



# Program

## Friday, 2 July.

### 08:40-08:55 Opening Remarks

### 09:00-09:45 Faculty Lecture 1-3

Moderators : Hiroshi Yamada (Wakayama Medical University)  
Seok Woo Kim (Hallym University Sacred Heart Hospital)

- FL1 Medical reform of navigation technology in minimally invasive spinal treatment (MIST) ..... Ken Ishii
- FL2 The Concept of Vesselplasty in Osteoporotic Vertebral Fractures..... Darwono A. Bambang
- FL3 Minimal Access Non-Fusion Surgery for Idiopathic Scoliosis ..... Hee-Kit Wong

### 09:55-10:20 Free Paper 1 Full End Discectomy

Moderators : Fujio Ito (Aichi Spine Hospital)  
Keng-Chang Liu (Buddhist Dalin Tzu Chi General Hospital)

- FP1-1 Transforaminal full-endoscopic discectomy for the patients with down-migrated lumbar disc herniation under local anesthesia ..... Fumitake Tezuka
- FP1-2 Clinical results of transforaminal full-endoscopic lumbar discectomy for lumbar disc herniation combined with asymptomatic spinal canal stenosis ..... Jiro Hirayama
- FP1-3 Withdraw
- FP1-4 Comparison of the efficacy of electromagnetic navigation and C-arm fluoroscopy guided percutaneous endoscopic transforaminal discectomy in the treatment of lumbar disc herniation: 2-Year Follow-Up Study ..... Yongpeng Lin

### 10:20-10:50 Free Paper 2 Full End Decompression

Moderators : Haruki Funao (International University of Health and Welfare)  
Ho-Jin Lee (Chungnam National University)

- FP2-1 How to cope an open posterior lumbar decompression surgery using single-portal spinal endoscope(Delta)? ..... Hongjian Wang
- FP2-2 Percutaneous stenosis endoscopic lumbar decompression for the lumbar stenosis ..... Fujio Ito
- FP2-3 Early return to work after minimally invasive full endoscopic decompression surgery in medical doctors: a case series. .... Kosuke Sugiura
- FP2-4 Full Endoscopic Treatment for Symptomatic Cage Migration after Lumbar Interbody Fusion ..... Keng-Chang Liu
- FP2-5 Selection of surgical approach for the treatment of thoracic spinal stenosis by percutaneous spinal endoscopy ..... Jingwei Bi

### 10:55-11:25 PAMISS Seminar 1

Moderator : Koichi Sairyo (Tokushima University)

Co-sponsored by **elliquence international**

- PS1-1 The Evolution of Lumbar Discectomy Surgery: Making the Transition from Microdiscectomy to Endodiscectomy ..... Choll Kim
- PS1-2 Full endoscopic KLIF-The minimally invasive interbody fusion..... Koichi Sairyo



**11:25-11:55 PAMISS Seminar 2**

Moderator : Munehito Yoshida (Sumiya Social Medical Corporation)

PS2 Pros & Cons of Full Endoscopic Lumbar Spinal Decompression and Fixation ..... Akira Dezawa

**12:00-12:30 Special Lecture 1**

Moderator : Shinichi Konno (Fukushima Medical University)

SL1 Sustainable Development Goals (SDGs) of Full-Endoscopic Spine Surgery ..... Koichi Sairyo

**13:00-13:25 Free Paper 3 Full Endoscopic LIF 1**

Moderators : Fumitake Tezuka (Tokushima University)

Eung Ha Kim (Soonchunhyang University Bucheon Hospital)

FP3-1 Clinical outcomes of full-endoscopic trans-Kambin lumbar interbody fusion (KLIF): Case report and technical note. ... Koichiro Ono

FP3-2 Percutaneous Full Endoscopic Kambin's Lumbar Interbody Fusion (PE-KLIF) using an 8 mm outer-sheath ..... Fujio Ito

FP3-3 Full endoscopic trans-Kambin triangle lumbar interbody fusion: technique and clinical outcome. .... Masatoshi Morimoto

FP3-4 An Innovative Percutaneous Endoscopic Transforaminal Lumbar Interbody Fusion for the Treatment of Lumbar Spinal Stenosis with Degenerative Instability: a prospective cohort study ..... Peng Yin

**13:25-13:50 Free Paper 4 Full Endoscopic LIF 2**

Moderators : Akira Dezawa (Meiryukai)

Zhen-Zhou Li (The PLA General Hospital)

FP4-1 How to cope a posterior lumbar interbody fusion surgery using single-portal spinal endoscope? Application value and boundary of Endo-P/TLIF ..... Hongjian Wang

FP4-2 Expandable cage design for Lumbar Interbody Fusion ..... Jing-Jing Fang

FP4-3 Application of Anterior Expandable Cylindrical Fusion Cages in Full Endoscopic Lumbar Interbody Fusion: Technical Notes and 1-year ..... Zhen-Zhou Li

FP4-4 Biportal endoscopic posterior lumbar decompression and vertebroplasty for extremely elderly patients affected by lower lumbar delayed vertebral collapse with lumbosacral radiculopathy ..... Hyun-Jin Park

**14:00-14:15 PAMISS Seminar 3**

Moderator : Takuya Nikaïdo (Fukushima Medical University)

Co-sponsored by HOYA Technosurgical

PS3 Our action for domestic production of surgical instruments. (RENGTM Project) ..... Shinobu Kanai

**14:15-14:30 PAMISS Seminar 4**

Moderator : Yuichi Takano (Inanami Spine and Joint Hospital)

Co-sponsored by Zimmer Biomet

PS4 Let's master the power tool for screw insertion ..... Masatsune Yamagata



**14:30-14:50 Invited Lecture 1**

Moderator : Hiroaki Nakamura (Osaka City University)

- IL1 To Establish Clearer Evidence in Vertebral Augmentation – Biomaterial and Timing of Surgical Indication Considering Patients’ Age ..... Daisuke Togawa

**14:55-15:20 Free Paper 5 Osteoporosis**

Moderators : Yutaka Hiraizumi (Showa University)  
Ming-Chau Chang (Taipei Veterans General Hospital)

- FP5-1 Importance of early diagnosis and treatment of osteoporotic vertebral body fractures ..... Masatoshi Teraguchi
- FP5-2 Whether the sandwich vertebral bodies (SVBs) have a higher risk of develop new fracture after vertebral augmentation (VA)? ..... Yaoshen Zhang
- FP5-3 Balloon Kyphoplasty for osteoporotic thoracolumbar vertebral fracture with diffuse idiopathic skeletal hyperostosis ... Yoshio Enyo
- FP5-4 Clinical outcomes and 3D morphological evaluation of percutaneous unilateral SpineJack kyphoplasty in elderly fragile burst fractures .....Wei-Yu Li

**15:20-15:45 Free Paper 6 Annular Repair**

Moderators : Kazuhiro Takeuchi (Okayama Medical Center)  
Hyung-Yeon Seo (Chonnam National University Hospital)

- FP6-1 A novel annular repair technique combined with Platelet-Rich Plasma intradiscal injection: A new serial therapeutic model for the treatment of lumbar disc herniation ..... En Song
- FP6-2 A new full endoscopy intradiscal irrigator combined with a novel annular repair device for the treatment of lumbar disc herniation ..... En Song
- FP6-3 Percutaneous laser disc decompression compared to percutaneous endoscopic lumbar discectomy for symptomatic contained lumbar disc herniation ..... Guo Han
- FP6-4 New treatment concept: Full-endoscopic disc cleaning for type 1 Modic change ..... Takashi Inokuchi

**15:55-16:20 Free Paper 7 Full Endo Cervical**

Moderators : Kazuo Nakanishi (Kawasaki Medical School)  
Kuo-Yuan Huang (National Cheng Kung University Hospital)

- FP7-1 Full endoscopic posterior cervical foraminotomy in management of foraminal disc herniation and foraminal stenosis .....Asrafi Rizki Gatam
- FP7-2 Percutaneous posterior endoscopic cervical discectomy for the vertebral artery compression by cervical osteophyte ..... Jianye Wang
- FP7-3 Full-endoscopic uniportal odontoidectomy for the treatment of basilar impression ..... Nahoko Kikuchi
- FP7-4 Effect of cervical micro-endoscopic laminotomy on quality of life: evaluation at 1 year after surgery compared with conventional posterior decompression in patients with cervical myelopathy ..... Hiroshi Kobayashi



**16:20-17:00 Free Paper 8 UBE**

**Moderators : Zenya Ito (Aichi Spine Institute & ITO Orthopaedic Clinic)  
Youk-Sang Kwon (Centum Hospital)**

- FP8-1 Unilateral biportal endoscopic thoracic decompression for management of flavum ligament ossification. Is it enough to improve clinical outcome? .....Asrafi Rizki Gatam
- FP8-2 Choice of endoscopic techniques for lumbar disc herniation and stenosis, percutaneous endoscopic lumbar discectomy, mobile microendoscopic discectomy and unilateral biportal endoscopy .....Baoshan Xu
- FP8-3 Advantages and disadvantages of the application of transforaminal endoscopy in unilateral biportal endoscopic spinal surgery technique ..... Hongjian Wang
- FP8-4 Biportal Endoscopic Interlaminar Lumbar Spine Decompression and Discectomy: Detailed Technique, Learning Curve and and Pitfalls for Beginners ..... Omar Luthfi
- FP8-5 Comparison of UBELD and PELD in Early Learning Curve of Lumbar Disc Herniation ..... Xianglong Meng
- FP8-6 Clinical comparison of unilateral biportal endoscopic laminotomy versus microendoscopic laminotomy for single-level laminotomy: a single-center, retrospective analysis - .....Zenya Ito

**17:00-17:25 Free Paper 9 MEL**

**Moderators : Hiroshi Hashizume (Wakayama Medical University)  
Luthfi Gatam (Fatmawati General Hospital)**

- FP9-1 Long-term outcomes following lumbar microendoscopic decompression for lumbar spinal stenosis with and without degenerative spondylolisthesis: Minimum 10-year follow-up ..... Takato Aihara
- FP9-2 Ten years follow-up of microendoscopic laminotomy for lumbar spinal stenosis ..... Keiji Nagata
- FP9-3 Microendoscopic decompression for lumbosacral foraminal stenosis: a novel surgical strategy based on anatomical considerations using 3D image fusion with MRI/CT ..... Shizumasa Murata
- FP9-4 Risk of Reoperation and Infection after Percutaneous Endoscopic Lumbar Discectomy and Open Lumbar Discectomy: A Nationwide Population-Based Study..... Taewook Kang

**17:35-18:50 Faculty Lecture 4-8**

**Moderators : Toru Hasegawa (Seirei Awaji Hospital)  
Yen-Mou Lu (Kaohsiung Medical University Hospital)**

- FL4 Technical tips & pitfalls of microendoscopic decompression & fusion for lumbar foraminal stenosis..... Hiroshi Yamada
- FL5 Full-endoscopic transforaminal decompression of exiting and traversing nerve: proctorship guidance and lessons from cases ..... Jin-Sung Kim
- FL6 The idea of Intra Spinal Canal Treatment..... Koji Sato
- FL7 Minimally invasive trans-sacral canal plasty for failed back surgery syndrome ..... Haruki Funao
- FL8 Trans-Sacral Epiduroscopic Laser Decompression (SELD) .....Zenya Ito



**Saturday, 3 July.**

**08:40-09:55 Faculty Lecture 9-13**  
Moderators : Hidetomi Terai (Osaka City University)  
Tsung-Jen Huang (Taipei Medical University Hospital)

- FL9 Current status of intraoperative spinal cord monitoring and its optimization .....Takanori Saito
- FL10 Lateral-anterior lumbar interbody fusion (LaLIF) for lumbar degenerative disease: technical notes, surgical system, and mid-term outcomes ..... Zhao-Min Zheng
- FL11 Minimally invasive anterior corpectomy and reconstruction with an expandable cage with rectangular footplates for osteoporotic vertebral fracture. .... Hidetomi Terai
- FL12 Percutaneous endoscopic transforaminal lumbar interbody fusion: a novel technique- sentinel pinning for protection of exiting root and preservation of facet joint ..... Yi Hung Huang
- FL13 Treatment of multi-levels Lumbar degeneration using MISS Concept ..... Darwono A. Bambang

**10:05-10:25 Free Paper 10 Finest Imaging 1**  
Moderators : Kazuhiro Hasegawa (Niigata Spine Surgery Center)  
Jian Wang (Xinqiao Hospital, Third Military Medical University)

- FP10-1 Usefulness of Simultaneous MR neurography and apparent T2 mapping before microendoscopic surgery to treat patient with radiculopathy due to cervical disc herniation ..... Yawara Eguchi
- FP10-2 Minimally invasive treatment assisted by diffusion tensor imaging for lumbar disc herniation with adjacent segmental imaging spinal stenosis ..... Liu Lijia
- FP10-3 Credible preoperative diagnosis of lumbar disc herniation using diffusion tensor imaging and diffusion tensor tractography ..... Liu Lijia

**10:25-10:45 Free Paper 11 Finest Imaging 2**  
Moderators : Shigeto Ebata (International University of Health and Welfare)  
Warat Tassanawipas (Thai Army Hospital)

- FP11-1 Diffusion tensor imaging with fiber tracking provides a valuable quantitative and clinical evaluation for compressed lumbosacral nerve roots: a systematic review and meta?analysis ..... Weishi Liang
- FP11-2 Using artificial intelligence to predict delayed union in fresh osteoporotic vertebral fractures on magnetic resonance images ..... Akito Yabu
- FP11-3 A Deep Convolutional Neural Network Using MRI: Automated Differentiation between Osteoporotic Vertebral Fracture and Vertebral Compression Fractures Due to Spinal Metastasis ..... Satoshi Maki

**10:50-11:20 PAMISS Seminar 5**  
Moderator : Tokumi Kanemura (Konan Kosei Hospital)  
Co-sponsored by Medtronic Sofamor Danek

- PS5 The State of the Art in Minimally Invasive Spine Procedures using Surgical Synergy .....Yoshihisa Kotani



**11:20-11:50 PAMISS Seminar 6**

Moderator : Seiji Ohtori (Chiba University)

Co-sponsored by Johnson & Johnson

PS6 Measures to prevent complications for minimally invasive spinal surgeries ..... Takayuki Fujiyoshi

**12:00-12:30 Special Lecture 2**

Moderator : Ken Ishii (International University of Health and Welfare )

SL2 Extended reality (XR: VR/AR/MR) for spatial surgical navigation and online telemedicine ..... Maki Sugimoto

**13:00-13:30 Invited Lecture 2**

Moderator : Seiji Ohtori (Chiba University)

Co-sponsored by Kaken Pharmaceutical

IL2 Condoliase chemonucleolysis for lumbar disk herniation: Optimal indication and long term follow-up ..... Yukihiro Matsuyama

**13:30-14:00 PAMISS Seminar 7**

Moderator : Masatsune Yamagata (Chiba Rosai Hospital)

Co-sponsored by Medtronic Sofamor Danek

PS7 History of anterior lumbar fusion surgery in Japan, our department, and a view of the future of the surgery ..... Seiji Ohtori

**14:05-14:35 Free Paper 12 L-LIF 1**

Moderators : Takanori Saito (Kansai Medical University)  
Jae Chul Lee (Soonchunhyang University Hospital)

FP12-1 Clinical and radiological evaluation of cage subsidence following oblique lateral lumbar interbody fusion: a large cohort, single-centre retrospective review ..... Jiancheng Zeng

FP12-2 Minimally Invasive Oblique Lateral Lumbar Interbody Fusion Combined with Anterolateral Screw Fixation for Lumbar Degenerative Disc Disease ..... Jiancheng Zeng

FP12-3 Three-dimensional Navigation Guided Oblique Lumbar Interbody Fusion (OLIF) Surgery for Lumbar Degeneration Diseases: Preliminary Clinical Application ..... Hongxun Sang

FP12-4 Is Stand-alone Lateral Lumbar Interbody Fusion superior to Instrumented Lateral Lumbar Interbody Fusion for the treatment of Lumbar Degenerative Disease? A Meta-analysis ..... Jingwei Liu

FP12-5 Clinical and Radiological Outcomes of Minimally Invasive Oblique Lumbar Interbody Fusion at L5-S1 ..... Hae-Dong Jang

**14:35-15:05 Free Paper 13 L-LIF 2**

Moderators : Sumihisa Orita (Chiba University Center for Frontier Medical Engineering (CFME) / Chiba University)  
Shing-Sheng Wu (Shin Kong Wu Ho Se Memorial Hospital)

FP13-1 Evaluation of the presence and distribution of air on abdominal computed tomography after thoracolumbar LIF and conventional anterolateral surgeries ..... Tetsuhiro Ishikawa

FP13-2 Risk factors for cage subsidence in minimally invasive lateral corpectomy for osteoporotic vertebral fractures ..... Toshiaki Kotani

FP13-3 Lateral lumbar interbody fusion after reduction using the percutaneous pedicle screw system in the lateral position for Meyerding grade II spondylolisthesis: a preliminary report of a new lumbar reconstruction strategy ..... Masanari Takami

FP13-4 Short segmental fusion with X-CORE® for vertebral pseudarthrosis after osteoporotic vertebral fractures ..... Ryo Taiji



FP13-5 Hounsfield unit values on CT as a predictor for cage subsidence following stand-alone oblique lumbar interbody fusion for the treatment of degenerative lumbar diseases ..... Jian Wang

15:05-15:20 PAMISS Seminar 8

Moderator : Tomoaki Toyone (Showa University)

Co-sponsored by Nuvasive

PS8 Utility of a computer-assisted rod bending system (Bendini®) in spinal instrumentation surgery ..... Toru Funayama

15:20-15:35 PAMISS Seminar 9

Moderator : Yoshiyasu Arai (Saiseikai Kawaguchi General Hospital)

Co-sponsored by Stryker

PS9 Utility of New Ultrasonic Aspirator System (Sonopet iQ) in Spine Surgery ..... Naohiro Kawamura

15:35-16:00 Free Paper 14 Cervical Spine Surgery

Moderators : Yoichiro Hatta (Japanese Red Cross Kyoto Daini Hospital)

Baoshan Xu (Tianjin Hospital)

FP14-1 3D printing motion-preserving cervical joint system implantation for treatment of cervical myelopathy: a first case report .....Xijing He

FP14-2 Replantation of spinous process-lamina complex in the treatment of cervical spine tumor : two cases report and literature review ..... Jiahui Xu

FP14-3 Atlanto-occipital instability associated with revision surgery after C1 laminectomy for a retro-odontoid pseudotumor .....Shunji Tsutsui

FP14-4 Analysis of the Incidence and Risk factors of Postoperative Delirium in Patients with Degenerative Cervical Myelopathy ..... Seok Woo Kim

16:10-16:55 Faculty Lecture 14-16

Moderators : Koji Sato (Japanese Red Cross Aichi Medical Center Nagoya Daini Hospital)

Zheng Zhaomin (The First Hospital Affiliated to Sun Yat-sen University)

FL14 C7-SVA and PI-LL: Key parameters of the successful surgery for dropped head deformity .....Tomoaki Toyone

FL15 Efficiency of Long lateral mass screw for cervical spine diseases - Proposal of a new trajectory ..... Kazuo Nakanishi

FL16 Technical and conceptual review on the L5-S1 Oblique Lateral Interbody Fusion Surgery (OLIF51) ..... Sumihisa Orita

17:00-17:30 Free Paper 15 LBP 1

Moderators : Yasuchika Aoki (Eastern Chiba Medical Center)

Naresh Kumar (National University Hospital Singapore)

FP15-1 Influence of preoperative difference in lumbar lordosis between the standing and supine positions on clinical outcomes after single-level mini-open transforaminal lumbar interbody fusion ..... Shuhei Ohyama

FP15-2 The effect of minimally invasive lumbar decompression surgery on sagittal spinopelvic alignment in patients with lumbar spinal stenosis: a 5-year follow up study..... Hiromitsu Toyoda

FP15-3 Asymptomatic stenosis and factors involved in the new-onset of symptoms after decompression surgery for lumbar spinal stenosis -10-year follow-up..... Kazuyuki Watanabe

FP15-4 Administration of N-acetylcysteine results in regression of fibrogenic and inflammatory signals in cells from hypertrophied ligamentum flavum ..... Hao-Chun Chuang



FP15-5 Indications and effects of condoliase for the treatment of lumbar disc herniation ..... Masahiro Inoue

**17:30-17:55 Free Paper 16 LBP 2**

**Moderators : Sohei Ebara (Shonan Fujisawa Tokushukai Hospital)  
Ruey Mo Lin (An Nan Hospital, China Medical University)**

- FP16-1 Low back pain and lumbar degeneration in Japanese professional baseball players ..... Masatoshi Morimoto
- FP16-2 Intradiscal and epidural Platelet-Rich Plasma Injection for the treatment of Chronic Discogenic Low Back Pain ..... En Song
- FP16-3 Characteristics and surgical outcomes of patients with recurrent lumbar disc herniation after percutaneous laser disc decompression ..... Koji Tamai
- FP16-4 Theoretical strategy for the perioperative management of low back pain with degenerative lumbar disease -Recommendation from the epidemiological study ..... Hiroshi Hashizume

**18:00-18:40 Free Paper 17 MIS-TLIF**

**Moderators : Minori Kato (Osaka City University)  
Jae-Sung Ahn (Chungnam National University Hospital)**

- FP17-1 Biomechanical feasibility of semi-rigid interspinous stabilization assisted lumbar interbody fusion: A Finite Element Study .....Kuo-Yuan Huang
- FP17-2 Results of Groove-entry technique/Hooking screw hybrid instrumentation for osteoporotic vertebral fracture treatment ..... Ivan Sekiguchi
- FP17-3 Clinical outcomes after minimally invasive spinal stabilization for metastatic spinal tumor cases .....Mitsuhiro Hashimoto
- FP17-4 Robotic spine surgery in Spine Hybrid OR ..... Sohei Ebara
- FP17-5 Percutaneous intravascular retrieval of large cement leakage into right atrium following cement-augmented pedicle screw instrumentation ..... Shinji Takahashi
- FP17-6 Comparative analysis of outcomes in minimally invasive TLIF and conventional TLIF ..... Jae-Young Hong

**18:40-19:10 Free Paper 18 MIS-LF**

**Moderators : Yukihiro Nakagawa (Wakayama Medical University Kihoku Hospital)  
Huilin Yang (The First Affiliated Hospital of Soochow University)**

- FP18-1 Mini-open approach with posterior lumbar interbody fusion and supplement interspinous process device have good clinical results in low-grade lumbar spondylolisthesis: short-term outcome study ..... Jun-Cheng Shiu
- FP18-2 Comparative study of posterior surgery for lumbar degenerative diseases with lateral listhesis and scoliotic disc wedging. -minimally invasive posterior decompression vs. transforaminal lumbar interbody fusion- ..... Minori Kato
- FP18-3 May the midline lumbar interbody fusion (MIDLIF) prevent the early adjacent segment degeneration? A minimum 3-year follow-up comparative study of MIDLIF in L4/5 with cortical bone trajectory screw versus traditional pedicle screw fixation ..... Bo Han
- FP18-4 Good five-year postoperative outcomes after facet fusion using a percutaneous pedicle screw system for degenerative lumbar spondylolisthesis ..... Tomohiro Miyashita
- FP18-5 Posterior spinal fixation for thoracolumbar fractures with diffuse idiopathic skeletal hyperostosis using the penetrating endplate screw technique ..... Takahisa Hishiya

**19:10-19:20 Closing Remarks**





**On-demand Thursday thru. Saturday**

- P1 Mesh-hold bone filling container vertebroplasty in the treatment of osteoporotic vertebral fractures with posterior wall injury ..... En Song
- P2 A novel steerable PKP for treatment of thoracolumbar osteoporotic vertebral compression fractures ..... En Song
- P3 Spinal endoscopic-Full see technique for the treatment of lumbar lateral recess stenosis ..... En Song
- P4 Withdraw
- P5 Percutaneous Endoscopic Lumbar Discectomy for Huge lumbar disc herniation with Complete Dural Sac Stenosis via an Interlaminar Approach: A Retrospective Study ..... Liu Lijia
- P6 Indirect decompression of the lumbar spinal canal in degenerative lumbar canal stenosis is possible from posterior approach. .... Ivan Sekiguchi
- P7 Long screws for spacer fixation without lateral mass drilling in double door laminoplasty (Tiptoe Technique)..... Ivan Sekiguchi
- P8 Delta-assisted Full-endoscopic posterior decompression of thoracic myelopathy caused by ossification of the ligamentum flavum: A retrospective clinical study. .... Hongjian Wang
- P9 Is unilateral pedicle screw fixation superior than bilateral pedicle screw fixation in endoscopic lumbar interbody fusion: A retrospective clinical study. .... Hongjian Wang
- P10 Thoracic endoscopic-assisted anterior-lateral decompression and fusion for thoracolumbar and lumbar disc herniation associated with vertebral osteochondrosis.....Baoshan Xu
- P11 Strategy for old osteoporotic fracture of thoracic and lumbar spine with kyphosis and revision after PVP/PKP .....Baoshan Xu
- P12 The cage height selection in oblique lumbar interbody fusion (OLIF): a multi-factor regression analysis..... Jiancheng Zeng
- P13 Lower Hounsfield units on computed tomography are associated with cage subsidence after Oblique Lumbar Interbody Fusion ..... Jiancheng Zeng
- P14 Outcomes of oblique lumbar interbody fusion for L3-5 degenerative disc diseases using anterolateral single-rod screw fixation ..... Jiancheng Zeng
- P15 OLIF Combined with Anterior Fixation for Lumbar Synovial Cysts with Instability ..... Jiancheng Zeng
- P16 Percutaneous Endoscopic Excision and Ablation of Osteoid Osteoma of the Lumbar Spine and Sacrum: A Technical Note and Outcomes ..... Jiancheng Zeng
- P17 The technique and effect of percutaneous endoscopic lumbar discectomy via interlaminar approach for recurrent lumbar disc herniation ..... Jiancheng Zeng