimal Allograft Height for Anterior Cervical Discectomy and Fusion?	Jun-Young Choi (Dongguk University Ilsan Hospital, Korea)		
	26	ABS-0155		Morphologic Change of Corticocancellous Allograft Used for Anterior Cervical Discectomy and Fusion	Jun-Young Choi (Dongguk University Ilsan Hospital, Korea)		
-	27	ABS-0169		Surgical Outcomes of Extensive Dome-Like Laminoplasty Using En Bloc Resection of C2 Inner Lamina for Patients with Severe Cord Compression Behind C2 Body	Hong-Sik Park (Kyung Hee University Hospital, Korea)		
	28	ABS-0196		The Effect of Posterior Cervical Laminoplasty with Dome Laminotomy on Cervical Alignment and Disability in Patients with Cervical Spondylotic Myelopathy Patients	Sung Hoon Choi (Hanyang University Hospital, Korea)		
	29	ABS-0202		Bicortical Laminar Screws for Posterior Fixation of Subaxial Cervical Spine: A Radiologic Analysis with Computed Tomography Images	Eugene Park (Kyungpook National University Hospital, Korea)		
	30	ABS-0263		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)		
	31	ABS-0102		Posterior Preventive Foraminatomy before Laminectomy Com-Bined with Pedde Screw Fixation May Decrease the Incidence of CS Palay in Complex Cervical Spine Surgery in Patients with Severe Myeloradiculopathy	Yong-Ho Lee (Yonsei University College of Medicine, Korea)		

pe # Abstract No.	Торіс	Title	Presenter	Session	Date/Time
32 ABS-0293		Deep Learning Model for Grading Metastatic Epidural Spinal Cord Compression on Staging CT	Naresh Kumar (National University Health System, Singapore)		
33 ABS-0225		Three-Dimensional Quiz-Game-Based Education for Spine Surgical Workforces	Seon-Jin Yoon (Severance Hospital, Korea)		
34 ABS-0294		Deep Learning Model for Classifying Metastatic Epidural Spinal Cord Compression on MRI	Naresh Kumar (National University Health System, Singapore)		
35 ABS-0134	Emerging	Screw Placement for Extremely Small Lumbar Pedicles in Scoliosis	JooYoung Lee (Dong-A Medical Center, University of Dong-A College of Medicine, Korea)		
36 ABS-0142	55	Long-Term Outcomes of Vertebral Body Sliding Osteotomy for the Treatment of Cervical Myelopathy: A Minimum of 5-Year Follow-Up	Sung Tan Cho (Ilsan Paik Hospital, Inje University, Korea)		
37 ABS-0291	&	Role of Icotec Carbon Fiber Implants for Spine Tumour Disease - A Multicentre Singapore Experience	Naresh Kumar (National University Health System, Singapore)		
38 ABS-0188	Techniques	3D Printing in Spinal Surgery: Current and Future	Eugene Park (Kyung Hee University Hospital, Korea)		
39 ABS-0313		is It Necessary to Extend Fusion Segment When We Meet Screw Loosening and Norunion? 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)		
40 ABS-0183		Unilateral Spinous Process Noncovering Hook Type	Byounggu Lee (Sejong Cheung Nam University Hospital, Korea)		
41 ABS-0197		Machine Learning-Based Measurement of the Regional and Global Spinal Parameters Using the Concept of Incidence Angle of Inflection Points	Sung Hoon Choi (Hanyang University Hospital, Korea)		
42 ABS-0121		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)		
43 ABS-0085		Comparison of Minimal Invasive Versus Biportal Endoscopic Transforaminal Lumbar Interbody Fusion For Single-Level Lumbar Disease	Kim Ju Eun (Baroseomyeon Hospital, Korea)		
44 ABS-0071		Risk Factors Analysis for Inferior Clinical Outcome and Recurrence after Full-Endoscopic Interlaminar Discectomy (FEID) for Lumbar Disc Hemiation; A Prospective Observational Study	Jungwoo Hur (Eunpyeong St.Mary's Hospital, The Catholic University of Korea, Korea)		
45 ABS-0180		In Vivo Comparison of Positive Microbial Culture by Wound Irrigation Methods: Biportal Endoscopic Versus Open Microscopic Transforaminal Lumbar Interbody Fusion	Minseok Kang (Anam Hospital, Korea University College of Medicine, Korea)		
46 ABS-0210		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)		
47 ABS-0300		Full Endoscopic Transpedicular Approach for Highly Migrated Ruptured Disc	Yongsoo Choi (Wooridul Spine Hospital, Korea)		
48 ABS-0010	Endoscopic	Full Endoscopic of Interlaminar Approach for Bilateral Decompression in Lumbar Spinal Ganal Stenosis : Evaluation of Clinical and Radiographic Outcome 1 Year Follow Up	Farid Yudoyono (Hasan Sadikin Hospital, Faculty of Medicine, Universitas Padjadjaran, Indonesia)		
49 ABS-0044	Technologies	Uniportal Full Endoscopic Spinous Process Preserving Laminectomy for Bilateral Decompression in Cervical Stenotic Myelopathy. (5 Level Endoscopic Decompression, 2 Disease Entity, CSM/OPI)	Hyun-Jin Ma (Daegu Wooridul Spine Hospital, Korea)		
50 ABS-0248	&	Percutaneous Endoscopic Thoracic Discectomy ; Case Report of Highly Migrated Thoracolumbar Disc Herniation	Youngmin Lee (Anyang Wiltse Memorial Hospital, Korea)		
51 ABS-0086	Techniques	Two Cases in Which FED to the Thoracic Disc Was Performed without Drilling Bones	Ryoo Fujisawa (Teine Keijinkai Hospital, Japan)		
52 ABS-0215		A Preliminary Report of Foraminal Decompression in Adult Isthmic Spondylolisthesis :Pathoanatomy and Endoscopic Posterior Approach	Dae-Jung Choi (Himnaer Hospital, Korea)		
53 ABS-0244		Endoscopic Correction of Spinal Sagittal Imbalance	Won Joong Kim (Synergy Orthopedic Clinic, Korea)		
54 ABS-0175		Removal Technique of Degenerative Epidural Cyst with Biportal Endoscopic Surgery	Dongyun Kim (Saeum Hospital, Korea)		
55 ABS-0236		Navigation Guided Endo-TLIF in Degeneration Lumbar Lesion And: Tips and Tricks	Yi-Hung Huang (Chia Yi Christian Hospital, Taiwan)		
56 ABS-0239		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)		
57 ABS-0245		Endoscopic Surgery + Flexible Rod = Awesome Results!	Sangyoup Han (Suwon Leon Wiltse Memorial Hospital, Korea)		

ntation Type	#	Abstract No.	Торіс	Title	Presenter	Session	Date/Time
	58	ABS-0030		The Evaluation of Feasibility of Psoas, Paraspinal, and Gluteal Muscle Index as a Predictor for Diagnosing Sarcopenia in Patients with Degenerative Lumbar Disease	Dae-Woong Ham (Chung-Ang University Hospital , Korea)		
	59	ABS-0067		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)		
	60	ABS-0053		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)		
	61	ABS-0059		Comparison of Minimally Invasive and Open Tlif Outcomes with more than Seven Years of Follow-Up	Yoonjoong Hwang (Korea University Ansan Hospital, Korea)		
	62	ABS-0076		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)		
	63	ABS-0056		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)		
	64	ABS-0243		Open Midline Decompression (OMD) with Ligament Reconstruction for Multi-Level Degenerative Lumbar Spinal Stenosis in Elderly Patients over the Age of 805	Sang-Ho Lee (Cheongdam Wooridul Spine Hospital, Korea)		
	65	ABS-0126		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)		
	66	ABS-0287		5-Year Radiological Outcomes Post an Interlaminar Device Insertion for Symptomatic Lumbar Spinal Stenosis	Naresh Kumar (National University Health System, Singapore)		
	67	ABS-0026	Lumbar Degenerative	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)		
	68	ABS-0269	Degenerative	Impact of Social Distancing on Degenerative Spinal Diseases during the Covid-19 Pandemic Period	Jun-Hoe Kim (Seoul National University Hospital, Korea)		
	69	ABS-0217		Comparison of Radiologic & Cinical Outcome of Posterior Lumbar Interbody Fusion Using Unikateral Cage with Unikateral Facetectomy and Contralateral Facet Fusion Versus Conventional Posterior Lumbar Interbody Fusion Using Bilateral Cages	Suk Hyun Hwang (Seoul Red Cross Hospital, Korea)		
	70	ABS-0193		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)		
	71	ABS-0303		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)		
	72	ABS-0306		Long-Term Clinical and Radiographic Outcome of Instrumented Facet Fusion of Lumbar Spine.	Dong Min Seo (Korea University Guro Hospital, Korea)		
	73	ABS-0063		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)		
	74	ABS-0064		Recanalization of External Iliac Artery Occlusion in Patient with Spinal Stenosis Using Medications: A Case Report	Geon-U Kim (Eunpyeong St. Many's Hospital, College of Medicine, The Catholic University of Korea, Korea)		
	75	ABS-0242		Spinal Stenosis Cases of Achondroplasia Patient, Case Review	Seung Jin Choi (Korea University Guro Hospital, Korea)		
	76	ABS-0023		Cauda Equina Syndrome due to Huge Lumbar Disc Herniation	Ji Soo Moon (Daegu Wooridul Spine Hospital, Korea)		
	77	ABS-0285		Novel 3D Printable PEEK-HA-Mg2Sio4 Composite Material for Spine Implants: Biocompatibility & Imaging Compatibility Assessments	Naresh Kumar (National University Health System, Singapore)		
	78	ABS-0070	-	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)		
	79	ABS-0250		Mid Term Efcacy and Safety of Escherichia Coli Derived Rhbmp 2/ Hydroxyapatite Carrier in Lumbar Posterolateral Fusion: A Randomized, Multicenter Study Minjoon Cho1 · Ki Han You8 ·	Minjoon Cho (SMG-SNU Boramae Medical Center, Korea)		
	80	ABS-0186	Science	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)		
	81	ABS-0266		Preliminary Evaluation of a New Vertebroplasty Material in Tibial Defects of Ovariectomized Rat Model	Je Hoon Jeong (Soonchunhyang University, Bucheon Hospital, Korea)		
	82	ABS-0043		Hydrogel Reservoir as "Self-Contained" NP Cell Delivery Vehicle for Immunoregulation to Repair Degenerated Intervertebral Disc	Juehan Wang (West China Hospital, Sichuan University, China)		

# Abstract No.	Торіс	Title	Presenter	Session	Date/Time
83 ABS-0122		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)		
84 ABS-0135		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)		
85 ABS-0278		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)		
86 ABS-0100		Clinical and Radiological Outcomes of Minimally Invasive Oblique Lumbar Interbody Fusion at L5-S1	Hae-Dong Jang (Soonchunhyang University Bucheon Hospital, Korea)		
87 ABS-0164		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)		
88 ABS-0237		Assessment of Adjacent Segment Changes Following Single-Level Oblique Lateral Interbody Fusion (OLIF): Insights from Radiographic Assessment	Kaweekrai Anusart (Chulalongkorn University, Thailand)		
89 ABS-0133		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)		
90 ABS-0018		Biportal Endoscopic Thoracic Decompression	Seung-Hyun Choi (Busan Korea Hospital, Korea)		
91 ABS-0201	MIS	Clinical Outcome of Oblique Lumbar Interbody Fusion with 3D-Printed Titanium Cage	Eugene Park (Kyungpook National University Hospital, Korea)		
92 ABS-0224	IVIIS	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)		
93 ABS-0255		Clinical and Radiological Results of Biportal Endoscopic Lumbar Interbody Fusion : More than 2 Year Follow Up	Dong Geun Lee (Leon Wiltse Memorial Hospital, Korea)		
94 ABS-0264		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)		
95 ABS-0096		Factors Affecting Segmental Lordotic Angle in Oblique Lateral Interbody Fusion at L5-S1	Nam-Su Chung (Ajou University Hospital, Korea)		
96 ABS-0267		Endoscopic Discectomy for Lumbar Disc Herniation after Decompression Surgery	Ji Soo Moon (Daegu Wooridul Spine Hospital, Korea)		
97 ABS-0275		Additional Level Endoscopic Discectomy with One Incision after Diagnostic Selective Nerve Root Block	Ji Soo Moon (Daegu Wooridul Spine Hospital, Korea)		
98 ABS-0279		Awake Unilateral Biportal Endoscopic Thoracic Decompression - Technical Note -	Tae Hoon Kang (SMG-SNU BRM Medical Center, Korea)		
99 ABS-0307		Unilateral Biportal Endoscopic Decompression Surgery for Histopathological Diagnosis and Abscess Removal in Spinal Tuberculosis: A Case Series	Youngsuk Hwang (Keimyung University Dongsan Hospital, Korea)		
100 ABS-0189		Oblique Lumbar Interbody Fusion for Congenital Solitary Kidney with Vascular Malformation : A Case Report	Byounggu Lee (Sejong Cheung Nam University Hospital, Korea)		
101 ABS-0109	Navigation &	The Sequence of Oblique Lumbar Interbody Fusion: Reduction First or Cage First?	Chang-Min Ha (Samsung Medical Center, Korea)		
102 ABS-0249	Robotics	Double Endplates Penetrating Screw Technique and Cross Trajectory Technique Using Robotic Navigation System	Sho Fujiwara (Osaka Gyoumeikan Hospital, Japan)		
103 ABS-0168	Non-Operative Care	The Efficacy of Hyaluronidase in Transforaminal Epidural Steroid Injection	Jae Yeun Hwang (Kangnam Sacred Heart Hospital, Hallym University School of Medicine, Korea)		
104 ABS-0302		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)		
105 ABS-0041		Vertebral Bone Quality Score as a Novel Predictor of Proximal Junctional Kyphosis after Thoracic Adolescent Idiopathic Scoliosis Surgery	Juehan Wang (West China Hospital, China)		
106 ABS-0068	Pediatric Spine	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)		
107 ABS-0073		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)		
108 ABS-0072		Correction of the Craniospinal Compliance in the Treatment of the Hydrocephalus Combined with the Spinal Hernia	Bakhtiyor Talipov (Resident Neurosurgeon, Uzbekistan)		
109 ABS-0289	Spinal Arthroplasty	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)		

sentation Type	# Abstract No.	Торіс	Title	Presenter	Session	Date/Time
	110 ABS-0061		Incidence and Treatment Trends of Infectious Spondylodiscitis in South Korea :A Nationwide Population-Based Study	Hee Jung Son (Nowon Eulji Medical Center, Eulji University School of Medicine, Korea)		
	111 ABS-0143		Prediction of Progressive Collapse in Osteoporotic Vertebral Fractures Using Conventional Statistics and Machine Learning	Sung Tan Cho (Ilsan Paik Hospital, Inje University, Korea)		
	112 ABS-0144		Measuring the Paraspinal Muscles as an Important Tool for Predicting the Overall Survival Period after Spine Surgery in Lung Cancer Patients with Spine Metastasis	Sung Tan Cho (Ilsan Paik Hospital, Inje University, Korea)		
-	113 ABS-0093		Sub-Multivariate Logistic Regression for In-Hospital Patient Falls (Including only Primary Surgery Patients)	Han-Bin Jin (National Health Insurance Service Ilsan Hospital, Korea)		
-	114 ABS-0103		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)		
-	115 ABS-0292		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)		
-	116 ABS-0288	Trauma,	Unipedicular-Screw Index Vertebra Manipulation Technique for Minimally Invasive Short-Segment Thoracolumbar Fracture Fixation	Naresh Kumar (National University Health System, Singapore)		
-	117 ABS-0295		Selection Criteria for Vertebral Augmentation	Sho Fujiwara (Osaka Gyoumeikan Hospital, Japan)		
-	118 ABS-0282	Infection	Psuedogout of the Spine Mimicking Infection: A Case Report	Jessica Thor (Changi General Hospital, Singapore)		
-	119 ABS-0247		The Importance of Mr-Tractography in the Diagnosis of Spinal Cord Tumors	Mansur Aliev (Department of Neurosurgery of Samarkand State Medical University, Uzbekistan)		
-	120 ABS-0131		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)		
-	121 ABS-0308		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)		
-	122 ABS-0052		Trial and Chronic Lumbosacral Epidural Stimulation to Regain Voluntary Motor Control after Complete Motor Paralysis	Alena Militskova (Kazan Federal University, Russia)		
-	123 ABS-0181		Acute Epidural Hematoma Following Cervical Spinal Fracture in a Patient with Ankylosing Spondylitis	Byounggu Lee (Sejong Cheung Nam University Hospital, Korea)		
-	124 ABS-0079		Lymphatic Vessels: A Neglected Channel in Spinal Infection	Jie Liu (The Third Affiliated Hospital, Southern Medical University, China)		
-	125 ABS-0119		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)		
-	126 ABS-0216		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)		
-	127 ABS-0065		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)		
-	128 ABS-0128	Value,	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)		
-	129 ABS-0176		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)		
-	130 ABS-0221	Healthcare Economics	Mortality Risk after the First Occurrence of Osteoporotic Vertebral Compression Fractures in the General Population: A Nationwide Cohort Study	Jong-hin Lee (Samsung Medical Center, Sungkyunkwan University School of Medicine, Korea)		
-	131 ABS-0130		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)		
-	132 ABS-0104		The Effect of Psychological Factors on Post-Surgical Outcomes in Spinal Surgery Patients	Koo yeon Lee (National Health Insurance Service Ilsan Hospital, Korea)		
	133 ABS-0034		Significance of Body Mass Index on Thoracic Ossification of the Ligamentum Flavum in a Chinese Population	Jialiang Lin (Peking University Third Hospital, China)		
	134 ABS-0290		Does Patient Blood Management Affect Outcomes in Metastatic Spine Tumour Surgery? A Review of Current Concepts	Naresh Kumar (National University Health System, Singapore)		