

# Program of the 55th Annual Meeting of the Japanese Society for Spine Surgery and Related Research

The First Day—April 16 (Thursday)

Room 1

## Symposium 1

8 : 10~9 : 40

Moderators : **M. Nakamura**  
**T. Kanemura**

### The Dawn of JSSR-DB Outputs: Real-world Evidence from a National Spine Registry

- 1-1-S1-1 Experience from a Nationwide Surgical Registry: Perspectives on Real-World Data Utilization and Output Generation .....103  
*H. Tachimori, et al.*, Dept. of Health Policy and Management, Keio Univ. School of Medicine
- 1-1-S1-2 Internal validity of Registered Data in JSSR-DB between 2022 and 2023 .....103  
*K. Yamada, et al.*, Database Committee, Japanese Society for Spine Surg. and Related Research
- 1-1-S1-3 Development and Future Directions of the JSSR-DB Risk Calculator Based on Real-World Data: Second Report .....104  
*S. Ikegami, et al.*, Dept. of Rehabilitation Medicine, Shinshu Univ.
- 1-1-S1-4 Construction of a Clinical Indicator Feedback System Using JSSR-DB Data .....104  
*S. Maki, et al.*, Database Committee, Japanese Society for Spine Surg. and Related Research
- 1-1-S1-5 The Role and Potential of PROMs and ePRO in Generating Real-World Evidence .....105  
*S. Takahashi, et al.*, JSSR Database Committee

## Special Lecture 1

10 : 30~11 : 30

Moderator : **M. Watanabe**

- 1-1-SL1-1 The Potential of AI Robots to Transform Healthcare and Nursing/Elder Care .....105  
*T. Ogata*, Waseda Univ.

## Luncheon Seminar 1

11 : 50~12 : 50

Moderator : **M. Matsumoto**

### Experience with the Use of a Modular Pedicle Screw System for AIS and ASD

- 1-1-LS1-1 Smart correction surgery for adolescent idiopathic scoliosis using ModuleX Spinal System .....106  
**K. Watanabe**, Dept. of Orthop. Surg., Keio Univ.
- 1-1-LS1-2 Experience with the Use of a Modular Pedicle Screw System for ASD .....106  
**M. Yagi**, Dept. of Orthop. Surg., International Univ. of Health and Welfare

## Congress President Lecture

13 : 00~13 : 30

Moderator : **M. Takaso**

- 1-1-PL-1 The Mastery of Spinal Arts -Reflections of an Outsider-  
**H. Nagashima**, Dept. of Orthop. Surg., Tottori Univ.

## Cultural Lecture

13 : 30~14 : 30

Moderator : **T. Yuki**

### A Moderated, Candid Conversation with Elite Athletes Who Have Experienced Spinal and Spinal Cord Injuries: What They Want from Healthcare Professionals

- 1-1-CL-1 .....107  
**K. Wada**, Former professional baseball player/Baseball commentator · coach
- 1-1-CL-2 .....107  
**H. Hirota**, Former Japan national trampoline team athlete/Sports commentator

## Symposium 2

16 : 30~18 : 00

Moderators : **M. Sekiguchi**

**T. Tetsunaga**

### Advancing Women in Spine Surgery: Professional Development and Career Support

- 1-1-S2-1 Career Development of Female Spine Surgeons in the Era of Diversity: -Even women can be active surgeons at any age- .....108  
**H. Ataka**, Matsudo Orthop. Hosp.
- 1-1-S2-2 Fostering Women and Young Surgeons in Spine Surgery: Lessons from the MIS Era .....108  
**F. Saiki, et al.**, Dept. of Orthop. Surg., Yokohama Rosai Hosp.

1-1-S2-3	Creating work environments where female spine surgeons -and all surgeons- can thrive .....109 <b>S. Kawasaki, et al.</b> , Dept. of Orthop. Surg., Nara Medical Univ.
1-1-S2-4	Is Being a Woman Spine Surgeon Challenging? .....109 <b>S. Soeda, et al.</b> , Dept. of Orthop., Institute of Biomedical Sciences, Tokushima Univ. Graduate School
1-1-S2-5	Building Sustainable Career Paths for Female Spine Surgeons - A Departmental Approach from a Regional University .....110 <b>K. Nishida</b> , Orthop. Surg., Graduate School of Medicine, Univ. of the Ryukyus

## Room 2

### Educational Lecture 1

8 : 10~9 : 10

Moderator : **S. Ohtori**

1-2-EL1-1	Toward a Smart Hospital Centered on Regional Care Coordination .....110 <b>K. Teramoto, et al.</b> , Faculty of Medicine, Tottori Univ.
-----------	--

### Educational Lecture 2

9 : 20~10 : 20

Moderator : **S. Okada**

1-2-EL2-1	The Use of AI in Spinal Surgery: History, Clinical Applications, and Information Dissemination .....111 <b>W. Narita, et al.</b> , Kameoka Municipal Hosp.
-----------	---

### Invited Lecture 1

10 : 30~11 : 30

Moderator : **K. Hasegawa**

1-2-IL1-1	Advances in Lumbar Sagittal Alignment .....111 <b>C. C. Wong</b> , ALTY Orthop. Hosp., Malaysia
1-2-IL1-2	Proposed age-adjusted sagittal alignment goals for elderly ASD fusion based on normal spinopelvic values from the Wakayama Spine Study .....112 <b>H. Yamada</b> , Dept. of Orthop. Surg., Wakayama Medical Univ.

## Luncheon Seminar 2

11 : 50~12 : 50

Moderator : **H. Nojiri**

- 1-2-LS2-1      A bone quality-based surgical strategy for degenerative spinal disease in elderly patients using CAPS and multilevel LIF .....112  
**K. Maruo, et al.**, Dept. of Orthop. Surg., Hyogo Medical Univ.
- 1-2-LS2-2      Practical Insights to Improve Surgical Outcomes for Osteoporotic Vertebral Fractures: Lessons Learned from Clinical Cases .....113  
**S. Takahashi**, Dept. of Orthop. Surg., Osaka Metropolitan Univ. Graduate School of Medicine

## Afternoon Seminar 1

14 : 40~15 : 40

Moderator : **J. Mizutani**

- 1-2-AS1-1      Impact of anterior surgery in the treatment of degenerative disease and deformity in cervical spine .....113  
**Y. Yukawa**, Spine Center, Nagoya Kyoritsu Hosp.

## Educational Lecture 3

15 : 50~16 : 50

Moderator : **M. Koda**

- 1-2-EL3-1      My Paper Writing and Submission Struggles, Including the Ethics of AI Use .....114  
**S. Ohtori**, Dept. of Orthop. Surg., Graduate School of Medicine, Chiba Univ.

## Invited Lecture 2

17 : 00~18 : 00

Moderator : **M. Watanabe**

- 1-2-IL2-1      Engineering Cell Therapy to Improve Recovery after Spinal Cord Injury .....114  
**M. Oudega**, Northwestern Univ./SRALab, USA
- 1-2-IL2-2      Regenerative Medicine for Spinal Cord Injury Using Human iPS cells .....115  
**N. Nagoshi, et al.**, Dept. of Orthop. Surg., Keio Univ.

## Room 3

## Overseas Invited Lecture 1

8 : 10~9 : 10

Moderator : **D. Sakai**

- 1-3-OIL1-1 Total en bloc resection of the uncinat for cervical spondylotic radiculopathy .....115  
**K. -S. Suk**, Dept. of Orthop. Surg., Yonsei Univ. College of Medicine, Korea (South)
- 1-3-OIL1-2 THE TRUE SPINE SPECIALTY -MY SPINE DREAM OF MY WHOLE LIFE .....116  
**T. V. Vo**, Hosp. for Trauma-Orthop., HCM City, Vietnam

## Overseas Invited Lecture 2

9 : 20~10 : 20

Moderator : **H. Takahashi**

- 1-3-OIL2-1 Long term results of transforaminal percutaneous endoscopic debridement and drainage (PEDD) for lumbar infectious spondylodiscitis .....116  
**T. -S. Fu**, Orthop. Dept., Chang Gung Memorial Hosp., Linkou, Taiwan
- 1-3-OIL2-2 OXLIF or (XLIF-AP): a slight oblique extreme lateral internal body fusion or extreme lateral interbody fusion via ante psoas approach in circumferential mis (cMiS) adult spinal deformity (ASD) surgery .....117  
**G. Liu**, National Univ. Hosp., Singapore

## Luncheon Seminar 3

11 : 50~12 : 50

Moderator : **T. Yoshii**

## The Frontier of Surgical Evolution - Next-Generation Technology for Tissue Protection -

- 1-3-LS3-1 Refined Dural Reconstruction Techniques for Preventing CSF Leakage: A New Option Using Porous Collagen Matrix .....117  
**H. Tominaga**, Dept. of Orthop. Surg., Graduate School of Medical and Dental Sciences, Kagoshima Univ.
- 1-3-LS3-2 Understanding the Strengths and Limitations of Surgical Devices in Spine Surgery .....118  
**H. Nakashima**, Dept. of Orthop. Surg. Nagoya Univ. Graduate School of Medicine

## Afternoon Seminar 2

14 : 40~15 : 40

Moderator : **T. Kaito**

- 1-3-AS2-1 Three Years After Introducing the UBE Lumbar Scope: Current Achievements and Future Perspectives .....118  
**T. Segawa, et al.**, Inanami spine and joint Hosp.

## Overseas Invited Lecture 3

15 : 50~16 : 50

Moderator : **H. Chikuda**

- 1-3-OIL3-1 Decision of Surgical Strategies for Severe Dynamic Sagittal Imbalance (DSI): What, When, and How .....119  
**Y. -C. Kim**, Kyung Hee Univ. Hosp. at Gandong, Seoul, South Korea
- 1-3-OIL3-2 Operative strategies in adult spinal deformity preventing mechanical complications .....119  
**Y. P. Charles**, Dept. of Spine Surg., Univ. Hosp. of Strasbourg, France

## Free Papers 1

17 : 00~18 : 00

Moderator : **T. Takebayashi**

### Cervical Spine Surgery

- 1-3-F1-1 Association of PhenoAge with perioperative complications in cervical degenerative disease surgery patients .....120  
**K. Ito, et al.**, Dept. of Orthop. Surg., International Univ. of Health and Welfare
- 1-3-F1-2 Risk Factors for Airway Swelling After Anterior Cervical Surgery: Utility of the IMSTI Composite Index .....120  
**Y. Ito, et al.**, Musculoskeletal Science, Yokohama City Univ. Graduate School of Medicine
- 1-3-F1-3 Correlation Between Myelopathy Severity and Complications After ACDF: A Multi-center Study .....121  
**A. Horiuchi, et al.**, Dept. of Orthop. and Spinal Surg., GraduateSchool of Medical and Dental Sciences, Institute of Science Tokyo
- 1-3-F1-4 Factors associated with cage migration of anterior cervical discectomy and fusion in elderly patients .....121  
**M. Iwasaki, et al.**, Dept. of Neurosurg., Faculty of Medicine and Graduate School of Medicine, Hokkaido Univ.
- 1-3-F1-5 Peri-Plate Gas on Cervical CT as a Useful Indicator of Delayed Esophageal Perforation After Anterior Cervical Spine Surgery .....122  
**S. Odate, et al.**, Dept. of Orthop. Surg., Gakkentoshi Hosp.

- 1-3-F1-6 Quantitative Assessment of Perioperative Swallowing Function and Predictive Factors for Dysphagia in Anterior Cervical Surgery .....122  
**Y. Ito, et al.**, Musculoskeletal Science, Yokohama City Univ. Graduate School of Medicine
- 1-3-F1-7 Can ultrasonography guided anterior foraminal decompression for proximal cervical spondylotic amyotrophy make surgery safer?.....123  
**S. Nakata, et al.**, Dept. of Orthop. Surg., Showa Medical Univ. Fujigaoka Hosp.

## Room 4

### Free Papers 2

8 : 10~9 : 10

Moderator : **H. Miyamoto**

#### Dropped Head Syndrome 1

- 1-4-F2-1 Surgical outcomes of 51 cases of dropped head syndrome .....123  
**Y. Kudo, et al.**, Dept. of Orthop. Surg., Showa Medical Univ.
- 1-4-F2-2 The Impact of Vertebral Fractures in Patients with Dropped Head Syndrome: Analysis of Global Spinal Alignment in 103 Cases .....124  
**S. Tani, et al.**, Dept. of Orthop. Surg., Showa Medical Univ.
- 1-4-F2-3 Prone position cervical X-ray as a radiographical diagnosis for dropped head syndrome patients .....124  
**H. Yamauchi, et al.**, Dept. of Orthop. Surg., Tokyo Medical Univ.
- 1-4-F2-4 A nuchal ligament reconstruction & stabilization surgery (NLRS) for patients with dropped head syndrome .....125  
**K. Endo, et al.**, Dept. of Orthop. Surg., Tokyo Medical Univ.
- 1-4-F2-5 Contrast-enhanced MRI classification of nuchal ligament injury in Dropped Head Syndrome .....125  
**K. Endo, et al.**, Dept. of Orthop. Surg., Tokyo Medical Univ.
- 1-4-F2-6 Impact of spinal alignment on postoperative cervical kyphosis following posterior decompression for cervical degenerative disc disease .....126  
**K. Takeda, et al.**, Dept. of Orthop. Surg., Keio Univ.
- 1-4-F2-7 A new radiological measurement evaluating cervical muscle endurance in DHS patient: 0-20-40 method .....126  
**T. Iguchi, et al.**, Matsuda Hosp.

## Free Papers 3

9 : 20 ~ 10 : 20

Moderator : **J. Mizutani**

### Dropped Head Syndrome 2

- 1-4-F3-1 Radiological features of cervical degenerative kyphoscoliosis .....127  
**Y. Terashima, et al.**, Dept. of Orthop. Surg., Kobe Rosai Hosp.
- 1-4-F3-2 Relationship between cervical extension ability and quality of life in patients with Dropped Head Syndrome .....127  
**T. Ueshima, et al.**, Dept. of Orthop. Surg., Tokyo Medical Univ.
- 1-4-F3-3 A study of the relationship between whole spinal sagittal alignment and electromyography in patients with dropped head syndrome .....128  
**Y. Miyamoto, et al.**, Dept. of Orthop. Surg., Showa Medical Univ.
- 1-4-F3-4 Effect of Trunk and Leg Muscles on Dropped Head Syndrome: Analysis Using a Human Finite Element Model .....128  
**R. Urata, et al.**, New Spine Clinic Tokyo
- 1-4-F3-5 Morphological Features of the Cervical Spine in Dropped Head Syndrome .....129  
**M. Kusaba, et al.**, Dept. of Orthop. Surg., Kobe Rosai Hosp.
- 1-4-F3-6 Association between Forward Gaze Improvement in Drop Head Syndrome and Muscle Strength and Postural Indicators Before Physical Therapy .....129  
**H. Yamane, et al.**, Saiseikai Hyogo Prefectural Hosp., Rehabilitation Dept.

## Free Papers 4

10 : 30 ~ 11 : 30

Moderator : **K. Sato**

### Pyogenic Spondylitis

- 1-4-F4-1 Seasonality of Pyogenic Spondylodiscitis: An Epidemiological Study Using the DPC Database of 71,134 Cases .....130  
**T. Motoyoshi, et al.**, Dept. of Orthop. Surg., Kudanzaka Hosp.
- 1-4-F4-2 Imaging findings of native vertebral osteomyelitis at six weeks after initiation of antimicrobial therapy: Is 6 weeks really enough? .....130  
**K. Miyamoto, et al.**, Kanto Rosai Hosp.
- 1-4-F4-3 The Utility of the Spinal Infection Treatment Evaluation Score (SITE score) in Surgical Cases .....131  
**S. Saino, et al.**, FURANO KYOKAI Hosp.
- 1-4-F4-4 Evaluation of the Safety and Efficacy of Cage-Assisted Spinal Fixation for Pyogenic Vertebral Spondylitis .....131  
**Y. Mineo, et al.**, Dept. of Orthop. Surg., Hyogo Hyogo Medical Univ.

- 1-4-F4-5 Utility of the Novel Inflammatory Marker LRG in Pyogenic Spondylitis .....132  
**M. Suzuki, et al.**, Dept. of Orthop. Surg., Iwate Medical Univ.
- 1-4-F4-6 Can the SIPscore, developed to assess instability in pyogenic spondylitis, help determine indications for fusion surgery?.....132  
**S. Saito, et al.**, Dept. of Orthop. Surg., Nihon Univ.

### Luncheon Seminar 4

11 : 50~12 : 50

Moderator : **N. Kamei**

- 1-4-LS4-1 Therapeutic Approach with Romosozumab for Osteoporotic Vertebral Fractures: Bone Quality Improvement and Prevention of Subsequent Fractures .....133  
**Y. Ishihama**, Dept. of Orthop. Surg., Kindai Univ. Faculty of Medicine
- 1-4-LS4-2 How Spine Surgeons Can Prevent Vertebral Fracture Cascade: Key Osteoporosis Actions Pre-, Post-Fracture, and Postoperatively .....133  
**N. Suzuki**, Dept. of Musculoskeletal Health Promotion Medicine, Nagoya City Univ., Graduate School of Medical Sciences

### Afternoon Seminar 3

14 : 40~15 : 40

Moderator : **M. Miyazaki**

- 1-4-AS3-1 Prone anterior compression correction technique for diffuse idiopathic skeletal hyperostosis (DISH) .....134  
**K. Nakanishi, et al.**, Dept. of Orthop. Surg., Kawasaki Medical School
- 1-4-AS3-2 Advancements and challenges of posterior stabilization in thoracolumbar fracture with DISH .....134  
**H. Ikuma**, Kagawa Prefectural Central Hosp.

### Free Papers 5

15 : 50~16 : 50

Moderator : **K. Otani**

#### Epidemiology and Functional Assessment

- 1-4-F5-1 Association between multidimensional health literacy and chronic low back pain .....135  
**Y. Endo, et al.**, Dept. of Orthop. Surg., Fukushima Medical Univ.
- 1-4-F5-2 Age-Related Changes in Lumbar and Hip Mobility in a Large Community-Based Cohort: The Wakayama Spine Study .....135  
**H. Kishi, et al.**, Dept. of Orthop. Surg., Wakayama Medical Univ.

1-4-F5-3	Potential involvement of family structure in locomotive recovery following surgery in older patients with lumbar spinal stenosis .....136 <b>K. Kageshima, et al.</b> , Dept. of Orthop. Surg., Fujita Health Univ.
1-4-F5-4	Age-related differences in the MCID after posterior decompression for lumbar spinal stenosis .....136 <b>M. Ozaki, et al.</b> , Dept. of Orthop. Surg., Keio Univ.
1-4-F5-5	Effects of Backpack Load on Sagittal Spinal Alignment in School Children .....137 <b>K. Higa, et al.</b> , Div. of Orthop. Surg., Dept. of Medicine of Sensory and Motor Organs, Faculty of Medicine, Univ. of Miyazaki
1-4-F5-6	Return to work within two years after lumbar surgery: Rates and associated preoperative factors .....137 <b>J. Wakasa, et al.</b> , Dept. of Orthop. Surg., Osaka Metropolitan Univ. Graduate School of Medicine
1-4-F5-7	Risk Factors for Rapid Deterioration of Spinal Sagittal Global Alignment: A 10-Year Study in a Community Cohort .....138 <b>Y. Yamato, et al.</b> , Dept. of Orthop. Surg., Hamamatsu Univ. School of Medicine

## Free Papers 6

17 : 00~18 : 00

Moderator : **T. Kanchiku**

### Osteoporotic Vertebral Fractures & Thoracolumbar Trauma

1-4-F6-1	Early Balloon Kyphoplasty Reduces the Incidence of Adjacent Vertebral Fractures in Patients with Osteoporotic Vertebral Fractures .....138 <b>S. Ito, et al.</b> , Kawasaki Municipal Hosp. Spine and spinal cord center
1-4-F6-2	Clinical evaluation of short-segment fixation with vertebroplasty for thoracolumbar junction fractures: elderly vs. non-elderly comparison .....139 <b>H. Takeshita, et al.</b> , Dept. of Orthop. Surg., Saiseikai Shiga Hosp.
1-4-F6-3	Objective Monitoring of Jewett Brace Compliance in Osteoporotic Vertebral Fractures: A Prospective Sensor-Based Study .....139 <b>T. Funayama, et al.</b> , Dept. of Orthop. Surg., Univ. of Tsukuba
1-4-F6-4	Comparison of romosozumab-denosumab sequential therapy versus two-year bisphosphonate therapy for acute osteoporotic vertebral fracture .....140 <b>H. Nomura, et al.</b> , Nomura Orthop. Clinic
1-4-F6-5	Usefulness of red blood cell distribution width (RDW) in predicting postoperative complications of thoracolumbar spinal trauma .....140 <b>T. Suzuki, et al.</b> , Dept. of Orthop. Surg., Yamagata Univ.

- 1-4-F6-6 Surgical Outcomes of Lateral Approach Vertebral Body Replacement for Kyphotic Deformity Caused by two level Vertebral Fractures .....141  
**H. Matsumori, et al.**, Dept. of Orthop. Surg., Kashiba Asahigaoka Hosp.
- 1-4-F6-7 Correlation between Spread and Load Sharing Classification, and evaluation of interobserver reliability in traumatic thoracolumbar injuries.....141  
**F. Eto, et al.**, Dept. of Orthop. Surg., Mito Medical Center

## Room 5

### English Presentation Award 1

8 : 10~9 : 15

Moderator : **M. Takahata**

#### Basic & Materials

- 1-5-EPA1-1 Withdrawn
- 1-5-EPA1-2 A Novel Biomaterial, Calcium Polyphosphate, Exhibits Osteoinductivity Comparable to Autogenous Bone Graft in a Mouse Spinal Fixation Model .....142  
**S. Egawa, et al.**, Dept. of Orthop. and Trauma Research, Graduate School of Medical and Dental Sciences, Institute of Science Tokyo
- 1-5-EPA1-3 Withdrawn
- 1-5-EPA1-4 Biomechanical Evaluations of Novel Clip-Type Implants for Cervical Double-Door Laminoplasty, Compared with Conventional Hydroxyapatite Spacers: A Cadaveric Study.....143  
**T. Mui, et al.**, Dept. of Orthop. Surg., Nara Medical Univ., Nara, Japan
- 1-5-EPA1-5 GLP-1 Receptor Agonists as a Potential Alternative Strategy to Reduce Spine-related Morbidities in Obese Populations .....144  
**M. -H. Wu, et al.**, Dept. of Orthop., Taipei Medical Univ. Hosp., Taipei, Taiwan
- 1-5-EPA1-6 Serum Deprivation Induces Autophagic Flux and Caspase-Dependent Apoptosis in Human Nucleus Pulposus Cells: Implication for Intervertebral Disc Degeneration and Potential Therapeutic Strategy .....144  
**Y. -Y. Kim, et al.**, The Catholic Univ. of Korea College of Medicine
- 1-5-EPA1-7 Low-Temperature Spine-Specific PMMA Enhances Bone Regeneration via Localized Thermal Necrosis in an Osteoporotic Rat Model.....145  
**Y. -Y. Kim, et al.**, The Catholic Univ. of Korea College of Medicine
- 1-5-EPA1-8 The Efficacy and Safety of Thermosensitive Poloxamer-Based Thermosensitive Material as an Anti-Adhesive Agent in Full Endoscopic Spine Surgery .....145  
**S. Sunpaweravong, et al.**, Faculty of Medicine, Chulalongkorn Univ., Bangkok

## English Presentation Award 2

9 : 25 ~ 10 : 30

Moderator : **K. Tamai****AI & Technology**

- 1-5-EPA2-1 Automated Measurement of Pelvic Parameters Using Convolutional Neural Network in Complex Spinal Deformities: Overcoming Challenges in Coronal Deformity Cases .....146  
**D. -H. Kang, et al.**, Dept. of Orthop. Surg., Samsung Medical Center, Seoul, Republic of Korea.
- 1-5-EPA2-2 Automated Measurement of Cervical Sagittal Parameters Using a Hierarchical Deep Learning Pipeline: A Robust Approach to C7 Obscuration on Radiographs .....146  
**D. -H. Kang, et al.**, Dept. of Orthop. Surg., Spine Center, Samsung Medical Center, Gangnam-gu, Seoul, Republic of Korea
- 1-5-EPA2-3 Generating synthetic lumbar CT myelography from plain CT by a modified cycle generative adversarial network .....147  
**R. Itoga, et al.**, Dept. of Orthop. Surg., Wajokai Eniwa Hosp.
- 1-5-EPA2-4 AI-based pseudo-MRI generation from CT in cervical spinal cord injury using stable diffusion: Clinical and quantitative validation .....147  
**M. Miura, et al.**, Kumagaya general Hosp.
- 1-5-EPA2-5 Validity and reliability of an artificial intelligence-based posture estimation software for measuring spine and lower-limb alignment .....148  
**S. C. Park, et al.**, Dept. of Orthop. Surg., Bumin Hosp. Seoul, Seoul, Republic of Korea
- 1-5-EPA2-6 Evaluating the Degenerative Impact of Unilateral Biportal Endoscopic Discectomy on Lumbar Discs Using AI-Augmented Pfirrmann Grading: A Pre and Postoperative MRI comparison .....148  
**R. Raksintham, et al.**, Dept. of Orthop., Phramongkutklao Hosp.
- 1-5-EPA2-7 Analysis of gait in adult spinal deformity patients using inverse dynamics by AnyBody modeling system .....149  
**H. -J. Kim, et al.**, Spine Center and Dept. of Orthop. Surg., Seoul National Univ. College of Medicine and Seoul National Univ. Bundang Hosp., Gyeonggi, Korea
- 1-5-EPA2-8 Patient-Specific Guides Improve Screw Accuracy and Reduce Mechanical Complications in C1-2 Fusion .....149  
**Y. Chiba, et al.**, Dept. of Orthop. Surg., Iwate Medical Univ., Iwate, Japan

## English Presentation Award 3

10 : 40~11 : 40

Moderator : **H. Toyoda**

### Endoscopic Surgery

- |            |  |     |
|------------|--|-----|
| 1-5-EPA3-1 | The LaRS and E-SAFE technique are effective strategies for preventing dural tear during UBE for Lumbar Spinal Stenosis .....150<br><b>S. Yamaya, et al.</b> , Endoscopic Spine Surg. Center, Dept. of Orthop. Surg., Sendai Nishitaga Hosp.  | 150 |
| 1-5-EPA3-2 | Outcomes of Biportal Endoscopic Versus Open TLIF in Meyerding Grade II or Higher Isthmic Spondylolisthesis .....150<br><b>S. -R. Park, et al.</b> , Dept. of Orthop. Surg., Yonsei Univ. College of Medicine   | 150 |
| 1-5-EPA3-3 | Withdrawn  |     |
| 1-5-EPA3-4 | Impact of postoperative cauda equina clumping on recovery after biportal endoscopic decompression for severe lumbar stenosis .....151<br><b>H. -R. Lee, et al.</b> , Dept. of Orthop. Surg., Korea Univ. Anam Hosp., Seoul, South Korea  | 151 |
| 1-5-EPA3-5 | Comparative Outcomes of Conventional Transforaminal Lumbar Interbody Fusion With Posterior Decompression Surgery Versus Endoscopic Foraminotomy Surgery in Stable Lumbar Foraminal Stenosis An Ambidirectional Cohort Study and 2-year outcome report .....152<br><b>T. Soonthornthum, et al.</b> , Orthop. Dept. ,Queen Savang Vadhana Memorial Hosp. ,Thailand | 152 |
| 1-5-EPA3-6 | Comparative Efficacy and Safety of Minimally Invasive, Full-Endoscopic, and Biportal Transforaminal Lumbar Interbody Fusion for Lumbar Degenerative Diseases: A Network Meta-analysis .....152<br><b>H. -Y. Cheng, et al.</b> , Dept. of Orthop. Surg., National Cheng Kung Univ. Hosp., College of Medicine, National Cheng Kung Univ., Tainan, Taiwan          | 152 |
| 1-5-EPA3-7 | Full-endoscopic lateral recess decompression: How much space do we need? .....153<br><b>S. Sunpaweravong, et al.</b> , Faculty of Medicine, Chulalongkorn Univ., Bangkok   | 153 |

### Luncheon Seminar 5

11 : 50~12 : 50

Moderator : **S. Inami**

- |           |   |     |
|-----------|---|-----|
| 1-5-LS5-1 | Getting Started with Adult Spinal Deformity Surgery .....153<br><b>T. Banno</b> , Dept. of Div. of Surg. Care, Morimachi Hamamatsu Univ. School of Medicine | 153 |
|-----------|---|-----|

## Afternoon Seminar 4

14 : 40~15 : 40

Moderator : **S. Takenaka**

### Full Endoscopic Spine Surgery (FESS) The journey from introduction to advanced AFESS

- 1-5-AS4-1 From Beginner to Board Certification in Percutaneous Endoscopic Spinal Procedures: Learning in a Mentor-Absent Environment .....154  
**T. Watanabe**, Dept. of Orthop. Surg., Oji General Hosp.
- 1-5-AS4-2 Basic and advanced techniques for AFESS using a FESS scope .....154  
**M. Tatsumura, et al.**, Tsukuba Univ. Hosp. Mito Clinical Education and Training Center/Mito Kyodo General Hosp.

## English Presentation Award 4

15 : 50~16 : 55

Moderator : **H. Arima**

### ASD : Surgical Results

- 1-5-EPA4-1 Relationship Between Improvement in Functional Mobility Tests and Spinopelvic Parameters, PROs Following Adult Spine Deformity Surgery .....155  
**B. -S. Mun, et al.**, Seoul National Univ. of Bundang Hosp., Seongnam, Korea
- 1-5-EPA4-2 Impact of Polypharmacy on Postoperative Outcomes in Adult Spinal Deformity Surgery .....155  
**J. A. B. Gellangarin, et al.**, West Visayas State Univ.
- 1-5-EPA4-3 Prone Transposas Lateral Interbody Fusion for Adult Spinal Deformity: Segmental Lordosis Correction and Neuro Monitoring Outcomes .....156  
**K. Minato, et al.**, Division of Orthop. Surg., Dept. of Regenerative and Transplant Medicine, Niigata Univ. Graduate School of Medical and Dental Sciences, Niigata, Japan.
- 1-5-EPA4-4 Fusion Outcomes and Complication Profiles of rhBMP-2 in 201 Adult Spinal Deformity Patients: A Retrospective Cohort Study .....156  
**H. -J. Kim, et al.**, Dept. of Orthop. Surg., Seoul National Univ. Bundang Hosp., Seongnam, South Korea
- 1-5-EPA4-5 Effect of lumbar stiffness after pan-lumbar arthrodesis on patient-reported outcomes and satisfaction in adult spinal deformity .....157  
**S. -J. Park, et al.**, Dept. of Orthop. Surg., Samsung Medical Center, Seoul
- 1-5-EPA4-6 Intraoperative local methylprednisolone in single-position lateral decubitus oblique lumbar interbody fusion (OLIF) for postoperative anterior thigh pain prevention: a randomized controlled trial .....157  
**K. Prateepsawangwong, et al.**, Dept. of Orthop., Faculty of Medicine, Chulalongkorn Univ.

- 1-5-EPA4-7 The iLLIF Score: A Predictive Success Scoring System for Indirect Decompression in Lateral Lumbar Interbody Fusion .....158  
**W. Singhatanadgige, et al.**, Dept. of Orthop., Faculty of Medicine, Chulalongkorn Univ. and King Chulalongkorn Memorial Hosp., Bangkok, Thailand
- 1-5-EPA4-8 Lateral Lumbar Interbody Fusion with a Bone Defect in Vertebral Body Using Autobone Overlapping Technique .....159  
**C. Bang, et al.**, Dept. of Orthop. Surg., Incheon St. Mary's Hosp., College of Medicine, The Catholic Univ. of Korea, Incheon, Korea

## Free Papers 7

17 : 05~18 : 00

Moderator : **M. Uehara**

### Pelvis & Sacroiliac Joint

- 1-5-F7-1 Spinopelvic fixation surgery in relation to the femoroacetabular impingement syndrome under the ultrasound .....159  
**T. Kozaki, et al.**, Dept. of Orthop. Surg., Wakayama Medical Univ.
- 1-5-F7-2 Treatment Outcomes of Sacroiliac Joint Disorder with Lumbar Comorbidity .....160  
**D. Kurosawa, et al.**, Japan Sacroiliac Joint and Low Back Pain Center, JCHO Sendai Hosp.
- 1-5-F7-3 Prevalence and Clinical Characteristics of Sacroiliac Joint Dysfunction in Patients Undergoing Lumbar Spine Surgery .....160  
**S. Nokariya, et al.**, Dept. of Orthop. Surg., Kitasato Univ.
- 1-5-F7-4 From Lumbar-Driven to Pelvis-Driven Motion: Reconstruction of Spinopelvic Function in Individuals with Chronic Low Back Pain .....161  
**S. Arita, et al.**, Dept. of Orthop. Surg., Wakayama Medical Univ.
- 1-5-F7-5 Finite element analysis in sacroiliac joints of long fusion surgery including pelvis -TANIT vs. S2AI .....161  
**M. Machida, et al.**, Dept. of Ortho. Surg. Saitama Child. Med. Cent.
- 1-5-F7-6 Postoperative changes in Pelvic Incidence from difference due to pelvic anchor (iliac-SAI) .....162  
**N. Tanaka, et al.**, Yamanashi Univ. Hosp.

## Room 6

### English Presentation Award 5

8 : 10~9 : 15

Moderator : **J. Ouchida**

#### AIS & SCI

- 1-6-EPA5-1 Outcome of idiopathic scoliosis using Ultracorrective Night Brace .....162  
**B. Matthieu, et al.**, Dept. of Orthop. pediatric Surg., Université Lyon-est Lyon, France
- 1-6-EPA5-2 Morphological Analysis of Concave Thoracic Pedicles in Adolescent Idiopathic Scoliosis - Focusing on Pedicle Screw Insertion Feasibility .....163  
**N. Sato, et al.**, Dept. of Orthop. Surg., Faculty of Medicine and Graduate School of Medicine, Hokkaido, Japan
- 1-6-EPA5-3 Selective Thoracic Fusion in Adolescent Idiopathic Scoliosis - Predictors for Spontaneous Lumbar Curve Correction .....163  
**M. Ruf, et al.**, SRH Klinikum Karlsbad-Langensteinbach, Center for Spine Surg., Orthop., and Traumatology, Karlsbad, Germany
- 1-6-EPA5-4 Efficacy of Suspension Bending Cast for Early Onset Scoliosis .....164  
**K. Masuda, et al.**, Emergency and Critical Care Medicine, Nara Medical Univ., Nara, Japan
- 1-6-EPA5-5 Achieving pelvic obliquity balance using coronal radiologic parameters in Adolescent Idiopathic Scoliosis .....164  
**P. Gajaseeni, et al.**, Phramongkutklao college of medicine
- 1-6-EPA5-6 Vertebral Rotation Discrepancy for Adding-on When Selecting the Touched Vertebra as the LIV in Idiopathic Scoliosis .....165  
**H. -J. Kim, et al.**, Dept. of Orthop. Surg., Korea Univ. Guro Hosp., Seoul, Republic of Korea
- 1-6-EPA5-7 Development of a predictive model combining serum biomarkers and clinical findings for functional recovery after spinal cord injury .....165  
**G. Ono, et al.**, Spinal Injuries Center
- 1-6-EPA5-8 Awake fMRI Biomarker: Coordinated Key-Region Connectivity Characterizes Functional Recovery After Spinal Cord Injury .....166  
**A. Toga, et al.**, Dept. of Orthop. Surg., Keio Univ. School of Medicine

## English Presentation Award 6

9 : 25~10 : 30

Moderator : **T. Hirai**

### Upper Cervical & Pediatric

1-6-EPA6-1	Withdrawn	
1-6-EPA6-2	Efficacy and Limitations of C1 Laminectomy Alone for Retro-Odontoid Pseudotumor .....167 <b>S. Fujiwara, et al.</b> , Dept. of Orthop. Surg., Faculty of Medicine, Tottori Univ., Tottori, Japan	
1-6-EPA6-3	Clinical Characteristics and Optimal Management of Craniocervical Junction Arteriovenous Fistulas with Subarachnoid Hemorrhage .....167 <b>T. Inoue, et al.</b> , Dept. of Neuro Surg., Saitama Red Cross Hosp.	
1-6-EPA6-4	Anatomical relationship between transverse process and uncinatate process base: Things to check for safe operation to prevent vertebral artery injury during uncinatate process resection .....168 <b>S. -Y. Seok</b> , Busan Bumin Hosp.	
1-6-EPA6-5	How cervical and cervicothoracic scoliosis influence the atlantoaxial joint .....168 <b>P. F. Richter, et al.</b> , Center for Spine Surg., Orthop., and Traumatology, SRH Klinikum Karlsbad-Langensteinbach, Karlsbad, Germany	
1-6-EPA6-6	C2 tilt is a Useful Predictor for Successful Correction of the Trunk Shift in Children with Congenital Cervical/Cervicothoracic Scoliosis .....169 <b>P. F. Richter, et al.</b> , Center for Spine Surg., Orthop., and Traumatology, SRH Klinikum Karlsbad-Langensteinbach, Karlsbad, Germany	
1-6-EPA6-7	Coronal Balance and Compensatory Mechanisms in Congenital Cervicothoracic Scoliosis .....169 <b>M. Ruf, et al.</b> , SRH Klinikum Karlsbad-Langensteinbach, Center for Spine Surg., Orthop., and Traumatology, Karlsbad, Germany	
1-6-EPA6-8	Complex Pediatric Cervical Deformity - Surgical Options in Young Children .....170 <b>M. Ruf, et al.</b> , SRH Klinikum Karlsbad-Langensteinbach, Center for Spine Surg., Orthop., and Traumatology, Karlsbad, Germany	

## English Presentation Award 7

10 : 40~11 : 40

Moderator : **S. Kawasaki**

### Cervical Myelopathy

1-6-EPA7-1	Is Motor Weakness in Cervical Radiculopathy an Indication for Surgery? Analysis of Risk Factors for Poor Recovery .....170 <b>K. Kwon, et al.</b> , Dept. of Orthopedics, Asan medical center, Korea	
------------	---	--

- 1-6-EPA7-2      Selecting the distal fusion level in multilevel posterior cervical fusion: Impact of C7-T1 junctional mobility on postoperative malalignment .....171  
**J. -W. Shin, et al.**, Dept. of Orthop. Surg., Yonsei Univ. College of Medicine, Seoul, Republic of Korea
- 1-6-EPA7-3      Radiologic and Clinical Importance of Lamina Hinge Fracture After Open-Door Cervical Laminoplasty: A Propensity Score-Matched Study.....171  
**G. Jeong, et al.**, Dept. of Orthop. Surg., GangNeung Asan Hosp., Univ. of Ulsan College of Medicine, Gangneung, Republic of Korea
- 1-6-EPA7-4      Restoration of the Anterior Spinal Cord Space correlates with improved postoperative outcomes in cervical myelopathy .....172  
**N. Kim, et al.**, Dept. of Orthop. Surg., Yonsei Univ. College of Medicine
- 1-6-EPA7-5      What are the clinical and radiological outcomes of patients undergoing anterior cervical fusion using zero profile anchored cage?.....172  
**S. Arataki, et al.**, The Dept. of Orthop. Surg., Okayama Rosai Hosp., Japan
- 1-6-EPA7-6      Impact of Grafted Fusion Patterns after Hybrid Anterior Decompression and Fusion for Multilevel Cervical Myelopathy .....173  
**K. Nagasawa, et al.**, Dept. of Orthop. Surg., Institute of Medicine, Univ. of Tsukuba
- 1-6-EPA7-7      CT-based Hounsfield Unit as an alternative osteoporosis assessment in ankylosing spondylitis patients with bamboo spine .....173  
**P. -H. Chou, et al.**, Dept. of Orthop. and Traumatology, Taipei Veterans General Hosp.

## Luncheon Seminar 6

11 : 50~12 : 50

Moderator : **N. Hosogane**

- 1-6-LS6-1      Reconsidering Lateral Access Surgery -Key Points for Safe and Efficient Procedures With a Focus on the LLIF Transpoas Approach- .....174  
**M. Ishihara, et al.**, Dept. of Orthop. Surg., Kansai Medical Univ.
- 1-6-LS6-2      Prone Lateral Lumbar Interbody Fusion (LLIF): Introduction in Japan and Efforts Toward Its Safe Implementation .....174  
**T. Kanemura, et al.**, Dept. of Orthop. Surg., Konan Kosei Hosp.

## Afternoon Seminar 5

14 : 40~15 : 40

Moderator : **T. Kanemura**

- 1-6-AS5-1      Prone extreme lateral interbody fusion. Surgical technique and applications .....175  
**P. Berjano**, IRCCS Galeazzi-Sant'Ambrogio Hosp., Milan, Italy

## English Presentation Award 8

15 : 50~16 : 50

Moderator : **S. Kato**

### Safety & Outcomes

- 1-6-EPA8-1 Risk Factors for False-Positive Alerts in Transcranial Motor Evoked Potential Monitoring: A Prospective Multi-Center Analysis of 13743 Cases .....175  
**H. Ushirozako, et al.**, Dept. of Orthop. Surg., Hamamatsu Univ. School of Medicine, Hamamatsu, Japan
- 1-6-EPA8-2 Impact of Severe Hip and Knee Osteoarthritis on Patient-Reported Outcomes and Global Alignment Following Lumbar Spinal Stenosis Surgery .....176  
**S. Tamagawa, et al.**, Dept. of Orthop., Juntendo Univ. Faculty of Medicine, Tokyo, Japan
- 1-6-EPA8-3 Factors Associated With the Discrepancy Between Postoperative Satisfaction and Recommendation After Spine Surgery: A Multicenter Study .....176  
**H. Nakarai, et al.**, Dept. of Orthop. Surg., The Univ. of Tokyo, Tokyo, Japan
- 1-6-EPA8-4 Prior Hospitalization as an Independent Risk Factor for Surgical Site Infection in Spinal Surgery .....177  
**T. Nakajima, et al.**, Dept. of Orthop. Surg., Gunma Univ.
- 1-6-EPA8-5 Effect of Facet Joint Degeneration on Clinical and Radiographic Outcomes after Oblique Lumbar Interbody Fusion (OLIF) .....177  
**S. Jaroenwareekul, et al.**, Dept. of Orthop., Faculty of Medicine, Chulalongkorn Univ. and King Chulalongkorn Memorial Hosp., Bangkok, Thailand
- 1-6-EPA8-6 Do Surgical Approach and Number of Fused Segments Correlate with Short-Term Outcomes in Osteoporotic Lumbar Fusion? .....178  
**S. ChengMin, et al.**, Taichung Veterans General Hosp., Taichung, Taiwan
- 1-6-EPA8-7 Clinical effectiveness of full endoscopic discectomy and thermal annuloplasty for the patients with discogenic low back pain .....178  
**F. Tezuka, et al.**, Dept. of Orthop., Tokushima Univ.

### Free Papers 8

17 : 00~18 : 00

Moderator : **S. Tsutsui**

### Spinal Deformity 1

- 1-6-F8-1 Facet Joint Asymmetry and Structural Curves in Lenke Type 5 and 6 Adolescent Idiopathic Scoliosis: Implications for Fusion Level Selection .....179  
**M. Mizutani, et al.**, Dept. of Orthop. Surg., Graduate School of Medicine, Chiba Univ.

1-6-F8-2	Longitudinal Analysis of Stress Factors During Brace Treatment for Adolescent Idiopathic Scoliosis: A Multicenter Prospective Study .....179 <b>R. Sugawara, et al.</b> , Spine Surg. Center, JCHO Sendai Hosp.
1-6-F8-3	Current Trends and Future Perspectives of the Scoliosis Screening Program in Kagawa Prefecture .....180 <b>T. Mishiro, et al.</b> , Takamatsu Red Cross Hosp
1-6-F8-4	Twenty-year trends in the number of surgical cases and indications for AIS in 4 cities with different screening systems .....180 <b>Y. Takeoka, et al.</b> , Dept. of Orthop. Surg., Kobe Univ. Graduate School of Medicine
1-6-F8-5	Clinical outcomes of the Coplanar-Hybrid technique with extensive use of sublaminar bands on the concave side for idiopathic scoliosis .....181 <b>T. Konomi, et al.</b> , Dept. of Orthop. Surg. Murayama Medical Center
1-6-F8-6	Cost-effectiveness analysis of thoracic idiopathic scoliosis .....181 <b>H. Moridaira, et al.</b> , Dept. of Orthop. Surg., DMU Nikko Medical Center
1-6-F8-7	The adolescent idiopathic scoliosis cohort exhibits delayed growth in the thoracic cage compared to the spine .....182 <b>Y. Sodeyama, et al.</b> , Dept. of Orthop. Surg., Faculty of Medicine and Graduate School of Medicine, Hokkaido Univ.

## Room 7

### English Presentation Award 9

8 : 10~9 : 15

Moderator : **K. Kitamura**

#### OPLL & Metabolism

1-7-EPA9-1	The impact of metabolic dysfunction-associated steatotic liver disease (MASLD) on spinal ligament ossification: a risk factor for OPLL progression .....182 <b>H. Xue, et al.</b> , Dept. of Orthop. Surg., Hokkaido Univ. Graduate School of Medicine, Hokkaido, Japan
1-7-EPA9-2	Association between Metabolic Syndrome and the Incidence of Ossification of Posterior Longitudinal Ligament in Korean Adults: A Nationwide Cohort Study .....183 <b>H. J. Son, et al.</b> , Dept. of Orthop. Surg., Nowon Eulji Medical Center, Eulji Univ. School of Medicine, Seoul, Republic of Korea
1-7-EPA9-3	Femoral BMD is the Superior Predictor of Screw Insertional Torque over Lumbar BMD and Hounsfield Unit in Lumbar Instrumentation Surgery .....183 <b>Y. Ogura, et al.</b> , Dept. of Orthop. Surg., Wake Forest Univ. School of Medicine, Winston Salem, NC

- 1-7-EPA9-4 Effects of anti-osteoporosis medication in adult posterior spine fusion patients: a systematic review and meta-analysis .....184  
**J. -W. Kwon, et al.**, Dept. of Orthop. Surg., Yonsei Univ. College of Medicine, Seoul, Republic of Korea
- 1-7-EPA9-5 Evaluate the Risk Factors for Sacral Stress Fracture Following L5-S1 Stand-alone ALIF with SYNFIX Evolution® .....184  
**T. -C. Yin, et al.**, Dept. of Orthop. Surg., Spine Division, Kaohsiung Chang Gung Memorial Hosp., Kaohsiung, Taiwan
- 1-7-EPA9-6 The Forgotten Spine Score: Validation of a Novel Patient-Centered Outcome Measure for Lumbar Spine Fusion in Italian and Japanese Patients .....185  
**L. Ambrosio, et al.**, Fondazione Policlinico Universitario Campus Bio-Medico
- 1-7-EPA9-7 Comparison of Wound-Related Outcomes Between Tissue Adhesive and Subcuticular Suture for Incisional Closure .....185  
**S. Jaroenwareekul, et al.**, Dept. of Orthop., Faculty of Medicine, Chulalongkorn Univ. and King Chulalongkorn Memorial Hosp., Bangkok, Thailand
- 1-7-EPA9-8 Predicting Surgical Indications and Outcomes in Ankylosing Spondylitis Patients with Thoracolumbar Fractures: A Classification-Based Approach.....186  
**I. -s. Son, et al.**, Dept. of Orthop. Surg., Kyung Hee Univ. Hosp. at Gangdong, Kyung Hee Univ., Seoul, South Korea

## English Presentation Award 10

9 : 25~10 : 30

Moderator : **K. Akeda**

### ASD : Alignment

- 1-7-EPA10-1 Ten-Year Longitudinal Analysis of Spinopelvic Alignment Changes and Health-Related Quality of Life in a Community Cohort .....186  
**H. Arima, et al.**, Dept. of Orthop. Surg., Hamamatsu Univ. School of Medicine
- 1-7-EPA10-2 Can L1-PA mismatch and T4-L1-PA mismatch predict postoperative mechanical complications in adult spinal deformity surgery in Japan?.....187  
**T. Takeuchi, et al.**, Department of Orthop. Surg., Kyorin Univ. School of Medicine, Tokyo, Japan
- 1-7-EPA10-3 Failure to achieve minimal clinically important difference despite achieving optimal global alignment in adult spinal deformity surgery .....187  
**S. -J. Park, et al.**, Dept. of Orthop. Surg., Samsung Medical Center
- 1-7-EPA10-4 A Novel Surgical Strategy-Oriented Classification for Severe Dynamic Sagittal Imbalance .....188  
**X. J. Li, et al.**, Dept. of Orthop. Surg., Kyung Hee Univ. Hosp. at Gangdong, Kyung Hee Univ., Seoul, South Korea

- 1-7-EPA10-5 Can Spinopelvic Realignment by Deformity Corrective Surgery improve Acetabular Lateral Coverage?: A Quantified Radiographic Analysis .....188  
**X. J. Li, et al.**, Dept. of Orthop. Surg., Kyung Hee Univ. Hosp. at Gangdong, Kyung Hee Univ., Seoul, South Korea
- 1-7-EPA10-6 Determining Optimal Age-Adjusted Sagittal Alignment Using Hierarchical Cluster Analysis in Adult Spinal Deformity Surgery .....189  
**S. -J. Park, et al.**, Dept. of Orthop. Surg., Samsung Medical Center, Seoul
- 1-7-EPA10-7 The Over-Widening Phenomenon due to suboptimal LDI: A Risk factor for Rod fracture after ACR in Patients with Degenerative Sagittal Imbalance .....189  
**S. -M. Kim, et al.**, Dept. of Orthop. Surg., Kyung Hee Univ. Hosp. at Gangdong, Kyung Hee Univ., Seoul, South Korea
- 1-7-EPA10-8 A Comparison of Gait Kinematic and Muscular Activity Between Walking Cane and a Walker in The Elderly with Sagittal Imbalance .....190  
**P. Laohapomsvan, et al.**, Dept. of Orthop., Faculty of Medicine, Ramathodi Hosp., Mahidol Univ.

## English Presentation Award 11

10 : 40~11 : 40

Moderator : **T. Yurube**

### Oncology & Infection

- 1-7-EPA11-1 Prognostic outcomes of spinal metastasis: timing of metastasis presentation matters .....190  
**M. -H. Hu, et al.**, Dept. of Orthopedic Surg., National Taiwan Univ. Hosp., Taipei, Taiwan
- 1-7-EPA11-2 Clinical outcomes of and risk factors for non-elective surgery for spinal metastases: a JASA multi-center prospective study .....191  
**Y. Kanda, et al.**, Dept. of Orthop. Surg., Kobe Univ. Graduate School of Medicine, Kobe, Japan
- 1-7-EPA11-3 Outcome Analysis of Metastatic Spinal Tumor Surgery Using MCID Criteria .....191  
**R. Hirota, et al.**, Dept. of Orthop. Surg., Sapporo Maruyama Orthop. Hosp., Sapporo, Hokkaido, Japan
- 1-7-EPA11-4 The Learning Curve of Total En Bloc Spondylectomy in a Resource-Limited Setting: A Case Series from Eastern Indonesia .....192  
**A. R. Hidayat, et al.**, Dept. of Orthop. and Traumatology, Dr. Soetomo General Academic Hosp., Surabaya, Indonesia
- 1-7-EPA11-5 Significance of Extended Culture for Pathogen Detection in Infectious Spondylitis .....192  
**T. Nakamura, et al.**, Dept. of Orthop. Surg., Faculty of Medicine, Tottori Univ. Tottori, Japan
- 1-7-EPA11-6 Comparative Outcomes of Open and Endoscopic Surgical Approaches for Thoracolumbar Pyogenic Spondylodiscitis .....193  
**C. -L. Lin, et al.**, Dept. of Orthop., National Cheng Kung Univ. Hosp., Tainan, Taiwan

- 1-7-EPA11-7 Minimally Invasive Spine Surgery for Very Elderly Patients with Lumbar Spondylodiscitis.....193  
**M. -W. Kim**, Orthop. Surg., Busan Medical Center, Busan, Republic of Korea

## Luncheon Seminar 7

11 : 50~12 : 50

Moderator : **H. Takahashi**

- 1-7-LS7-1 The current status and future prospects of spinal robot surgery .....194  
**Y. Kawaguchi, et al.**, Dept. of Orthop. Surg., Faculty of Medicine, Univ. of Toyama

## Afternoon Seminar 6

14 : 40~15 : 40

Moderator : **T. Tokioka**

- 1-7-AS6-1 Innovations and Career Pathways in Spine Surgery .....194  
**Y. Sugimoto**, Dept. of Bone and Joint Surg., Kawasaki Medical School
- 1-7-AS6-2 Addressing Invisible Pain: Understanding and Treating Epidural and Foraminal Micro-lesions  
 .....195  
**K. Yokosuka**, Dept. of Orthop. Surg., Kurume Univ.

## English Presentation Award 12

15 : 50~16 : 50

Moderator : **M. Miyagi**

### Lumbar Degenerative

- 1-7-EPA12-1 Recalibrating the red-flag age criterion for low back pain in Japan, a super-aging society .....195  
**S. Soeda, et al.**, Orthop. Dept., Tokushima Univ.
- 1-7-EPA12-2 Delay diagnosis of Peripheral artery disease is related to poor outcome of Lumbar Spinal Stenosis  
 Surgery. A Taiwan NHIRD study. ....196  
**S. Chen, et al.**, Dept. of NeuroSurg., Chung Shan Medical Univ. Hosp., Taiwan
- 1-7-EPA12-3 Influence of Lumbar Spinal Stenosis on Functional Recovery After Hip Fracture Surgery .....196  
**K. Mokmongkolkul, et al.**, Dept. of Orthop., Phramongkutklao Hosp. and College of Medicine, Bangkok, Thailand
- 1-7-EPA12-4 Osteoarthritic Knee Can Change Surgical Result for Lumbar Degenerative Disease: Radiographic  
 and Clinical Evidence .....197  
**I. -s. Son, et al.**, Dept. of Orthop. Surg., Kyung Hee Univ. Hosp. at Gangdong, Kyung Hee Univ.,  
 Seoul, South Korea

1-7-EPA12-5	Recovery Patterns of Lower Limb Motor Function Following Lumbar Spinal Stenosis Surgery: A 5-Year Retrospective Cohort Study Utilizing the Foot Tapping Test .....197 <b>H. Kobayashi, et al.</b> , Dept. of Orthop. Surg., Fukushima Medical Univ. School of Medicine, Fukushima, Japan
1-7-EPA12-6	Robotic versus conventional single-level lumbar fusion in frail older adults: analysis of the National readmission database, 2016-2020 .....198 <b>S. Chen, et al.</b> , Dept. of Neuro Surg., Chung Shan Medical Univ. Hosp., Taiwan
1-7-EPA12-7	Trans-pedicular Intravertebral Cage Augmentation (TPICA) with Short-level Fixation in the Treatment of Kummell Disease: Mid-term Results from a Case Series .....198 <b>D. -W. Ham</b> , Dept. of Orthop., Chung-Ang Univ. Hosp., Seoul, South Korea

## Free Papers 9

17 : 00~18 : 00

Moderator : **O. Tsuji**

### Spinal Cord Tumors

1-7-F9-1	Hydrocephalus Associated with Spinal Schwannoma: Correlation Between Cerebrospinal Fluid Findings and Postoperative Improvement .....199 <b>I. Suda, et al.</b> , Dept. of Neurological Surg., Graduate School of Medicine, Chiba Univ.
1-7-F9-2	Does planned dural incision during spinal surgery increase the risk of non-infectious delayed post-operative fever? .....200 <b>H. Kinjo, et al.</b> , Orthop. Surg., Univ. of the Ryukyus Hosp.
1-7-F9-3	Evaluation of Telomerase-specific Oncolytic Adenovirus Infection to Spinal Tumors for Therapeutic Use .....200 <b>R. Takatori, et al.</b> , Dept. of Orthop. Surg., Science of Functional Recovery and Reconstruction, Faculty of Medicine, Dentistry, and Pharmaceutical Sciences, Okayama Univ.
1-7-F9-4	Diagnosis and Surgical Techniques for Symptomatic Sacral Perineural Cysts: An 11-Case Series .....201 <b>M. Tsujino, et al.</b> , Dept. of Orthop. Surg., Osaka Metropolitan Univ. Graduate School of Medicine
1-7-F9-5	Mid-term clinical outcomes of Simpson Grade 2 resection for spinal meningiomas .....201 <b>H. Tonomura, et al.</b> , Dept. of Orthop., Graduate School of Medical Science, Kyoto Prefectural Univ. of Medicine

## Room 8

### Free Papers 10

8 : 10~9 : 10

Moderator : **H. Nojiri**

#### Perioperative Complication

- 1-8-F10-1 Incidence, Causes and Risk Factors for Unplanned Return to the Operating Room within 30 Days Following Elective Spine Surgery .....202  
**Y. Taniguchi, et al.**, Orthop. Surg., Sensory and Motor System Medicine, Surgical Sciences, Graduate School of Medicine, The Univ. of Tokyo
- 1-8-F10-2 Perioperative Complication Risks in Adult Spinal Instrumentation Surgery: A JSIS-DB Analysis of Fusion Extent and Surgeon Experience .....202  
**H. Arima, et al.**, Dept. of Orthop. Surg., Hamamatsu Univ. School of Medicine
- 1-8-F10-3 Risk Factors and Causes of Reoperation Within 90 Days After Decompression Surgery for Lumbar Spinal Stenosis .....203  
**D. Kamio, et al.**, Japanese Red Cross Shizuoka Hosp.
- 1-8-F10-4 Postoperative mortality and patient-reported outcomes after adult spinal deformity surgery in patients aged  $\geq 80$  years versus 65-79 years .....203  
**K. Inoue, et al.**, Dept. of Orthop. Surg., Kudanzaka Hosp.
- 1-8-F10-5 Thoracic PPS and smaller-diameter rods reduce PJK after thoracic-to-pelvis fusion for adult spinal deformity. ....204  
**T. Nakamura, et al.**, Dept. of Orthop. Surg., Tohoku Cent. Hosp.
- 1-8-F10-6 Perioperative Complications of Multilevel vs Single-Level Fusion Surgery: A Study Using the Japanese Spinal Instrumentation Society-Database .....204  
**R. Mizukoshi, et al.**, Database Committee, JSIS
- 1-8-F10-7 Timing of implant-related complications and reoperation rate following adult spinal deformity surgery: Over 10 years of follow-up .....205  
**Y. Kagami, et al.**, Dept. of Orthop./Rheumatology, Musculoskeletal and Cutaneous Surg., Program in Integrated Medicine, Graduate School of Medicine, Nagoya Univ.

### Free Papers 11

9 : 20~10 : 20

Moderator : **M. Teraguchi**

#### Imaging (MRI)

- 1-8-F11-1 Vertebral-Spinal cord Ratio (VSR): A Novel MRI-based Index for Assessing Vertebral Bone Strength and Fracture Risk .....205  
**S. Kawaguchi, et al.**, Dept. of Orthop. Surg., Graduate School of Biomedical and Health Sciences, Hiroshima Univ.

1-8-F11-2	Assessment of Lumbar Morphology Using the FRACTURE MRI Sequence: A Comparative Study with CT.....206 <b>D. Yamabe, et al.</b> , Dept. of Orthop. Surg., Iwate Medical Univ.
1-8-F11-3	Comparative study of MRI, DECT, and AI in the diagnosis of acute vertebral compression fractures .....206 <b>H. Kano, et al.</b> , Amagasaki Chuo Hosp.
1-8-F11-4	Correlation Between MRI VBQ Scores and Pedicle Screw Insertion Torque in AIS Patients: Evaluating Usefulness Compared to DEXA and CT .....207 <b>K. Mizukami, et al.</b> , Dept. of Orthop. Surg., Graduate School of Medical Science, Univ. of Yamanashi
1-8-F11-5	Diagnostic Reliability of MR Bone Imaging in Staging Lumbar Spondylolysis in Adolescents: Can MR Bone Imaging Replace CT? .....207 <b>K. Okuyama, et al.</b> , Nishikawa Orthop CL
1-8-F11-6	Evaluation of Cervical Foraminal Stenosis Using Multiplanar Reconstruction MRI .....208 <b>T. Shibata, et al.</b> , Dept. of Orthop. Surg., Fukuoka Univ.
1-8-F11-7	Evaluation of MR Bone Imaging as a Potential Alternative to CT: A Comparative Study in Healthy Subjects .....208 <b>N. Suzuki, et al.</b> , Dept. of Orthop. Surg., Graduate School of Medicine, Chiba Univ.

## Free Papers 12

10 : 30~11 : 30

Moderator : **Y. Kasukawa**

### Ossification of the Ligamentum Flavum

1-8-F12-1	Identifying Risk Factors for Poor Sensory Recovery After Surgery for Thoracic Ossification of Ligamentum Flavum .....209 <b>S. Ito, et al.</b> , Dept. of Orthop./Rheumatology, Musculoskeletal and Cutaneous Surg., Program in Integrated Medicine, Graduate School of Medicine, Nagoya Univ.
1-8-F12-2	Epigenetic Modifications in the Ossification Process of Thoracic Ligamentum Flavum: The Role of DNA Methylation in Angiogenesis .....209 <b>Y. Chosei, et al.</b> , Dept. of Orthop. Surg., Shiga Univ. of Medical Science
1-8-F12-3	Metabolic dysfunction-associated steatotic liver disease (MASLD) as a new risk factor for spinal ligament ossification ligaments .....210 <b>S. Fukada, et al.</b> , Dept. of Orthop. Surg., Faculty of Medicine and Graduate School of Medicine, Hokkaido Univ.
1-8-F12-4	Sagittal alignment changes in patients with thoracic myelopathy due to ossification of the ligamentum flavum .....210 <b>A. Kimura, et al.</b> , Ishibashi Hosp.

- 1-8-F12-5 Relation between the enthesophyte of the external occipital protuberance and thoracic Ossification of the Posterior Longitudinal Ligament .....211  
**K. Sakaeda, et al.**, Dept. of Orthop. and Spinal Surg., Graduate School of Medical and Dental Sciences, Institute of Science Tokyo
- 1-8-F12-6 Investigation of Standing Global Alignment in Lower Thoracic Ossification of the Ligamentum Flavum .....211  
**H. Tsujisawa, et al.**, Dept. of Orthop. Surg., Nihon Univ.

### Luncheon Seminar 8

11 : 50~12 : 50

Moderator : **K. Hasegawa**

- 1-8-LS8-1 The Role of Spine Surgeons in a Super-Aged Society .....212  
**S. Kawabata**, Dept. of Orthop. Surg., Fujita Health Univ.

### Afternoon Seminar 7

14 : 40~15 : 40

Moderator : **Y. Takahashi**

- 1-8-AS7-1 How we can prevent neurological complication in posterior cervical decompression and fusion (PCDF) ? .....212  
**K. Miyamoto**, Orthop. and Spine Surg., Gifu Municipal Hosp.

### Free Papers 13

15 : 50~16 : 50

Moderator : **K. Saita**

#### Postoperative Complications in Cervical Spine Surgery

- 1-8-F13-1 Impact of postoperative C5 palsy on patients' QOL with cervical OPLL: a prospective multicenter study .....213  
**N. Segi, et al.**, Dept. of Orthop./Rheumatology, Musculoskeletal and Cutaneous Surg., Program in Integrated Medicine, Graduate School of Medicine, Nagoya Univ.
- 1-8-F13-2 Analysis of Upper Limb Paralysis Incidence and Risk Factors Following Cervical Spine Deformity Surgery .....213  
**S. Maki, et al.**, Dept. of Orthop. Surg., Graduate School of Medicine, Chiba Univ.
- 1-8-F13-3 Operative Procedure and Results of Laminoplasty to Prevent C5 Palsy .....214  
**Y. Orita, et al.**, Dept. of Orthop. Surg., Kanazawa Medical Univ.
- 1-8-F13-4 Investigation of risk factors of C5 palsy after anterior cervical spine surgery .....214  
**Y. Matsukura, et al.**, Dept. of Orthop. and Spinal Surg., Graduate School of Medical and Dental Sciences, Institute of Science Tokyo

- 1-8-F13-5 Cervical posterior decompression and fusion is better performed with laminoplasty, not with laminectomy.....215  
**T. Yano, et al.**, Gifu Municipal Hosp., Orthop. Surg.
- 1-8-F13-6 Impact of decompression width on clinical outcomes after cervical selective laminectomy .....215  
**S. Nori, et al.**, Dept. of Orthop. Surg., NHO Tokyo Medical Center

## Free Papers 14

17 : 00~18 : 00

Moderator : **D. Togawa**

### Percutaneous Vertebroplasty

- 1-8-F14-1 Clinical Outcomes and Limitations of Balloon Kyphoplasty for Osteoporotic Vertebral Fractures with Diffuse Idiopathic Skeletal Hyperostosis .....216  
**T. Maeda, et al.**, Dept. of Orthop. Surg., Wakayama Medical Univ. Kihoku Hosp.
- 1-8-F14-2 Incidence of Postoperative Secondary Fractures Following BKP: Based on Existing VFs Count and Survival Rate Using Two Anabolic Agents .....216  
**K. Matsumoto, et al.**, SOUKA-MATSUBARA Orthop. Surg. Clinic
- 1-8-F14-3 Predictors of Subsequent Vertebral Fractures After Early Balloon Kyphoplasty .....217  
**R. Taiji, et al.**, Dept. of Orthop. Surg., Wakayama Medical Univ. Kihoku Hosp.
- 1-8-F14-4 Leg pain associated with osteoporotic vertebral fractures of the mid-lower lumbar spine and clinical outcomes with BKP .....217  
**R. Shibo, et al.**, Dept. of Orthop. Surg., Oono Central Hosp.
- 1-8-F14-5 Evaluation of Cement Leakage After Percutaneous Vertebroplasty .....218  
**K. Masuda, et al.**, Dept. of Orthop. Surg. Kawasaki Medical Univ
- 1-8-F14-6 Comparison of Treatment. Conservative and Balloon Kyphoplasty for osteoporotic vertebral fractures in older patients older than 90 years old .....218  
**H. Harada, et al.**, Sattuporotokusyukai Hosp.

## Room 9

### Main Theme 1

8 : 10~9 : 10

Moderator : **S. Kaneko**

### Long-Term Results in Spinal Deformity

- 1-9-M1-1 Long-Term Follow-up of Traditional Growing Rods for Early-Onset Scoliosis: Clinical and Social Outcomes in Adulthood .....219  
**M. Ito, et al.**, Kobe Medical Center

1-9-M1-2	New Evidence for Corrective Surgery in Adult Spinal deformity in the Elderly: Is the Concept of Age-Adjustment Alignment Goals Correct? .....	219
	<b>M. Takami, et al.</b> , Dept. of Orthop. Surg., Wakayama Medical Univ.	
1-9-M1-3	Preoperative Sacral Slope Change as a Risk Factor for Mechanical Complications after Adult Spinal Deformity Surgery .....	220
	<b>T. Ohba, et al.</b> , Dept. of Orthop. Surg, Yamanashi Univ.	
1-9-M1-4	The mid and long-term outcomes after primary spinal surgery for idiopathic adult scoliosis .....	220
	<b>T. Suzuki, et al.</b> , Kobe Medical Center	
1-9-M1-5	Ten-Year Outcomes of Thoracopelvic corrective Fusion for Degenerative Scoliosis .....	221
	<b>Y. Yamato, et al.</b> , Dept. of Orthop. Surg., Hamamatsu Univ. School of Medicine	
1-9-M1-6	Cervical Sagittal Alignment Changes in Lenke Type 1 and 2 Adolescent Idiopathic Scoliosis Patients with Thoracic Lordosis .....	221
	<b>S. Kato, et al.</b> , Dept. of Orthop. Surg., Keio Univ.	

## Main Theme 2

9 : 20 ~ 10 : 20

Moderator : **H. Ozawa**

### Advances in Spinal Infection Management

1-9-M2-1	Challenges and limitations of the existing scoring systems for postoperative outcomes in thoracolumbar pyogenic spondylitis .....	222
	<b>H. Gamada, et al.</b> , Dept. of Orthop. Surg., Ushiku Aiwa Hosp.	
1-9-M2-2	Risk Factors for Severe Deep/Organ-Space Infection After Spine Surgery: An 11-Year Single-Center Study of 217 Cases .....	222
	<b>S. Hashimoto, et al.</b> , Dept. of Orthop. Surg., NHO Murayama Medical Center	
1-9-M2-3	Influence of Perioperative Oral Health Status on the Incidence of Surgical Site Infection Following Spinal Surgery .....	223
	<b>R. Hirota, et al.</b> , Dept. of Orthop. Surg., Sapporo Medical Univ.	
1-9-M2-4	Treatment of postoperative infection following lumbar interbody fusion surgery using antibiotic-containing gel-like artificial bone .....	223
	<b>H. Koshimizu, et al.</b> , Dept. of Orthop. Surg., Nagano Red Cross Hosp.	
1-9-M2-5	Impact of Abscess Types on postoperative clinical Outcomes After minimally invasive posterior fixation for Pyogenic Spondylitis .....	224
	<b>H. Gamada, et al.</b> , Dept. of Orthop. Surg., Ushiku Aiwa Hosp.	
1-9-M2-6	Impact of Osteoporosis on Surgical Outcomes of Pyogenic Vertebral Osteomyelitis and the Efficacy of Cement-Augmented Pedicle Screws .....	224
	<b>S. Asuka, et al.</b> , Dept. of Orthop. Surg., Osaka Kaisei Hosp	

## Main Theme 3

10 : 30~11 : 30

Moderator : **T. Tachibana**

### New Technologies in Spine Surgery

- 1-9-M3-1 Vertebral Body Stenting versus Balloon Kyphoplasty for Osteoporotic Vertebral Fractures: a Propensity Score Matching Study .....225  
**H. Hasebe, et al.**, Dept. of Orthop. Surg., Hokkaido Orthop. Memorial Hosp.
- 1-9-M3-2 Development of a Pedicle Screw Insertion Simulator Using Convolutional Neural Network and Accuracy Analysis in Idiopathic Scoliosis.....225  
**K. Yamada, et al.**, Dept. of Orthop. Surg., Faculty of Medicine and Graduate School of Medicine, Hokkaido Univ.
- 1-9-M3-3 Clinical Value of Weight-Bearing MRI in Assessing Anterior Spinal Cord Compression in Degenerative Cervical Disorders .....226  
**K. Sakaki, et al.**, Dept. of Orthop. Surg., Saiseikai Kawaguchi Genaral Hosp.
- 1-9-M3-4 Oblique-view Method Improves Detection of Cement Leakage in Cement-Augmented Pedicle Screw Fixation .....226  
**K. Kishima, et al.**, Dept. of Orthop. Surg., Hyogo Hyogo Medical Univ.
- 1-9-M3-5 Novel strategy to prevent cement leakage: Intermittent injection and intravertebral lavage in cement-augmented pedicle screws .....227  
**M. Ishihara, et al.**, Dept. of Orthop. Surg., Kansai Medical Univ.
- 1-9-M3-6 Risk Factors of Cage Subsidence in OLIF51: importance of Endplate Sclerosis and Cage Placement .....227  
**M. Ishihara, et al.**, Dept. of Orthop. Surg., Kansai Medical Univ.

### Luncheon Seminar 9

11 : 50~12 : 50

Moderator : **Y. Arai**

#### Why SCS for Postoperative Pain Now? – Basics and Real-World Experience for Orthopedic

- 1-9-LS9-1 Why I chose to begin spinal cord stimulation therapy .....228  
**T. Harada, et al.**, Sangubashi Spine Surg. Hosp.
- 1-9-LS9-2 Postoperative Pain Management and Spinal Cord Stimulation: Basic Concepts and the First Step .....228  
**H. Funao**, Dept. of Orthop. Surg., International Univ. of Health and Welfare

## Afternoon Seminar 8

14 : 40~15 : 40

Moderator : **K. Watanabe**

- 1-9-AS8-1      Diagnosis and Surgical Indications of Sacroiliac Joint-related Pain in Spine Surgery Practice ...229  
**D. Kurosawa**, Japan Sacroiliac Joint and Low Back Pain Center, JCHO Sendai Hosp.
- 1-9-AS8-2      The Science of Refractory Pain Due to Spinal Diseases .....229  
**M. Miyagi**, Dept. of Orthop. Surg., Kitasato Univ.

## Main Theme 4

15 : 50~16 : 50

Moderator : **M. Hangai**

### Diagnosis and Treatment of Chronic Low Back Pain in Athletes

- 1-9-M4-1      Adult-Onset Lumbar Spondylolysis in Elite Athletes: Comparison Between Strict Rest and Early Return to Play .....230  
**K. Kato, et al.**, Dept. of Orthop. Surg., Fukushima Medical Univ.
- 1-9-M4-2      Short-term outcomes of Smiley Face Rod repair for terminal-stage lumbar spondylolysis: effects of age, disc degeneration, and slippage.....230  
**K. Sugiura, et al.**, Dept. of Orthop., Tokushima Prefecture Naruto Hosp.
- 1-9-M4-3      T2-High Signal Intensity in the Posterior Longitudinal Ligament as Pathological Key in Elite Athletes with Minimal LDH Treated by TF-FESS .....231  
**T. Kitahara, et al.**, Dept. of Orthop., Institute of Biomedical Sciences, Tokushima Univ. Graduate School
- 1-9-M4-4      A 10.8-degree Threshold of Maximal Facet Tropism Predicts Lumbar Disc Herniation in Young Athletes .....231  
**T. Kitahara, et al.**, Dept. of Orthop., Institute of Biomedical Sciences, Tokushima Univ. Graduate School
- 1-9-M4-5      The Clinical Significance of Fluoroscopically Guided Spinal Interventions in Sports Spinal Medicine .....232  
**R. Yamasaki, et al.**, Dept. of Orthop. Surg., Kansai Rosai Hosp.
- 1-9-M4-6      Clinical features and initial management of thoracolumbar fractures due to falls and sports: analysis of the Japan Trauma Data Bank .....232  
**A. Yasuda, et al.**, Dept. of Orthop. Surg., NHO Saitama Hosp.

## Main Theme 5

17 : 00~18 : 00

Moderator : **K. Suda**

## Treatment Strategies for Spinal Cord Injury in the Elderly

- 1-9-M5-1 Temporal Trends of Spinal Cord Injuries: A Japan Trauma Data Bank Study on Aging, Non-bony Lesions, and Surgical Strategies .....233  
**A. Yasuda, et al.**, Dept. of Orthop. Surg., NHO Saitama Hosp.
- 1-9-M5-2 Is Early Decompression and Fusion Within 24 Hours Justified Even in Elderly Patients With Traumatic Cervical Spinal Cord Injury? .....233  
**S. Nakatsuka, et al.**, Dept. of Orthop. Surg., Wakayama Medical Univ.
- 1-9-M5-3 Impact of the COVID-19 Pandemic on Adult Spinal and Spinal Cord Injuries: A nationwide study using the Japan Trauma Data Bank (JTDB) .....234  
**K. Kajikawa, et al.**, Dept. of Orthop. Surg., National Defense Medical College
- 1-9-M5-4 A review of JASA nationwide study of cervical spine injury in elderly patients .....234  
**S. Kato, et al.**, Dept. of Orthop. Surg., Graduate School of Medical Sciences, Kanazawa Univ.
- 1-9-M5-5 Non-Cervical DISH Is Associated with an Increased Risk of Respiratory Complications after Traumatic Cervical Spinal Cord Injury .....235  
**K. Katayama, et al.**, Dept. of Orthop. Surg., Wakayama Medical Univ.
- 1-9-M5-6 Value of Percutaneous Vertebroplasty for Osteoporotic Vertebral Fractures in Patients with Dementia .....235  
**S. Kaneyama, et al.**, Dept. of Orthop. Surg., Nadogaya Hosp.

## Room 10

## Luncheon Seminar 10

11 : 50~12 : 50

Moderator : **Y. Matsuyama**

- 1-10-LS10-1 Improving Outcomes of Transforaminal Full-Endoscopic Spine Surgery: Outside-Only Discectomy and Expandable-Cage KLIF .....236  
**M. Morimoto, et al.**, Dept. of Orthop., Institute of Biomedical Sciences, Tokushima Univ. Graduate School
- 1-10-LS10-2 The Mult-e Portal Concept: Advancing Biportal Endoscopic Spine Surgery with the Monoportal Scope .....236  
**T. Kaneko**, Kamakura Hosp.

## Afternoon Seminar 9

14 : 40~15 : 40

Moderator : **K. Watanabe**

- 1-10-AS9-1 Not Skill Alone: How Surgical Navigation Helped an Inexperienced Surgeon Perform Safe Deformity Surgery .....237  
**H. Nakashima**, Dept. of Orthop./Rheumatology, Musculoskeletal and Cutaneous Surg., Program in Integrated Medicine, Graduate School of Medicine, Nagoya Univ.
- 1-10-AS9-2 Confronting complex cases in adult spinal deformity .....237  
**Y. Nakao**, Sanraku Hosp.

## Free Papers 15

15 : 50~16 : 50

Moderator : **H. Funao**

### Trans-Sacral Spinal Canal Plasty

- 1-10-F15-1 The usefulness of transsacral spinal canaloplasty (TSCP) - Significant difference between two catheters .....238  
**K. Nakanishi, et al.**, Dept. of Orthop. Surg., Kawasaki Medical School.
- 1-10-F15-2 Prognostic Factors Associated with Pain Improvement after Trans-sacral Canal Plasty .....238  
**D. Fukazawa, et al.**, Dept. of Orthop., Juntendo Univ.
- 1-10-F15-3 Investigation of the Mechanism of Therapeutic Effect in Trans-sacral Canal Plasty: Mechanical Adhesiolysis or Drug Delivery .....239  
**M. Teraguchi, et al.**, Dept. of Orthop. Surg., Wakayama Medical Univ.
- 1-10-F15-4 Trans-Sacral Canal Plasty for Lumbar Spinal Stenosis: Comparative Analysis by Prior Lumbar Surgery and Pathological Classification .....239  
**Y. Yamamoto, et al.**, Dept. of Orthop. Surg., Wakayama Medical Univ.
- 1-10-F15-5 Mismatch Between MRI Stenotic Level and Epidurographic Block in Lumbar Disorders: A Retrospective Study of TSCP .....240  
**D. Arimura, et al.**, Dept. of Orthop. Surg., The 3rd Hosp. of the Jikei Univ. School of Medicine
- 1-10-F15-6 Efficacy of Epidural Adhesiolysis for Chronic Low Back Pain Without MRI Abnormalities in Middle-Aged Manual Laborers: A Case Series .....240  
**T. Kaneda, et al.**, Dept. of Orthop. Surg., JuntendoTokyo Koto Geriatric Medical Center

## Free Papers 16

17 : 00~18 : 00

Moderator : **Y. Sakai****Lumbar Disorders, Pain & Functional Impairment**

- 1-10-F16-1 Prevalence and Clinical Impact of Mild Cognitive Impairment in Lumbar Spinal Stenosis Patients .....241  
*K. Watanabe, et al.*, Dept. of Research for Spine and Spinal Surg., Fukushima Med. Univ.
- 1-10-F16-2 Low Back Pain Outcomes After Posterior Decompression for Lumbar Spinal Stenosis: Impact of Pain-Provoking Posture and Sagittal Alignment .....241  
*M. Norimoto, et al.*, Dept. of Orthop. Surg., Toho Univ.(Sakura)
- 1-10-F16-3 Low Back Pain Associated with Lumbar Spinal Canal Stenosis Improves after Non-fusion Posterior Decompression Surgery .....242  
*S. Kotaka, et al.*, Asa Citizens Hosp.
- 1-10-F16-4 Outcomes of conservative treatment in patients with lumbar facet cysts .....242  
*T. Kusakabe, et al.*, Dept. of Orthop. Surg., Tohoku Rosai Hosp.
- 1-10-F16-5 Association between lifestyle-related factors and low back pain .....243  
*S. Kawabata, et al.*, Dept. of Orthop. Surg., Fujita Health Univ.
- 1-10-F16-6 Functional disability mediates the association between low back pain and sleep disturbance: Evidence from a population-based study in Japan .....243  
*S. Kawabata, et al.*, Dept. of Orthop. Surg., Fujita Health Univ.
- 1-10-F16-7 Association between the fat infiltration of lumbar multifidus muscle and the spinopelvic alignment .....244  
*K. Ura, et al.*, Dept. Orthop. Surg., Otaru general hosp.

**Room 11****Hands-on Seminar 1****OLIF51™ Training**

9 : 20~11 : 20

Moderator : **M. Tanaka**Speakers : **S. Orita****Y. Kotani**

## Hands-on Seminar 2

### Prestige LP™ Cervical Artificial Disc Training

15 : 50~17 : 50

Moderator : **K. Sakai**

Speaker : **T. Yoshii**

#### Poster Room 1

#### Poster 1

9 : 00~9 : 40

Moderator : **H. Imabayashi**

#### Pyogenic Spondylitis 1

- P1-1 Comparison of postoperative clinical outcomes based on differences in pathogenic bacteria in thoracolumbar pyogenic spondylitis .....244  
**Y. Shibao, et al.**, Dept. of Orthop. Surg., Ibaraki Western Medical Center
- P1-2 Characteristics of spondylodiscitis by level of infection -cervical and thoracic lesion with epidural abscess require more attention .....245  
**T. Inoue, et al.**, Dept. of Spine Surg., Toyohashi Municipal Hosp.
- P1-3 Frequency of pyogenic spondylitis in patients with positive blood culture .....245  
**S. Inoue, et al.**, Kumagaya General Hosp.
- P1-4 Clinical results of pyogenic spondylitis treated with posterior spinal fusion .....246  
**H. Kakimaru, et al.**, Hamada MC
- P1-5 Clinical Outcome of Full-endoscopic debridement and drainage for Pyogenic Spondylitis .....246  
**K. Kishima, et al.**, Dept. of Orthop. Surg., Hyogo Medical Univ.
- P1-6 Factors associated with bridging ossifications following percutaneous intervertebral disc biopsy and irrigation for spondylodiscitis. ....247  
**T. Maruyama, et al.**, Dept. of Orthop. Surg., JA Hiroshima General Hosp.

#### Poster 2

9 : 50~10 : 30

Moderator : **S. Katsumi**

#### Pyogenic Spondylitis 2

- P2-1 Spinal Instability Spondylodiscitis Score (SISS) as a Predictor of Reoperation After Surgical Treatment for Pyogenic Spondylodiscitis .....247  
**T. Kusakawa, et al.**, Dept. of Orthop. Surg., Takarazuka City Hosp.

P2-2	Pathophysiology and Treatment Strategies for Pyogenic Spondylitis .....248 <b>M. Oshima, et al.</b> , Dept. of Orthop. Surg., Kawaguchi MMC
P2-3	Epidemiology and Differential Diagnosis of Pyogenic Spondylitis in Secondary Emergency Hospital .....248 <b>T. Dokai, et al.</b> , Dept. of Orthop. Surg., Sanin Rosai Hosp.
P2-4	Clinical Outcomes of Full Endoscopic Spinal Surgery (FESS) for Pyogenic Spondylitis .....249 <b>T. Matsubara, et al.</b> , Dept. of Spine and Spinal Cord Surg., Fukuoka Kinen Hosp.
P2-5	Analysis of Factors Associated with Prolonged Infection in Pyogenic Spondylitis According to the New AO Classification .....249 <b>T. Iimura, et al.</b> , Dept. of Orthop. Surg., Dokkyo Medical Univ.
P2-6	Efficacy of lateral lumbar interbody fixation using a 3D-Printed Titanium Cage for lumbar pyogenic spondylitis. ....250 <b>T. Shirahata, et al.</b> , Dept. of Orthop. Surg., Showa Medical Univ. Koto Toyosu Hosp.

### Poster 3

10 : 40~11 : 20

Moderator : **G. Kumagai**

#### Diagnosis of Lumbar Degeneration

P3-1	Analysis of Factors Associated with Early Postoperative Disc Degeneration After Lumbar Decompression .....250 <b>H. Nawa, et al.</b> , Dept. of Orthop. Surg., Otemae Hosp.
P3-2	Investigation of lumbar surgery rate after cervical decompression with preoperative myelographic lumbar canal stenosis .....251 <b>S. Seo, et al.</b> , Dept. of Orthop. Surg., School of Medicine, Univ. of Occupational and Environmental Health
P3-3	ADL impairment and clinical results of exercise therapy in patients with lumbar degenerative diseases on Modic change types .....251 <b>K. Yo, et al.</b> , Hamawaki Orthop.
P3-4	Longitudinal Changes in Lumbar Modic Change in a Community Population: A 20-Year Follow-Up from the Minami Aizu Study .....252 <b>Y. Fukuda, et al.</b> , Dept. of Orthop. Surg., Fukushima Medical Univ.
P3-5	Impact of Modic Changes on Postoperative Outcomes Following Oblique Lateral Interbody Fusion (OLIF) .....252 <b>T. Hozumi, et al.</b> , Dept. of Orthop. Surg., Graduate School of Medicine, Chiba Univ.
P3-6	Subchondral bone STIR hyperintensity as a predictor of low back pain outcomes in lumbar spinal stenosis .....253 <b>S. Tamagawa, et al.</b> , Dept. of Orthop., Juntendo Univ.

- P3-7 Redefining Painful Modic Changes: The Role of Type 2, Type 3, and STIR Imaging .....253  
**S. Soeda, et al.**, Tokushima Univ., Orthop. Dept.

## Poster Room 2

### Poster 4

9 : 00~9 : 40

Moderator : **M. Ishihara**

#### Metastatic Spine Tumor 1

- P4-1 Surgical management of metastatic epidural spinal cord compression in geriatric patients .....254  
**M. Hirasawa**, Tokyo Shinagawa Hosp.
- P4-2 Investigation of MRI-Independent Factors Associated with Neurological Symptoms in Patients with Spinal Metastases of Lung Cancer .....254  
**K. Fujimoto, et al.**, Dept. of Orthop. Surg., Yamaguchi Univ. Graduate School of Medicine
- P4-3 Surgery for Metastatic Spinal Tumors in the Elderly: Equivalent Outcomes Beyond Age 75 .....255  
**H. Tominaga, et al.**, Dept. of Orthop. Surg., Graduate School of Medical and Dental Sciences, Kagoshima Univ.
- P4-4 Utility of Cement-Augmented Pedicle Screws (CAPS) in Palliative Posterior Fixation for Metastatic Spine Tumors: Comparison with PPS .....255  
**T. Tsuchida, et al.**, Dept. of Orthop. Surg., Ibaraki Prefectural Central Hosp.
- P4-5 Diagnostic strategy for patients with spinal metastases of unknown origin .....256  
**S. Ujigo, et al.**, Dept. of Orthop. Surg., Higashihiroshima Medical Center
- P4-6 Surgical Outcomes in Elderly Patients with Metastatic Spinal Tumors Presenting with Neurological Deficits .....256  
**T. Mihara, et al.**, Dept. of Orthop. Surg., Tottori Univ.
- P4-7 Impact of an Immediate Notification System from Radiologists to Spine Surgeons on the Timing of Treatment for Spinal Metastases .....257  
**H. Shigematsu, et al.**, Dept. of Orthop. Surg., Nara Medical Univ.

### Poster 5

9 : 50~10 : 30

Moderator : **S. Kato**

#### Metastatic Spine Tumor 2

- P5-1 The Relationship Between Preoperative Nutritional Status and Prognosis in Patients with Metastatic Spinal Tumors .....257  
**H. Takaki, et al.**, Dept. of Orthop. Surg., Kumamoto Rosai Hosp.

P5-2	Preoperative Neurologic Severity in Spinal Metastases After an Imaging-Based Bone Metastasis Cancer Board .....258 <b>Y. Toda, et al.</b> , Dept. of Orthop. Surg., Saga Univ.
P5-3	Evaluation of the HU Ratio Between Metastatic and Non-metastatic Vertebrae as a Novel Surgical Indicator and spinal instability .....258 <b>H. Arai, et al.</b> , Dept. of Orthop. Surg., National Defense Medical College
P5-4	Withdrawn
P5-5	Impact of postoperative resumption of chemotherapy on survival after laminectomy for metastatic spinal cord compression with paraplegia .....259 <b>H. Kinoshita, et al.</b> , Dept. of Orthop. Surg., Chiba Cancer Center
P5-6	A Case of Advanced Gastric Cancer with Spinal Metastasis Successfully Treated by Multidisciplinary Non-surgical Therapy .....260 <b>H. Kinoshita, et al.</b> , Dept. of Orthop. Surg., Chiba Cancer Center
P5-7	Short-Term Outcomes and Associated Factors in Surgical Treatment for Metastatic Cervical Tumors .....260 <b>S. Matsumoto, et al.</b> , TDC Ichikawa
P5-8	Preoperative Prognostic Nutritional Index Predicts Survival After Surgery for Spinal Metastases from Lung Cancer .....261 <b>Y. Kinoshita, et al.</b> , Dept. of Orthop. Surg., Showa Medical Univ. Northern Yokohama Hosp.

## Poster 6

10 : 40~11 : 20

Moderator : **T. Aihara**

### Adult Spinal Deformity

P6-1	Surgical Techniques for Preventing Proximal Junctional Kyphosis after Surgery for Adult Spinal Deformity .....261 <b>S. Suzuki, et al.</b> , Dept. of Orthop. Surg., Keio Univ.
P6-2	Association of phenotypic age and frailty with perioperative complications in ASD surgery ...262 <b>N. Nishino, et al.</b> , Dept. of Orthop. Surg., Tokyo Women's Medical Univ., Yachiyo Medical Center
P6-3	Comparative Study of Surgical Outcomes Between Young and Middle-Aged patients With Adult Idiopathic Scoliosis .....262 <b>Y. Iijima, et al.</b> , Dept. of Orthop. Surg., Seirei Sakura Citizen Hosp.
P6-4	Impact of Lateral Interbody Release and Rim Cage Placement in PLIF for Achieving Optimal Lumbar Lordosis in Adult Spinal Deformity Surgery .....263 <b>K. Nagata, et al.</b> , Dept. of Orthop. Surg., Wakayama Medical Univ.

- P6-5 Factors affecting good outcomes in short fusion strategy using lateral lumbar interbody fusion for adult spinal deformity .....263  
**M. Takami, et al.**, Dept. of Orthop. Surg., Wakayama Medical Univ.
- P6-6 Influence of Upper Instrumented Vertebra Level on Gait Kinematics After Corrective Fusion for Adult Spinal Deformity .....264  
**H. Arima, et al.**, Dept. of Orthop. Surg., Hamamatsu Univ. School of Medicine
- P6-7 Prevention of proximal junctional failure in Adult Spinal Deformity Surgery: Effectiveness and impact of a bundle approach .....264  
**M. Keishi, et al.**, Dept. of Orthop. Surg., Hyogo Hyogo Medical Univ.
- P6-8 Five-year outcomes of multiple rod constructs in adult spinal deformity surgery .....265  
**S. Miyagi, et al.**, Kobe Medical Center

### Poster Room 3

#### Poster 7

9 : 00~9 : 40

Moderator : **K. Kiyasu**

#### Vertebroplasty 1

- P7-1 Comparison of early and elective BKP for elderly osteoporotic vertebral fractures .....265  
**J. Inoue, et al.**, Akita Rosai Hosp.
- P7-2 Outcomes and challenges of Balloon Kyphoplasty for osteoporotic vertebral fractures in patients aged 85 years old and older .....266  
**K. Suzuki, et al.**, Tomidahama Hosp.
- P7-3 Preoperative radiological risk factor of revision surgery after BKP for OF4 OVF. ....266  
**J. Nagasawa, et al.**, Dept. of Orthop. Surg., Ishikiriseiki Hosp.
- P7-4 Withdrawn
- P7-5 Clinical significance of vertebral and intervertebral instability in percutaneous balloon kyphoplasty (BKP) .....267  
**K. Yamazaki, et al.**, Dept. of Orthop, Kindai Univ. Nara Hosp.
- P7-6 Five-Year Outcomes of Balloon Kyphoplasty for Osteoporotic Vertebral Compression Fractures” .....268  
**A. Yabu, et al.**, Dept. of Orthop. Surg., Saiseikai Nakatsu Hosp.
- P7-7 Clinical results of balloon kyphoplasty for osteoporotic vertebral fracture with DISH .....268  
**H. Takano, et al.**, Dept. of Orthop., Juntendo Univ.

- P7-8 The Impact of Pre-existing Vertebral Fractures on the Incidence of Secondary Vertebral Fractures After BKP Surgery in Postmenopausal Women .....269  
**K. Matsumoto, et al.**, SOUKA-MATSUBARA Ortop. Surg. Clinic.

## Poster 8

9 : 50 ~ 10 : 30

Moderator : **T. Ishikawa**

### Vertebroplasty 2

- P8-1 Clinical and radiological outcomes of vertebral body stenting for osteoporotic vertebral burst fractures .....269  
**H. Murata, et al.**, Shimura Hosp.
- P8-2 Expanding Indications and Identifying Limitations of Vertebral Body Stenting (VBS) for Osteoporotic Vertebral Fractures (OVF) .....270  
**T. Sakai**, Dept. of Spine Surg., Fukuoka Seisyukai Hosp.
- P8-3 Treatment Outcomes of Balloon Kyphoplasty and Vertebral Body Stenting for Early Post-Injury Osteoporotic Vertebral Fractures .....270  
**S. Makio, et al.**, Orthop. Surg., Sangubashi Spine Surg. Hosp.
- P8-4 A Comparative Study of BKP and VBS for the Prevention of Correction Loss in Osteoporotic Endplate-Type Vertebral Fractures .....271  
**Y. Yamamoto, et al.**, Tokyo rinkai Hosp.
- P8-5 Short-term results of postoperative loss of correction after VBS and BKP for osteoporotic vertebral fractures. ....271  
**T. Sugiyama, et al.**, Dept. of Orthop. Hikone Municipal Hosp..
- P8-6 Posterior instrumentation with vertebroplasty using hydroxyapatite block for elderly vertebral fractures .....272  
**M. Nagae, et al.**, Dept. of Orthop., Graduate School of Medical Science, Kyoto Prefectural Univ. of Medicine
- P8-7 Posterior short fusion without neural decompression for osteoporotic thoracolumbar vertebral collapse with neurological deficits: BKP vs HA .....272  
**A. Nakano, et al.**, Dept. of Orthop. Surg., Osaka Medical and Pharmaceutical Univ., Mishima-Minami Hosp.

## Poster 9

10 : 40~11 : 20

Moderator : **Y. Yabe**

### Endoscopic Spine 1

- P9-1 An investigation of exiting nerve root irritation during TF-FESS under local anesthesia .....273  
**K. Yagi, et al.**, Dept. of Musculoskeletal Sports Medicine, Research and Innovation, Nagoya City Univ., Graduate School of Medical Sciences
- P9-2 The usefulness of FESS for lateral lumbar disc herniation as seen from the reduction in analgesic dosage .....273  
**R. Shoji, et al.**, Akita Kousei Medical Center
- P9-3 Learning Curve and CUSUM Analysis of the Interlaminar Approach in Full-Endoscopic Spine Surgery: A Phase- Specific Evaluation .....274  
**T. Kaneko, et al.**, Inanami
- P9-4 Optimal endoscopic position and superior articular process resection in full-endoscopic discectomy using AI-assisted 3D MRI/CT fusion images .....274  
**D. Ukeba, et al.**, Dept. of Orthop. Surg., Faculty of Medicine and Graduate School of Medicine, Hokkaido Univ.
- P9-5 The Utility of Medical Real-Time Image Enhancement Devices in Education for Full-Endoscopic Spine Surgery .....275  
**K. Kin, et al.**, Dept. of Neurological Surg., Graduate School of Medicine, Dentistry and Pharmaceutical Sciences, Okayama Univ.
- P9-6 Initial Experience with Full-Endoscopic Spine Surgery for Lumbar Disc Herniation: Learning Curve Analysis by Surgical Approach .....275  
**T. Watanabe, et al.**, Dept. of Orthop. Surg., Oji Gen. Hosp.
- P9-7 New treatment for Bertolotti syndrome using Full Endoscopic Spine Surgery (FESS) An operation maneuver and mid-term clinical result .....276  
**T. Funato, et al.**, Dept. of Orthop. Surg., Noda General Hosp.
- P9-8 Evaluation of the Efficacy of Fully Endoscopic Spinal Surgery for Bastrup's Disease .....276  
**N. Ono, et al.**, Dept. of Orthop. Surg., Kansai Medical Univ.

## Poster Room 4

### Poster 10

9 : 00~9 : 40

Moderator : **Y. Yanagisawa**

#### Pain 1

- P10-1      Multidimensional Evaluation of Spinal Cord Stimulation (SCS) Treatment Outcomes: Analysis Using the JOABPEQ .....277  
**D. Matsuyama, et al.**, Dept. of Orthop. Surg., JRC Hadano Hosp.
- P10-2      Severe and prolonged nerve compression in lumbar spinal stenosis leads to poor postoperative improvement of leg pain. ....277  
**H. Suzuki, et al.**, Dept. of Orthop. Surg., Teikyo Univ.
- P10-3      Association between Preoperative Functional Connectivity and Postoperative Neuropathic Pain in DCM: A resting-state fMRI study .....278  
**T. Nakagawa, et al.**, Dept. of Orthop. Surg., Univ. of Tsukuba, Institute of Medicine
- P10-4      Surgical Outcomes of Lower Limb Pain After Surgery for Degenerative Cervical Myelopathy With or Without Lumbar Spinal Stenosis. ....278  
**A. Yoshida, et al.**, Dept. of Orthop. Surg., The Univ. of Tokyo Hosp., The Univ. of Tokyo
- P10-5      Therapeutic Effects of Spinal Cord Stimulation for Refractory Chronic Pain: An Observational Study Using JOABPEQ .....279  
**H. Katoh, et al.**, Dept. of Orthop. Surg., Surgical Science, Tokai Univ.
- P10-6      Neuropathic pain and sarcopenia -Based on skeletal muscle mass assessment following lumbar spinal stenosis surgery- .....279  
**K. Uomi, et al.**, National Center for Geriatrics and Gerontology
- P10-7      Therapeutic effects and prognostic factors of duloxetine on lumbar spinal canal stenosis .....280  
**A. Kubota, et al.**, Dept. of Orthop., Univ. of Fukui
- P10-8      Current Status of Treatment for Residual Pain After Lumbar Surgery: Focusing on Neuropathic Pain .....280  
**Y. Tanaka, et al.**, Dept. of Orthop. Surg., Kitasato Univ.

### Poster 11

9 : 50~10 : 30

Moderator : **H. Suzuki**

#### Pain 2

- P11-1      Postoperative Analgesic Efficacy of Epidural Catheterization After Posterior Spinal Fusion for Scoliosis .....281  
**S. Matsuda, et al.**, Kobe Medical Center

P11-2	Characteristics of Inflammatory Back Pain and Sagittal Alignment in Patients with Spondyloarthritis.....	281
	<b>H. Takahashi, et al.</b> , Dept. of Orthop. Surg., Univ. of Tsukuba	
P11-3	Clinical Characteristics of Superior Cluneal Nerve Entrapment: High Prevalence of Prior Lumbar Surgery and Right-sided Dominance .....	282
	<b>S. Takenaka, et al.</b> , JCHO Osaka Hosp.	
P11-4	Superficial Siderosis Develops 19 Years After Onset of Orthostatic Headache .....	282
	<b>S. Egawa, et al.</b> , Dept. of Orthop. and Trauma Research, Graduate School of Medical and Dental Sciences, Institute of Science Tokyo	
P11-5	Current Status of Neuropathic Pain Before and After Lumbar Surgery .....	283
	<b>Y. Tanaka, et al.</b> , Dept. of Orthop. Surg., Kitasato Univ.	
P11-6	Postpartum pelvic-girdle pain (PGP) in Japanese women and aggravating factors .....	283
	<b>T. Iguchi, et al.</b> , Matsuda Hosp., Orthop. Surg.	
P11-7	Prevalence of myofascial pain among patients with radicular-like lower limb symptoms .....	284
	<b>M. Kashii, et al.</b> , Dept. of Orthop. Surg., NHO Osaka Minmi Medical Center	
P11-8	Low Back Pain and Exercise Habits among Community-Dwelling Residents .....	284
	<b>K. Otani, et al.</b> , Dept. of Orthop. Surg., Fukushima Medical Univ.	

## Poster 12

10 : 40~11 : 20

Moderator : **M. Kato**

### Cervical Spine Alignment

P12-1	Investigation of Cutoff Values for Assessing Symptom Improvement and Treatment Satisfaction in Patients with Dropped Head Syndrome .....	285
	<b>R. Urata, et al.</b> , New Spine Clinic Tokyo	
P12-2	Quantitative Evaluation and Temporal Changes in Contrast-Enhanced MRI Findings of Cervical Spondylosis .....	285
	<b>T. Uehara, et al.</b> , Dept. of Orthop. Surg., Tokyo Medical Univ.	
P12-3	Withdrawn	
P12-4	Is preop gap ROM associated with the development of postop kyphosis after muscle-preserving selective laminectomy of cervical spine?.....	286
	<b>K. Kitamura, et al.</b> , Dept. of Orthop. Surg., National Defense Medical College, Saitama	
P12-5	The relationship between cervical spine alignment and PROMs in patients with rheumatoid arthritis.....	287
	<b>R. Wakabayashi, et al.</b> , Dept. of Orthop. Surg., Kakunodate Hosp.	

- P12-6 Does restoration of thoracic kyphosis in AIS surgery affect cervical alignment?.....287  
**T. Banno, et al.**, Dept. of Orthop. Surg., Hamamatsu Univ. School of Medicine
- P12-7 Analysis of the factors influence cervical sagittal alignment .....288  
**I. Yonezawa, et al.**, Tokyo Kamata Hosp. Spine and Scoliosis center

## Poster Room 5

### Poster 13

9 : 00~9 : 40

Moderator : **K. Mizutani**

#### Cement-Augmented Screws 1

- P13-1 Risk factors for cement leakage into segmental veins in posterior spinal fusion with fenestrated screws .....288  
**H. Futakawa, et al.**, Dept. of Orthop. Surg., Fac. of Med., Univ. of Toyama
- P13-2 The risk of cement leakage in cement-augmented pedicle screw fixation .....289  
**Y. Ishii, et al.**, Koto Hosp.
- P13-3 Risk factors for cement leakage when using cement augmented fenestrated pedicle screw.....289  
**A. Miyamoto, et al.**, Dept. of Orthop. Surg., Okayama Rosai Hosp.
- P13-4 Evaluation of Intraoperative Fluoroscopic Detection of Intravascular Cement Leakage in Cement-Augmented Pedicle Screws .....290  
**Y. Takashima, et al.**, Dept. of Orthop. Surg., Yokohama City Minato Red Cross Hosp.
- P13-5 Early mechanical complications and revision surgery following spinal fusion using cement augmented pedicle screws .....290  
**M. Hatano, et al.**, Dept. of Orthop. Surg., Hyogo Medical Univ.
- P13-6 Surgical outcome of Cement-Augmented Pedicle Screws for Osteoporotic Spinal Disorders: Evaluating Leakage Risks and Fixation Stability .....291  
**K. Nakamichi, et al.**, Keiyu Spine Center, Keiyu Orthop. Hosp.
- P13-7 The Usefulness of cement augmented pedicle screw (CAPS) and Prevention of Complications: Recent Advances with PEEP Combination .....291  
**S. Tahata, et al.**, Naruo Orthop. Hosp.
- P13-8 Comparison of Lateral access corpectomy with Cement-Injected Pedicle Screw and Conventional Method for Osteoporotic Vertebral Fractures. ....292  
**H. Matsumori, et al.**, Dept. of Orthop. Surg., Kashibaasahigaoka Hosp.

## Poster 14

9 : 50~10 : 30

Moderator : **Y. Ishimoto**

### Cement-Augmented Screws 2

- P14-1 A study of postoperative outcomes of VA and VA + CAPS evaluated by vertebral instability for OVF with DISH .....292  
*H. Oishi, et al.*, Miyoshi Hosp.
- P14-2 Fusion for osteoporotic vertebral fractures using cement-augmented pedicle screw is possible with short fusion.....293  
*H. Baba, et al.*, Dept. of Orthop. Surg., Nagasaki Rosai Hosp.
- P14-3 Short-term results of cement-augmented fenestrated pedicle screw for osteoporotic vertebral fractures .....293  
*S. Suzuki, et al.*, KMMC
- P14-4 Evaluation of Cement Volume and Cement Leakage in Cement-Augmented Pedicle Screws: A Study of 307 Vertebrae .....294  
*T. Yamaura, et al.*, Dept. of Orthop. Surg., Hyogo Hyogo Medical Univ.
- P14-5 Impact of Screw Placement and Relative Cement Volume on Cement Leakage in Cement-Augmented Fenestrated Pedicle Screw .....294  
*G. Uesugi, et al.*, Dept. of Orthop. and Spinal Surg., GraduateSchool of Medical and Dental Sciences, Institute of Science Tokyo
- P14-6 Impact of ROI-Based CT Values and T-scores on Cement Leakage from Vertebral Screws .....295  
*N. Higuchi, et al.*, Nagasaki Rosai Hosp.
- P14-7 From the vertebral body to the heart: Experience of unexpected complications caused by cement particles .....295  
*K. Yoshiki, et al.*, Dept. of Orthop. Surg., Kansai Medical Univ.

## Poster 15

10 : 40~11 : 20

Moderator : **S. Kawaguchi**

### Surgery for Osteoporotic Vertebral Fractures 1

- P15-1 Efficacy of llif for osteoporotic vertebral fractures with radiculopathy in the middle to lower lumbar spine .....296  
*G. Mori, et al.*, Sangubashi Spine Surg. Hosp.
- P15-2 Early BKP effectively prevents vertebral deformity progression in osteoporotic fractures of the thoracolumbar junction. ....296  
*J. Yamada, et al.*, Dept. of Orthop. Surg., Matsusaka Municipal Hosp.

- P15-3 Comparison of surgical results in patients with osteoporotic burst fractures in the middle-low lumbar spine undergoing LLIF and TLIF .....297  
**M. Kohno, et al.**, Dept. of Orthop. Surg., Chigasaki Municipal Hosp.
- P15-4 Clinical outcomes of surgical treatment for osteoporotic vertebral fractures using a dynamic stabilization system .....297  
**T. Kato, et al.**, Dept. of Orthop. Surg., NHO Tokyo Medical Center
- P15-5 Minimally Invasive Anteroposterior Fixation for Osteoporotic Vertebral Fractures: Thoracolumbar Junction vs Lower Lumbar Spine .....298  
**H. Takei, et al.**, Dept. of Orthop. Surg., Graduate School of Medical Science, Univ. of Yamanashi
- P15-6 Kyphotic deformity and high cement filling increase adjacent vertebral fracture risk after BKP/VBS for OVF. ....298  
**K. Yamamoto, et al.**, Dept. of Orthop. Surg., Inabe General Hosp.
- P15-7 Is anterior-posterior fusion using vertebral cages for osteoporotic vertebral fractures a dangerous procedure for elderly patients? .....299  
**H. Baba, et al.**, Dept. of Orthop. Surg., Nagasaki Rosai Hosp.

## The Second Day—April 17 (Friday)

### Room 1

### Symposium 3

8 : 10~9 : 40

Moderators : **M. Yamazaki**

**T. Morimoto**

#### Co-Creating Spine Care through Medical-Engineering Collaboration

- 2-1-S3-1 Development of medical devices in orthopedic implant fields .....309  
**Y. Okazaki**, AIST
- 2-1-S3-2 Medical-Engineering Collaboration: Our Case [People Who Sustain Surgical Instruments for the Next Decade] .....309  
**S. Kanai**, Meistec Co., Ltd.
- 2-1-S3-3 Successful Co-Creation of Medical Devices Between Academia and Industry .....310  
**M. Shimizu**, Medical Lab Partners
- 2-1-S3-4 Development of innovative medical devices through collaboration between medicine and engineering .....310  
**H. Sudo**, Dept. Orthop. Surg., Hokkaido Univ. Hosp.
- 2-1-S3-5 Medical-Engineering Collaboration for Screw-Anchored Kyphoplasty System: Novel Stabilization of Osteoporotic Vertebral Fractures .....311  
**N. Yonezawa, et al.**, Spine Chronicle

### Special Lecture 2

10 : 30~11 : 30

Moderator : **M. Nakamura**

- 2-1-SL2-1 Lessons from the Longest-Lived Rodent, the Naked Mole-Rat: Mechanisms of Resistance to Age-Related Diseases .....311  
**K. Miura**, Kyushu Univ.

## Luncheon Seminar 11

11 : 50~12 : 50

Moderator : **K. Takeshita**

### Considering Pain Management with Patient Treatment Satisfaction in Mind

- 2-1-LS11-1      How Will Technological Innovation in Spine Surgery Transform Patient Care and the Future of Medicine? .....312  
*T. Kaito*, Dept. of Orthop. Surg., Osaka-Rosai Hosp.
- 2-1-LS11-2      Current status of conservative treatment for spinal diseases .....312  
*G. Inoue*, Dept. of Orthop. Surg., Kitasato Univ.

## Luncheon Seminar 21

13 : 00~14 : 00

Moderator : **H. Terai**

- 2-1-LS21-1      Bone Quality Management and Surgical Design to Prevent Postoperative Complications in Spinal Surgery .....313  
*K. Watanabe*, Dept. of Orthop. Surg., Keio Univ.

## JSSR Related Academic Awards

14 : 10~15 : 10

Moderators : **M. Nakamura**  
**H. Nagashima**

### JSSR Award (sponsored by Taisho Pharmaceutical Co., Ltd.) -Basic-

- 2-1-JRAA-1      Development of a new treatment for osteoporotic vertebral fractures using adipose-derived stem cell spheroids .....313  
*Y. Sawada*, Dept. of Orthop., Osaka Metropolitan Univ. Graduate School of Medicine

### JSSR Award (sponsored by Taisho Pharmaceutical Co., Ltd.) -Clinical-

- 2-1-JRAA-2      Development of a machine learning model and a web application for predicting neurological outcome at hospital discharge in spinal cord injury patients .....314  
*K. Kitagawa*, Dept. of Orthop. Surg., Graduate School of Medicine, Chiba Univ.

### Journal of Spine Research (JSR) Best Paper Award

- 2-1-JRAA-3      Effectiveness of Intraoperative Neurophysiological Spinal Cord Monitoring in Lumbosacral Spine Surgery: Analysis of 6,196 Patients from Spinal Cord Monitoring Committee of the Japanese Society for Spine Surgery and Related Research .....314  
*M. Takahashi, et al.*, Kyorin Univ.
- 2-1-JRAA-4      Clinical Characteristics of Neurological Impairments Associated with Osteoporotic Vertebral Fractures .....315  
*H. Kanno, et al.*, Dept. of Orthop. Surg., Tohoku Medical and Pharmaceutical Univ.

**Spine Surgery and Related Research (SSRR) Best Paper Award**

- 2-1-JRAA-5 Optimal Placement of Supplemental Accessory Rods to Prevent Rod Fracture at the Lumbosacral Junction in Long Spinopelvic Fixation Using Lateral Interbody Fusion: A Biomechanical Experimental Study Using a Synthetic Bone Model and a Finite Element Model .....315  
**R. Nakanishi, et al.**, Dept. of Orthop. Surg., Wakayama Medical Univ., Wakayama, Japan
- 2-1-JRAA-6 Abnormal Paravertebral Muscle Activity and Cervical Extensor Muscle Condition Affect Dynamic Spinal Balance during Gait in Dropped Head Syndrome .....316  
**K. Sakashita, et al.**, Dept. of Orthop. Surg., Institute of Medicine, Univ. of Tsukuba, Tsukuba, Japan
- 2-1-JRAA-7 Trabecular Bone Remodeling after Lateral Lumbar Interbody Fusion: Indirect Findings for Stress Transmission between Vertebrae after Spinal Fusion Surgery .....316  
**N. Segi, et al.**, Dept. of Orthop. Surg., Nagoya Univ. Graduate School of Medicine, Nagoya, Japan

**Symposium 4**

15 : 20~16 : 50

Moderators : **Y. Aoki****K. Nakanishi****Clinical Insights in Physical Therapy for Spinal Disorders**

- 2-1-S4-1 Chronic low back pain and physical therapy .....317  
**T. Goto**, Dept. of Physical Therapy, Faculty of Health and Welfare, Tokushima Bunri Univ.
- 2-1-S4-2 Physical Therapy for Adult Spinal Deformity (ASD) .....317  
**K. Miyagishima, et al.**, Eniwa Hosp.
- 2-1-S4-3 Postoperative rehabilitation for lumbar spinal stenosis .....318  
**T. Wada**, Rehabilitation Div., Tottori Univ. Hosp.
- 2-1-S4-4 Effect of the Physical Therapy on Vertebral Collapse in Patients With Osteoporotic Vertebral Fractures .....318  
**T. Narita, et al.**, Toin Univ. of Yokohama
- 2-1-S4-5 Interdisciplinary Collaboration Between Spine Surgeons and Physical Therapists .....319  
**T. Sakai**, Dept. of Orthop., Tokushima Univ. Hosp.

**Researches Initiated by JSSR2026 1**

17 : 00~17 : 25

Moderator : **T. Aizawa**

- 2-1-RS1-1 Board-Certified Spine and Spinal Cord Surgeon .....319  
**N. Fujita, et al.**, Dept. of Orthop. Surg., Fujita Health Univ.

## Supervisory Doctor's Evening Seminar

17 : 30~18 : 30

Moderator : **T. Maeda**

- 2-1-SV-1 Safe anterior cervical surgery .....320  
**T. Yoshii**, Dept. of Orthop. and Spinal Surg., Graduate School of Medical and Dental Sciences, Institute of Science Tokyo
- 2-1-SV-2 Providing safe and secure medical care -Concepts of medical safety and safe and secure spine surgery- .....320  
**Y. Matsuyama**, Dept. of Orthop. Surg., Hamamatsu Univ. School of Medicine

### Room 2

#### Educational Lecture 4

8 : 10~9 : 10

Moderator : **H. Haro**

- 2-2-EL4-1 Three Lurking Radiation Hazards for Spinal Surgeons and Their Prevention .....321  
**Y. Hijikata**, Section of Clinical Epidemiology, Dept. of Community Medicine, Graduate School of Medicine, Kyoto Univ.

#### Symposium 5

10 : 00~11 : 30

Moderators : **K. Nishida**  
**H. Kanno**

##### Management of Low Back Pain in Patients with Severe Obesity

- 2-2-S5-1 Epidemiology of Obesity and Low Back Pain: Insights from Global and Japanese Evidence .....321  
**T. Nikaido, et al.**, Dept. of Orthop. Surg., Fukushima Medical Univ.
- 2-2-S5-2 Impact of Obesity on Lumbar Spine Surgery .....322  
**S. Tanishima**, Dept. Orthop. Surg. Faculty of Medicine, Tottori Univ.
- 2-2-S5-3 Clinical outcomes and complications of lumbar spine surgery in obese patients .....322  
**K. Nakajima, et al.**, Dept. of Orthop. Surg., Iwata City Hosp.
- 2-2-S5-4 Medical Treatment for Severe Obesity: From Fundamental Therapeutic Principles to the Latest Anti-Obesity Medications .....323  
**A. Saiki**, Ctr. of Diabetes, Endocrinol. & Metab., Toho Univ. Sakura Med. Ctr.
- 2-2-S5-5 The Latest Advances in Surgical Obesity Treatment .....323  
**K. Kasama, et al.**, YMC

## Luncheon Seminar 12

11 : 50~12 : 50

Moderator : **K. Miyamoto**

- 2-2-LS12-1 Exploration for spinal deformity treatment with the longest-lasting effect based on mathematical considerations and true professionalism .....324  
**S. Kaneko**, Dept. of Spine and Spinal Cord Surg., Fujita Health Univ.

## Luncheon Seminar 22

13 : 00~14 : 00

Moderator : **R. Takemasa**

- 2-2-LS22-1 Minimally invasive spinal reconstruction surgery using vertebral body stenting system for osteoporotic vertebral fractures .....324  
**A. Minamide**, Dept. of Orthop. Surg., Kansai Medical Univ. Medical Center
- 2-2-LS22-2 The True Value of VBS for Osteoporotic Vertebral Fractures: From Standalone Augmentation to Combined Posterior Fixation and Interbody Fusion .....325  
**H. Katoh**, Dept. of Orthop. Surg., Surgical Science, Tokai Univ.

## Educational Lecture 5

14 : 10~15 : 10

Moderator : **Y. Kawaguchi**

- 2-2-EL5-1 Antimicrobial Stewardship in Spinal Infections: Based on ICM 2025 Recommendations .....325  
**T. Taniguchi**, Dept. of ID, Chiba Univ. Hosp.

## Educational Lecture 6

15 : 20~16 : 20

Moderator : **M. Matsumoto**

- 2-2-EL6-1 Insurance Coverage of New Medical Technologies: Current Status and Challenges .....326  
**Y. Ishikawa, et al.**, MHLW

## Educational Lecture 7

16 : 30~17 : 30

Moderator : **H. Takahashi**

- 2-2-EL7-1 Learning "Law" and "Ethics" through Court Cases - In the Field of Spinal Cord Disorders .....326  
**Y. Munakata**, Sekiya & Munakata LAW OFFICE

## Room 3

### Morning Seminar 1

7 : 00~8 : 00

Moderator : **K. Sasaki**

- 2-3-MS1-1 The World of UBE Evolved from FESS: What to Update and What to Retain .....327  
**S. Yamaoka, et al.**, Dept. of Orthop. Surg., Ehime Univ. Graduate School of Medicine
- 2-3-MS1-2 PETLIF: Technical strategies to improve the safety of the extraforaminal approach.....327  
**K. Nagahama, et al.**, Sapporo Endoscopic Spine Surgery Clinic

### Free Papers 17

8 : 10~9 : 20

Moderator : **S. Orita**

#### Basic Research on Intervertebral Discs

- 2-3-F17-1 Sustained RNA interference using cationized gelatin nanospheres for intervertebral disc degeneration in a rat tail model .....328  
**Y. Hiranaka, et al.**, Dept. of Orthop. Surg., Kobe Univ. Graduate School of Medicine
- 2-3-F17-2 Effects of Mechanical Loading on a Rat Intervertebral Disc Puncture Model .....328  
**K. Umeda, et al.**, Dept. of Orthop., Graduate School of Medical Science, Kyoto Prefectural Univ. of Medicine
- 2-3-F17-3 Modulation of Macrophage Polarization by T Cells in Injured Intervertebral Discs .....329  
**N. Shibata, et al.**, Dept. of Orthop. Surg., Kitasato Univ.
- 2-3-F17-4 Effects of Osmotic Pressure on Piezo1, Extracellular Matrix, and Cell Apoptosis in Rat Nucleus Pulposus Cells .....329  
**D. Nakagawa, et al.**, Dept. of Orthop. Surg., Kobe Univ. Graduate School of Medicine
- 2-3-F17-5 Relationship between PITX1 and Actin Filaments in Intervertebral Discs .....330  
**Y. Otani, et al.**, Dept. of Orthop. Surg., Surgical Science, Tokai Univ.
- 2-3-F17-6 Development of a novel rat intervertebral disc degeneration model: adjacent disc degeneration by the pedicle screw fixation .....330  
**T. Yabumoto, et al.**, Dept. of Orthop. Surg., Faculty of Medicine and Graduate School of Medicine, Hokkaido Univ.
- 2-3-F17-7 Effects of Adipose tissue-derived Stem cell Exosome Supernatant on Human Intervertebral disc cells .....331  
**K. Ohara, et al.**, Dept. of Musculoskeletal Surg., Dept. of Multimodality Therapy for Cancer, Mie Univ. Graduate School of Medicine
- 2-3-F17-8 Effect of Osmotic Stress via TRPV4 Activation on Autophagy and Matrix Synthesis in the Rat Intervertebral Disc .....331  
**M. Furuya, et al.**, Dept. of Orthop. Surg., Kobe Univ. Graduate School of Medicine

## Free Papers 18

9 : 30 ~ 10 : 20

Moderator : **G. Yoshida**

### Neuromonitoring 1

- 2-3-F18-1 Derivability and Determinants of SEP/Tc-MEP in Cervical and Thoracic Spine Surgery: A Multi-center Prospective Study .....332  
**M. Funaba, et al.**, Dept. of Orthop. Surg., Yamaguchi Univ. Graduate School of Medicine
- 2-3-F18-2 Initial Outcomes of LTP Surgery with Concurrent Saphenous Nerve SSEP Monitoring: A Study of Safety and Efficacy .....332  
**T. Tsuzuki, et al.**, Dept. of Orthop. Surg., The Jikei Univ. School of Medicine
- 2-3-F18-3 Comparative Analysis of Fusion and Decompression Surgery in Degenerative Cervical Myelopathy: A multicenter study .....333  
**M. Funaba, et al.**, Dept. of Orthop. Surg., Yamaguchi Univ. Graduate School of Medicine
- 2-3-F18-4 Characteristics of Intraoperative Neuromonitoring Waveform Changes in Indirect Decompression During LLIF .....333  
**N. Manabe, et al.**, East Maebashi Orthop. Hosp.
- 2-3-F18-5 Distribution of muscle innervation in patients with L6 LSTV investigated by nerve root electrical stimulation during surgery .....334  
**T. Sasaki, et al.**, Dept. of Clinical Engineering, Kameda Daiichi Hosp.
- 2-3-F18-6 A comparative study on the effectiveness of electrodes for transcranial motor-evoked potential monitoring at our hospital .....334  
**S. Yoshikawa, et al.**, General Aoyama Hosp.

## Free Papers 19

10 : 30 ~ 11 : 30

Moderator : **M. Takami**

### Neuromonitoring 2

- 2-3-F19-1 MEP Recovery After Rod Removal in Spinal Deformity Surgery: Recurrent Alerts and Postoperative Neurological Deficits .....335  
**T. Hashimoto, et al.**, Dept. of CE, NHO Kobe Medical Center
- 2-3-F19-2 Investigation of Alarm Points Using combination of Tc-MEP and Spontaneous Electromyography for Thoracolumbar Degenerative Spinal Disease .....335  
**T. Koike, et al.**, Niigata Spine Surg. Center
- 2-3-F19-3 Does Adding SEP Improve Intraoperative Monitoring Accuracy? A Multicenter Prospective Study by the JSSR Committee .....336  
**M. Funaba, et al.**, Dept. of Orthop. Surg., Yamaguchi Univ. Graduate School of Medicine

- 2-3-F19-4 The impact of functional diagnosis using magnetoneurography (magnetospinography) on treatment decision-making .....336  
**S. Tamura, et al.**, Dept. of Orthop. and Spinal Surg., Graduate School of Medical and Dental Sciences, Institute of Science Tokyo
- 2-3-F19-5 External Anal Sphincter Monitoring in Spine Surgery: Coccygeal Reference Enhances Amplitude : Comparison of Needle vs Seal Electrodes .....337  
**Y. Yanagisawa**, Dept. of Orthop., Sure., Fukuoka Mural Hosp.
- 2-3-F19-6 Diagnostic evaluation of L5/S foramina stenosis using absolute values of superficial peroneal nerve SNAP amplitude .....337  
**Y. Kusabe, et al.**, Dept. of Orthop. Sure., Niigata Central Hosp.
- 2-3-F19-7 Utility of post tetanic motor evoked potentials monitoring in patients with preoperative lower limb weakness .....338  
**T. Mui, et al.**, Dept. of Orthop. Surg., Nara Medical Univ.

### Luncheon Seminar 13

11 : 50~12 : 50

Moderator : **T. Nikaido**

#### Occupational Radiation Exposure in Spine Surgeons and Strategies for Dose Reduction

- 2-3-LS13-1 "Silent Hazard 2.0" Reassessment of Radiation Exposure Risks in Spinal Procedures .....338  
**K. Yamashita**, Takamatsu Municipal Hosp.

### Luncheon Seminar 23

13 : 00~14 : 00

Moderator : **S. Ohtori**

- 2-3-LS23-1 Bone Health Optimization in Spine Surgery: Practical Perioperative Strategies Based on the 2025 Osteoporosis Guidelines .....339  
**A. Hiyama**, Dept. of Orthop. Surg., Surgical Science, Tokai Univ.

### Free Papers 20

14 : 10~15 : 10

Moderator : **T. Miyamoto**

#### Osteoporosis

- 2-3-F20-1 Utility of CT-Derived Hounsfield Units for Osteoporosis Risk Assessment Using the Local Fragility Index and Radiomics-lite Model .....339  
**A. Hiyama, et al.**, Dept. of Orthop. Surg., Surgical Science, Tokai Univ.

2-3-F20-2	Change in spinal bone mineral density as estimated Hounsfield units following abaloparatide, romosozumab or arendronate.....340 <b>Y. Nitobe, et al.</b> , Hakodate Municipal Hosp.
2-3-F20-3	Association between morphometric vertebral fractures and physical function in older adults: The Bunkyo Health Study .....340 <b>S. Tamagawa, et al.</b> , Dept. of Orthop., Juntendo Univ.
2-3-F20-4	Predictors of vertebral fractures in patients with severe osteoporosis .....341 <b>H. Inose, et al.</b> , Dept. of Orthop. Surg., Dokkyo Medical Univ. Saitama Medical Center
2-3-F20-5	Prospective and retrospective research for the diagnosis of osteoporosis: validation and establishment of vertebral Hounsfield Unit .....341 <b>H. Taniwaki, et al.</b> , Dept. of Orthop. Surg., Osaka Metropolitan Univ. Graduate School of Medicine
2-3-F20-6	ucOC is associated with bone turnover markers and bone mineral density in patients undergoing spinal surgery .....342 <b>D. Kudo, et al.</b> , Dept. of Rehabilitation Medicine, Akita Univ.Hosp.
2-3-F20-7	Trends of clinical vertebral fractures after the introduction of municipality fracture prevention from 2015 to 2021 in an aged region .....342 <b>T. Hamasaki, et al.</b> , Dept. of Orthop. Surg., Chugoku Rosai Hosp.

## Free Papers 21

15 : 20~16 : 20

Moderator : **A. Yamazaki**

### Osteoporotic Vertebral Fractures 1

2-3-F21-1	Adjacent Disc Vacuum Phenomenon as a Risk Factor for Adjacent Vertebral Fracture after Balloon Kyphoplasty.....343 <b>K. Okamoto, et al.</b> , Dept. of Orthop. Surg., Yuri General Hosp.
2-3-F21-2	Adjacent vertebral fractures after fusion for osteoporotic thoracolumbar fractures .....343 <b>H. Baba, et al.</b> , Dept. of Orthop. Surg., Nagasaki Rosai Hosp.
2-3-F21-3	Factors related to improvement of ADL following BKP for osteoporotic vertebral fractures in patients aged 90 years and older .....344 <b>A. Hasegawa, et al.</b> , Dept. of Orthop. Surg., Kyorin Univ. Suginami Hosp.
2-3-F21-4	Risk Factors for Subsequent Vertebral Fractures after Balloon Kyphoplasty: A Temporal and Regional Analysis.....344 <b>A. Muramoto</b> , Kariya TOYOTA General Hosp.
2-3-F21-5	Investigation of Factors Contributing to the Deflation Effect in Cement Vertebroplasty .....345 <b>Y. Chosei, et al.</b> , Dept. of Orthop. Surg., Omi Medical Center

## Free Papers 22

16 : 30~17 : 30

Moderator : **K. Maruo**

### Osteoporotic Vertebral Fractures 2

- 2-3-F22-1 Building a screening system for vertebral fracture diagnosis using X-ray images taken with a smartphone and artificial intelligence .....345  
**Y. Kado, et al.**, Dept. of Orthop. Surg., Graduate School of Biomedical and Health Sciences, Hiroshima Univ.
- 2-3-F22-2 Factors involved in neurological symptoms in osteoporosis vertebral fractures of the lower lumbar spine .....346  
**K. Fujimoto, et al.**, Dept. of Orthop. Surg. Kohnodai Medical Center
- 2-3-F22-3 Risk factors for subsequent vertebral fractures following acute osteoporotic vertebral fractures: a retrospective single-center study .....346  
**J. Wakasa, et al.**, Dept. of Orthop. Surg., Eniwa Hosp.
- 2-3-F22-4 Further Examination of Clinical Significance of Confined High Intensity on T2WI MRI in Fresh OVs .....347  
**M. Tokunaga, et al.**, Sendai Orthop. Hosp.
- 2-3-F22-5 Risk factors for early subsequent vertebral fractures after osteoporotic vertebral fracture .....347  
**I. Takahashi, et al.**, Ishii Orthop. & Rehabilitation Clinic
- 2-3-F22-6 The effects of extracorporeal shockwave therapy on the lumbar spine of osteoporotic rat models .....348  
**K. Inomata, et al.**, Dept. of Orthop. Surg., Gunma Univ. Graduate School of Medicine
- 2-3-F22-7 Clinical features of foraminal stenosis due to osteoporotic vertebral fracture: a prospective multi-center study .....348  
**H. Kanno, et al.**, Dept. of Orthop. Surg., Tohoku Medical and Pharmaceutical Univ.

## Room 4

### Free Papers 23

8 : 10~9 : 20

Moderator : **N. Wakao**

### Ligamentum Flavum Hypertrophy & Ossification

- 2-4-F23-1 Dual Pathways of Ligamentum Flavum Hypertrophy Revealed by Two-Photon Imaging .....349  
**M. Ikuta, et al.**, Dept. of Orthop. Surg., Osaka General Medical Center
- 2-4-F23-2 Potential therapeutic effects of GLP-1 receptor agonists on ligamentum flavum hypertrophy .....349  
**Y. Akaike, et al.**, Dept. of Orthop. Surg., Fujita Health Univ.

- 2-4-F23-3 Increased alpha-SMA and Scleraxis Expression in Hypertrophied Ligamentum Flavum in Patients with Lumbar Spinal Canal Stenosis .....350  
**K. Nagashima, et al.**, Musculoskeletal Science, Yokohama City Univ. Graduate School of Medicine
- 2-4-F23-4 Gene analysis of thickened ligamentum flavum: comparison between the dural and dorsal sides of the thickened ligamentum flavum .....350  
**Y. Yabe, et al.**, Dept. of Orthop. Surg., Sendai Medical Center
- 2-4-F23-5 Correlations of ging factors in the degenerative process of the Lumber Ligamentum Flavum ...351  
**T. Aoki, et al.**, OKTH
- 2-4-F23-6 Single-Cell RNA-Sequencing Analysis of Ligamentum Flavum Hypertrophy with Spondylolisthesis .....351  
**M. Hashimoto, et al.**, Dept. of Orthop. Surg., Teikyo Univ.
- 2-4-F23-7 Cytokine Dynamics and Severity of Ossification in Cervical Ossification of the Posterior Longitudinal Ligament .....352  
**H. Saito, et al.**, Dept. of Orthop. Surg., Shiga Univ. of Medical Science
- 2-4-F23-8 The significance of epigenetic modifications in pathogenesis with ossification of the spinal ligament .....352  
**T. Yayama, et al.**, Dept. of Orthop. Surg., Shiga Univ. of Medical Science

## Free Papers 24

9 : 30 ~ 10 : 20

Moderator : **H. Iwasaki**

### Nerve Blocks and Injections

- 2-4-F24-1 Recognizing C6-C7 anatomical variations and the artery is vital for safe ultrasound-guided cervical nerve root block .....353  
**S. Murata, et al.**, Dept. of Orthop. Surg., Wakayama Medical Univ.
- 2-4-F24-2 The '0-1 Sign' for Cervical Nerve Visualization under Ultrasound Guidance: A New Standard for Beginner-Friendly Identification .....353  
**Y. Ishimoto, et al.**, Dept. of Orthop. Surg., Wakayama Medical Univ.
- 2-4-F24-3 Comparative Effectiveness of Nerve Root Block Across Lumbar Disorders: A Multicenter Study Organized by the JSSR .....354  
**K. Minato, et al.**, Div. of Orthop. Surg., Dept. of Regenerative and Transplant Medicine, Niigata Univ. Graduate School of Medical and Dental Sciences
- 2-4-F24-4 Clinical efficacy of selective nerve root block with and without gabapentinoid therapy for lumbar degenerative disease .....354  
**Y. Shibuya, et al.**, Div. of Orthop. Surg., Dept. of Regenerative and Transplant Medicine, Niigata Univ. Graduate School of Medical and Dental Sciences

2-4-F24-5	Comparative Study of Effects of Selective Nerve Root Block for Lumbar Spinal Canal Stenosis by Age Group .....355
	<b>J. Ouchida, et al.</b> , Dept. of Orthop./Rheumatology, Musculoskeletal and Cutaneous Surg., Program in Integrated Medicine, Graduate School of Medicine, Nagoya Univ.
2-4-F24-6	Analgesic effect of ESP block during lumbar spine surgery .....355
	<b>F. Kasama, et al.</b> , Akita Kosei Medical Center

## Free Papers 25

10 : 30~11 : 30

Moderator : **T. Mihara**

### Imaging

2-4-F25-1	MRI-based vertebral bone quality (VBQ) score is a independent predictor of pedicle screw insertion torque compared with HU and DXA values. ....356
	<b>Y. Nishiyama, et al.</b> , Dept. of Orthop., Tachikawa Hosp.
2-4-F25-2	Association between android and gynoid fat mass and spinal Hounsfield unit values .....356
	<b>Y. Hashimoto, et al.</b> , Dept. of Orthop. Surg., Hakodate Central General Hosp.
2-4-F25-3	Low vertebral hounsfield unit values predict nonunion after single-level PLIF .....357
	<b>K. Kitaguchi, et al.</b> , Dept. of Orthop. Surg., Sumitomo Hosp.
2-4-F25-4	Analysis of Hounsfield Unit distribution throughout the whole spine and identification of the optimal assessment level .....357
	<b>R. Oishi, et al.</b> , Dept. of Orthop. Dept. of Orthop., Japanese Red Cross Aichi Medical Center Nagoya Daiichi Hosp.
2-4-F25-5	Do the endplate shape, the cage position, and the CT Hounsfield unit to the occurrence of postoperative cage sinking in PLIF? .....358
	<b>M. Tanaka, et al.</b> , Dept. of Orthop. Surg
2-4-F25-6	Layer-Specific 3D Hounsfield Unit Analysis of the First Lumbar Vertebra: Age- and Sex-Related Bone Quality Changes .....358
	<b>M. Fujimoto, et al.</b> , Dept. of Neuro Surg., Japanese Red Cross Ise Hosp., Funae, Ise, Mie, Japan
2-4-F25-7	A New Scoring System Incorporating Hounsfield Unit Values to Predict Adjacent Vertebral Fracture After Balloon Kyphoplasty .....359
	<b>K. Matsumoto, et al.</b> , Dept. of Orthop. Surg, Nihon Univ

## Luncheon Seminar 14

11 : 50~12 : 50

Moderator : **T. Kotani**

### Spinal Surgery and Vertebral Fracture Liaison Services: What Today's Spine Surgeons Should Know

- 2-4-LS14-1 Treatment Strategies for Spinal Deformity Following Vertebral Fracture - Implementation of an FLS Regional Care Pathway - .....359  
*H. Arima, et al.*, Dept. of Orthop. Surg., Hamamatsu Univ. School of Medicine
- 2-4-LS14-2 The Latest Secondary Fracture Prevention Measures Spine Surgeons Should Know: Utilizing the FLS Clinical Standards .....360  
*H. Yasuoka*, Dept. of Orthop. Surg., Tokorozawa Hakusyoukai Hosp.

## Luncheon Seminar 24

13 : 00~14 : 00

Moderator : **S. Demura**

- 2-4-LS24-1 Advancing Spinal Trauma and Scoliosis Surgery: New Strategies Enabled by Robotic Assistance and Intraoperative CT Navigation .....360  
*H. Oba, et al.*, Dept. of Orthop. Surg., Shinshu Univ.

## Free Papers 26

14 : 10~15 : 10

Moderator : **T. Oda**

### Spine Surgery in the Elderly

- 2-4-F26-1 Results and Complications of Spine Surgeries in Nonagenarians Compared with Octogenarians .....361  
*T. Sono, et al.*, Dept. of Orthop. Surg., Graduate School of Medicine, Kyoto Univ.
- 2-4-F26-2 Comprehensive Evaluation of Surgical Outcomes for Elderly Patients with Degenerative Cervical Myelopathy: A Multicenter Prospective Study .....361  
*S. Ito, et al.*, Kawasaki Municipal Hosp. Spine and spinal cord center
- 2-4-F26-3 Multiple geriatric comparison of older surgical patients with degenerative cervical and lumbar diseases: A retrospective longitudinal study .....362  
*R. Kurihara, et al.*, Dept. of Orthop. Surg., Fujita Health Univ.
- 2-4-F26-4 Perioperative complications in patients aged 85 and older undergoing spinal surgery: a comparative study of pre-old and old patients .....362  
*T. Mui, et al.*, Dept. of Orthop. Surg., Nara Medical Univ.

2-4-F26-5	Clinical outcome and complication of anterior-posterior correction surgery for adult spinal deformity in elderly patients .....363 <i>Y. Kotani, et al.</i> , Wakakusa Daiichi Hosp.
2-4-F26-6	Outcomes of adult spinal deformity surgery in octogenarians .....363 <i>S. Kato, et al.</i> , Dept. of Orthop. Surg., The Univ. of Tokyo Hosp., The Univ. of Tokyo
2-4-F26-7	Perioperative Complications and Functional Outcomes After Vertebroplasty in Elderly Patients: A Nationwide Study .....364 <i>R. Tahara, et al.</i> , Dept. of Orthop. and Spinal Surg., Graduate School of Medical and Dental Sciences, Institute of Science Tokyo

## Free Papers 27

15 : 20~16 : 20

Moderator : **T. Kotani**

### Adult Spinal Deformity 1

2-4-F27-1	Investigation of Hospitalization Costs for Spinal Corrective Surgery in Adult Spinal Deformity: A Multicenter Prospective Study in Japan .....364 <i>Y. Murakami, et al.</i> , Dept. of Orthop. Surg., Hamamatsu Univ. School of Medicine
2-4-F27-2	Risk Factor Analysis of Proximal Junctional Failure in Adult Spinal Deformity Surgery: A Multidimensional Evaluation .....365 <i>T. Kanto, et al.</i> , Dept. of Orthop. Surg., Dokkyo Medical Univ.
2-4-F27-3	Risk factor of proximal junctional failure in adult spinal deformity surgery .....365 <i>G. Yoshida, et al.</i> , Dept. of Orthop. Surg., Hamamatsu Univ. School of Medicine
2-4-F27-4	The correlation between nutritional status, assessed by MNA-SF, and clinical outcomes in adult spinal deformity patients .....366 <i>K. Oda, et al.</i> , Dept. of Orthop. Surg., Graduate School of Medical Science, Univ. of Yamanashi
2-4-F27-5	The fusion morphology of allografted allogeneic bone in adult spinal deformity surgery was evaluated using CT .....366 <i>A. Kuroda, et al.</i> , Zama general Hosp.
2-4-F27-6	Prevalence of Retro-renal Colon in the Japanese Population: Analysis of 333 Abdominal CT Scans .....367 <i>H. Hirata, et al.</i> , Dept. of Orthop. Surg., Saga Univ.
2-4-F27-7	Prevention of UIV fractures in adult spinal deformity surgery -Hook vs Pedicle Screw vs Percutaneous Pedicle Screw- .....367 <i>M. Ohno, et al.</i> , Scoliosis center, Dept. of Orthop. Surg. Osaka City General Hosp.

## Free Papers 28

16 : 30~17 : 30

Moderator : **S. Inami**

### Adult Spinal Deformity 2

- 2-4-F28-1 Spinopelvic-Hip Harmony as a Novel Predictor of Residual Knee Flexion After Adult Spinal Deformity Surgery .....368  
**K. Takahashi, et al.**, Dept. of Orthop. Surg., Tohoku Univ. Graduate School of Medicine
- 2-4-F28-2 Effects of the Koshimagari Exercise on quality of life in adult spinal deformity .....368  
**H. Taniwaki, et al.**, Dept. of Orthop. Surg., Osaka Metropolitan Univ. Graduate School of Medicine
- 2-4-F28-3 Clinical Profiles and Low Back Pain in Thoracic- and Lumbar-Dominant Types of Adult Spinal Deformity: The Wakayama Spine Study .....369  
**K. Nagata, et al.**, Dept. of Orthop. Surg., Wakayama Medical Univ.
- 2-4-F28-4 The importance of trunk and lower limb muscle strength in preventing lumbar kyphosis .....369  
**K. Mizutani, et al.**, Dept. of Orthop. Surg., Asahikawa Medical Univ.
- 2-4-F28-5 Efficacy of abdominal trunk muscles-strengthening exercise in spinal alignment, muscle quality and quantity of abdominal trunk muscles .....370  
**M. Kawai, et al.**, Dept. of Orthop. Surg., Graduate School of Medical Sciences, Kanazawa Univ.
- 2-4-F28-6 Outcomes of L5 Osteotomy for Kyphotic Deformity with L5 as the Apex and Future Challenges .....370  
**R. Shoji, et al.**, Akita Kousei Medical Center
- 2-4-F28-7 Surgical treatment for lumbosacral anomaly with an oblique take-off .....371  
**T. Ohara, et al.**, Meijo Hosp.

## Room 5

## Free Papers 29

8 : 10~9 : 20

Moderator : **Y. Yamato**

### Spinal Alignment and Lower Extremities

- 2-5-F29-1 Analysis of Pelvic Tilt Compensation in Spinal Kyphosis: Hip and Knee Contributions to Standing and Gait Posture .....371  
**K. Ishikawa, et al.**, Dept. of Orthop. Surg., Tohoku Univ. Graduate School of Medicine
- 2-5-F29-2 Classification of Hip-Spine Syndrome and Its Impact on Spinal Alignment in Patients After Total Hip Arthroplasty .....372  
**M. Sakamoto, et al.**, Dept. of Orthop. Surg., Graduate School of Medicine, Kyoto Univ.
- 2-5-F29-3 Regarding lumbar degenerative disease in cases of knee OA surgery Complication frequency of lumbopelvic sagittal plane alignment .....372  
**H. Kokufu, et al.**, Dept. of Orthop. Sagamihara kyoudou Hosp.

2-5-F29-4	Impact of thoracolumbar fusion range and lower extremity range of motion on postoperative activities of daily living .....373 <i>T. Katayama, et al.</i> , Matsue Red Cross Hosp.
2-5-F29-5	Does cross-legged sitting position induce lumbar scoliosis? .....373 <i>T. Miwa, et al.</i> , Dept. of Orhop. Surg., Ikeda city Hosp.
2-5-F29-6	Lumbar Spinal Fusion Increases Hip Joint Mobility .....374 <i>M. Takemoto, et al.</i> , Dept. of Orthop. and Spine Surg., Kyoto City Hosp.
2-5-F29-7	Impact of sagittal spinal alignment on Quality of life in patients with severe knee osteoarthritis undergoing total knee arthroplasty .....374 <i>M. Kohno, et al.</i> , Dept. of Orthop. Surg., Chigasaki Municipal Hosp.
2-5-F29-8	Prevalence of Acetabular Dysplasia in Patients with Adolescent Idiopathic Scoliosis.....375 <i>T. Takahashi, et al.</i> , Div. of Orthop. Surg., Dept. of Medicine of Sensory and Motor Organs, Faculty of Medicine, Univ. of Miyazaki

## Free Papers 30

9 : 30 ~ 10 : 20

Moderator : **T. Sakai**

### Lumbar Spinal Stenosis, Locomotive Syndrome & Physical Function

2-5-F30-1	Utility of GLFS-25 for older patients with lumbar spinal stenosis: a two-year retrospective cohort study .....375 <i>Y. Akaike, et al.</i> , Dept. of Orthop. Surg., Fujita Health Univ.
2-5-F30-2	Sleep disturbance as a comorbidity in lumbar spinal stenosis: Impact of postoperative improvement of leg numbness on sleep recovery .....376 <i>T. Sada, et al.</i> , Dept. of Orthop. Surg., Nara Med. Univ.
2-5-F30-3	Comparison of GLFS-25 stage classification and MCID in assessing surgical outcomes for older patients with lumbar spinal stenosis .....376 <i>Y. Akaike, et al.</i> , Dept. of Orthop. Surg., Fujita Health Univ.
2-5-F30-4	Research of age-specific average strength of the abdominal trunk muscles and its relationship with locomotive syndrome .....377 <i>M. Kawai, et al.</i> , Dept. of Orthop. Surg., Graduate School of Medical Sciences, Kanazawa Univ.
2-5-F30-5	Lower leg edema in lumbar spinal stenosis and improvement following treatment .....377 <i>Y. Takeichi, et al.</i> , Dept. of Orthop. Surg., NCGG
2-5-F30-6	Cross-sectional Study on Locomotive Syndrome Severity Assessment and Falls: Comparison of GLFS-25 Alone and Combined Use of Three Tests .....378 <i>T. Nakano, et al.</i> , Dept. of Orthop. Surg., Hirosaki Univ. Graduate School of Medicine

## Free Papers 31

10 : 30~11 : 30

Moderator : **S. Yabuki**

### Lumbar Spine Disorders/Epidemiology

- 2-5-F31-1 Epidemiology and Image Analysis of Interspinous High Signal Change on MRI in 263 Young Athletes with Low Back Pain .....378  
**T. Kitano, et al.**, Div. of Spine Surg., Dept. of Orthop. Surg., Kobe Univ. Graduate School of Medicine
- 2-5-F31-2 Adult attention-deficit hyperactivity disorder is a risk factor for chronic low back pain: A nationwide cross-sectional study .....379  
**M. Iwamae, et al.**, Dept. of Orthop. Surg., Osaka Metropolitan Univ. Graduate School of Medicine
- 2-5-F31-3 Epidemiology of Single-Level PLIF/TLIF: A Study Using Database of the Japanese Spinal Instrumentation Society .....379  
**K. Yokosuka, et al.**, Dept. of Orthop. Surg., Kurume Univ. Sch. Med.
- 2-5-F31-4 Evaluation of brace treatment and analysis of factors influencing pain relief in 551 adolescents with early-stage lumbar spondylolysis .....380  
**T. Kitano, et al.**, Div. of Spine Surg., Dept. of Orthop. Surg., Kobe Univ. Graduate School of Medicine
- 2-5-F31-5 Cross-Sectional Study of Early-Phase Diffuse Idiopathic Skeletal Hyperostosis and Pain in the General Population .....380  
**K. Wada, et al.**, Dept. of Orthop. Surg., Hirosaki Univ. Graduate School of Medicine
- 2-5-F31-6 Spinal Alignment and QOL Changes in Elderly Farmers: A 3-Year Prospective Cohort Study .....381  
**T. Motoyoshi, et al.**, Dept. of Orthop. Surg., Kudanzaka Hosp.
- 2-5-F31-7 Prospective Longitudinal Cohort Study of Trunk Muscle Mass: Associations with Low Back Pain, Sagittal Alignment, and Vertebral Fracture Risk .....381  
**Y. Okamura, et al.**, Dept. of Orthop. Surg., Osaka Metropolitan Univ. Graduate School of Medicine

### Luncheon Seminar 15

11 : 50~12 : 50

Moderator : **Y. Oshima**

#### The cutting edge of endoscopic spinal fusion

- 2-5-LS15-1 Possibility of UBE-ELIF .....382  
**K. Sasaki**, Orthop. Seirei hosp
- 2-5-LS15-2 Unilateral biportal endoscopic lumbar interbody fusion via the trans-Kambin approach at L5/S1 .....382  
**T. Segawa, et al.**, Inanami spine and joint Hosp.

## Luncheon Seminar 25

13 : 00~14 : 00

Moderator : **M. Iwasaki**

- 2-5-LS25-1      Updating Spine Surgery with Upright Low-Dose Whole-Body Radiography .....383  
**N. Kawakami**, Dept. of Orthop. Surg., Ichinomiyaniishi Hosp.

## Free Papers 32

14 : 10~15 : 10

Moderator : **Y. Oshima**

### Laminectomy

- 2-5-F32-1      A Randomized Comparative Trial of Cervical Laminoplasty Using Plates Alone vs. Plates with  
Cages: Early Postoperative Clinical Outcomes .....383  
**K. Hayashi, et al.**, Dept. of Orthop. Surg., Osaka City Juso Hosp.
- 2-5-F32-2      Impact of surgeon experience on surgical outcomes following posterior decompression for DCM:  
A prospective multicenter study .....384  
**T. Okubo, et al.**, Dept. of Orthop. Surg., Keio Univ.
- 2-5-F32-3      Assessing the association between preoperative grip strength and outcomes after cer-  
vical laminoplasty using sex-specific cutoffs .....384  
**K. Shigenobu, et al.**, Dept. of Orthop. Surg., Shinshu Univ.
- 2-5-F32-4      Simplification of Laminoplasty via C3 Dome-Shaped Laminectomy -Is Decompression at C2/3 Nec-  
essary?- .....385  
**S. Tateda, et al.**, Japanese Red Cross Ishinomaki Hosp.
- 2-5-F32-5      Cost-effectiveness of alternate-level fixation in open-door cervical laminoplasty: secondary analysis  
of a randomized controlled trial .....385  
**M. Tsujino, et al.**, Dept. of Orthop. Surg., Osaka Metropolitan Univ. Graduate School of Medicine
- 2-5-F32-6      Factors Associated With Patient Satisfaction After Open-Door Laminoplasty for Cervical Spondy-  
lotic Myelopathy .....386  
**M. Uematsu, et al.**, Dept. of Orthop. Surg., Osaka Metropolitan Univ. Graduate School of Medicine
- 2-5-F32-7      Bone union rate of open door laminoplasty with autologous local bone grafting in the hinge site  
.....386  
**K. Iwazaki, et al.**, Orthop. Surg., Nihonkai General Hosp.

## Free Papers 33

15 : 20~16 : 20

Moderator : **A. Suzuki**

### Metastatic Spine Tumor 1

- 2-5-F33-1 Prospective registry study to establish minimal clinically important differences in spinal metastasis surgery outcomes .....387  
**R. Hirota, et al.**, Dept. of Orthop. Surg., Sapporo Medical Univ.
- 2-5-F33-2 Early mortality prediction using immunonutritional indices and prognostic scores in metastatic spinal tumours .....387  
**T. Shibata, et al.**, Dept. of Orthop. Surg., IUHW Ichikawa General Hosp.
- 2-5-F33-3 A Preoperative Nutritional Assessment Method Useful for Predicting Prognosis in Cases of Posterior Fusion for Metastatic Spinal Tumors .....388  
**H. Shimada, et al.**, Dept. of Orthop. Surg., Kagoshima City Hosp.
- 2-5-F33-4 Evaluation of the prognostic accuracy of major scoring systems in patients undergoing surgery for metastatic spinal tumors .....388  
**J. Miyahara, et al.**, Dept. of Orthop. Surg., Tokyo Metropolitan Komagome Hosp.
- 2-5-F33-5 Analysis of Metastatic Spinal Tumors Using Data from the Bone Metastasis Conference Registry .....389  
**Y. Yonezawa, et al.**, Saiseikai Yokohamashi Tobu Hosp.
- 2-5-F33-6 Short-term prognosis after surgery for metastatic spinal tumors based on the modified Glasgow Prognostic Score and LDH levels .....389  
**M. Tsujino, et al.**, Dept. of Orthop. Surg., Osaka Metropolitan Univ. Graduate School of Medicine
- 2-5-F33-7 Analysis of Functional Recovery Factors After Surgery for Spinal Metastases from Renal Cell Carcinoma: JASA Multicenter Prospective Study .....390  
**T. Imura, et al.**, Dept. of Orthop. Surg., Dokkyo Med. Univ.

## Free Papers 34

16 : 30~17 : 30

Moderator : **S. Fujibayashi**

### Metastatic Spine Tumor 2

- 2-5-F34-1 Effectiveness of Pain Management Team involvement in postoperative pain control after surgery for metastatic spinal tumors .....390  
**U. Mitsuhiro, et al.**, The Dept. of Orthop. Surg. Tokyo Metropolitan Cancer and Infectious Diseases Center
- 2-5-F34-2 Impact of Surgical Treatment on Patient Reported Outcome in Patients with Spinal Metastases from Prostate Cancer .....391  
**R. Hirota, et al.**, Dept. of Orthop. Surg., Sapporo Medical Univ.

2-5-F34-3	Characteristics and Postoperative Outcomes in Spinal Metastases of Cancer of Unknown Primary: JASA Multicenter Prospective Cohort Study.....391 <b>R. Hirota, et al.</b> , Dept. of Orthop. Surg., Sapporo Medical Univ.
2-5-F34-4	Characteristics of metastatic spinal tumors with Tokuhashi score below 8 and survival exceeding six months: a JASA multicenter study .....392 <b>N. Isogai, et al.</b> , Dept. of Orthop. Surg., International Univ. of Health and Welfare
2-5-F34-5	Role of preoperative nutritional and inflammatory markers in predicting walking ability after spinal metastasis surgery .....392 <b>H. Inoue, et al.</b> , Dept. of Orthop., Jichi Medical Univ.
2-5-F34-6	An initiative for proactive intervention in patients with bone metastases, based on the findings from our facility's radiology reports .....393 <b>Y. Suga, et al.</b> , Dept. of Orthop. Surg., Higashiosaka City Medical Center
2-5-F34-7	Effect of high-dose denosumab on Hounsfield Unit of non-metastatic vertebrae .....393 <b>H. Sawada, et al.</b> , Dept. of Orthop. Surg., Nihon Univ.

## Room 6

### Invited Lecture 3

8 : 10~9 : 10

Moderator : **Y. Matsumoto**

2-6-IL3-1	Evolving Concepts in the Management of Metastatic Spinal Tumors: The Role of Separation Surgery .....394 <b>J. H. Cho</b> , Asan Medical Center, Korea
2-6-IL3-2	Innovative bone graft in total en bloc spondylectomy (TES) .....394 <b>H. Murakami, et al.</b> , Dept. of Orthop. Surg., Nagoya City Univ., Graduate School of Medical Sciences

### Invited Lecture 4

9 : 20~10 : 20

Moderator : **M. Ito**

2-6-IL4-1	Management of Native Pyogenic Spinal Infection: Key diagnostic, microbiological, antibiotic, and surgical recommendations from the International Consensus Meeting 2025 to standardize care and improve clinical outcomes .....395 <b>S. Rajasekaran, et al.</b> , Ganga Medical Centre & Hosp. Pvt Limited, India
2-6-IL4-2	Whats new in surgical site infection prevention .....395 <b>K. Yamada, et al.</b> , Mizonokuchi Orthop.

## Overseas Invited Lecture 4

10 : 30~11 : 30

Moderator : **S. Demura**

- 2-6-OIL4-1 Relook vertebral column resection for severe spine deformity: pitfall and success .....396  
**Q. Yong, et al.**, Nanjing Drum Tower Hosp., China
- 2-6-OIL4-2 Setting up a smart scoliosis clinic utilizing generative AI: development of the mskalign .....396  
**J. PY Cheung**, The Univ. of Hong Kong, Hong Kong SAR, China

## Luncheon Seminar 16

11 : 50~12 : 50

Moderator : **H. Kanno**

### Screw Augmentation with Artificial Bone in Spinal Fusion Surgery

- 2-6-LS16-1 Calcium phosphate cement screw augmentation in open fixation surgery for patients with poor bone quality .....397  
**T. Hasegawa, et al.**, Enshu Hosp.
- 2-6-LS16-2 Development of a Novel Reinforcement Technique for Percutaneous Pedicle Screws Using Calcium Phosphate Cement Augmentation .....397  
**D. Inoue**, Dept. of Orthop. Surg., Kashiba Asahigaoka Hosp.

## Luncheon Seminar 26

13 : 00~14 : 00

Moderator : **M. Yagi**

- 2-6-LS26-1 Minimally Invasive Spine Care in Transition: Chondroitinase Therapy for Lumbar Disc Herniation and Treatment Decision-Making .....398  
**H. Suzuki**, Dept. of Orthop. Surg., Yamaguchi Univ. Graduate School of Medicine

## Invited Lecture 5

14 : 10~15 : 10

Moderator : **S. Imagama**

- 2-6-IL5-1 Vertebral Body Tethering: Lessons Learned and Future Directions After a Decade of Experience .....398  
**A. Alanay**, Acıbadem Mehmet Ali Aydınlar Univ. School of Medicine, Turkey
- 2-6-IL5-2 Anterior fusion with overcorrection in the treatment of Lenke 1 AR and 5 curve type: How to achieve, and its impact to spinal alignment .....399  
**S. Inami, et al.**, Dept. of Orthop. Surg., Dokkyo Medical Univ.

## Invited Lecture 6

15 : 20~16 : 20

Moderator : **K. Watanabe**

- 2-6-IL6-1 Can Growing Rods be Growth Friendly and avoid Auto-fusion? .....399  
**A. F. Parr, et al.**, Queensland Children's Hosp. (QCH) and Queensland Univ. of Technology (QUT),  
Australia
- 2-6-IL6-2 Early-Onset Scoliosis: Diagnosis and Management .....400  
**J. Takahashi**, Dept. of Orthop. Surg., Shinshu Univ.

## International Proposed Lecture

16 : 30~17 : 30

Moderator : **K. Miyamoto**

- 2-6-IPL-1 My Experiences as a Teacher Spine Surgeon in Mid-East Africa; Practice and Education .....400  
**Y. M. Kim**, Chungbuk National Univ., Korea S
- 2-6-IPL-2 Organisation of the thoracolumbar junction and AI-based prediction of reciprocal change in the  
thoracic spine in adult spinal deformity .....401  
**D. A. Rothenfluh**, CHUV Univ. Hosp. Lausanne, Switzerland

## Room 7

### Free Papers 35

8 : 10~9 : 20

Moderator : **S. Takahashi**

#### Bone Fusion

- 2-7-F35-1 Pharmacological activity of the Freeze-dried platelet-rich plasma .....401  
**H. Kinoshita, et al.**, Dept. of Orthop. Surg., Chiba Cancer Center
- 2-7-F35-2 Enhanced Interbody Fusion in Posterior Lumbar Interbody Fusion Using Bone Marrow Aspirate-  
Augmented Local Autograft .....402  
**H. Watanabe, et al.**, Keiyu Orthop. Hosp.
- 2-7-F35-3 Fusion status after TLIF in the dialysis patients .....402  
**K. Hatake, et al.**, KUMAMOTO CHUO Hosp.
- 2-7-F35-4 Evaluation of Enhanced Early Bone Fusion in Lumbar Spine Surgery with Cotton-type PLGA/  
Beta-TCP Synthetic Bone Graft .....403  
**H. Onuma, et al.**, Dept. of Orthop. and Spinal Surg., GraduateSchool of Medical and Dental Sci-  
ences, Institute of Science Tokyo

- 2-7-F35-5 Anatomical Classification of Fractures and Factors Influencing Bone Union in 155 Cases of Progressive Adolescent Lumbar Spondylolysis .....403  
**T. Kitano, et al.**, Div. of Spine Surg., Dept. of Orthop. Surg., Kobe Univ. Graduate School of Medicine
- 2-7-F35-6 Development of a Healing Promotion Therapy for Refractory Fractures Using Stem cells from Human Exfoliated Deciduous teeth .....404  
**T. Murakami, et al.**, Dept. of Orthop. Surg., Faculty of Medicine and Graduate School of Medicine, Hokkaido Univ.
- 2-7-F35-7 Mid- to Long-Term Evaluation of Trabecular Bone Remodeling and Bone Union After Posterior Lumbar Interbody Fusion .....404  
**Y. Nagatani, et al.**, Dept. of Orthop./Rheumatology, Musculoskeletal and Cutaneous Surg., Program in Integrated Medicine, Graduate School of Medicine, Nagoya Univ.
- 2-7-F35-8 A Transient 'Stability Dip' in Screw Fixation is Mediated by a Shift from Early Osteoclast Induction to Later Bone Formation .....405  
**Y. Miyanaga, et al.**, NHO Disaster Medical Center

## Free Papers 36

9 : 30~10 : 20

Moderator : **M. Kanayama**

### Cement-Augmented Screws

- 2-7-F36-1 Analysis of Vertebral Hounsfield Unit Asymmetry Affecting Venous Cement Leakage in Cement-Augmented Pedicle Screws .....405  
**H. Tomita, et al.**, Konan Kosei Spine Center
- 2-7-F36-2 Factors contributing to cement leakage risk in pedicle screw fixation with cement injection volume limited to 1 mL or less .....406  
**K. Hirata, et al.**, Dept. of Orthop. Surg., Irumagawa Hosp
- 2-7-F36-3 Usefulness of fenestrated screws for minimizing fixation range in posterior fixation combined with percutaneous vertebroplasty for OVF .....406  
**M. Kitagawa, et al.**, Omi medical center
- 2-7-F36-4 Risk Factors for Segmental Venous Cement Leakage in Cement-Augmented Pedicle Screws .....407  
**M. Kosaka, et al.**, Dept. of Orthop. and Spine Surg., Tokyo Metropolitan Geriatric Medical Center
- 2-7-F36-5 Cement Leakage in Cement-Augmented Pedicle Screw Instrumentation: A Clinical Analysis of 230 Screws .....407  
**N. Hattori, et al.**, Dept. of Orthop. Surg., Surgical Science, Tokai Univ.

## Researches Initiated by JSSR2026 2

10 : 30~11 : 25

Moderator : **Y. Ito**

- 2-7-RS2-1      Developing a Comprehensive Novel Index for Adult Spinal Deformity: Insights from a Multicenter Prospective Study .....408  
**Y. Yamato, et al.**, Dept. of Orthop. Surg., Hamamatsu Univ. School of Medicine
- 2-7-RS2-2      Outcome measurements in thoracic myelopathy .....408  
**S. Kato, et al.**, Dept. of Orthop. Surg., The Univ. of Tokyo Hosp., The Univ. of Tokyo
- 2-7-RS2-3      Validation of lumbar spinal stenosis-specific symptom and quality of life scales .....409  
**M. Sekiguchi**, Dept. of Orthop. Surg., Fukushima Medical Univ.
- 2-7-RS2-4      Cement-augmented Pedicle Screw Complication Study -The Study Using a Questionnaire in JSSR- .....409  
**K. Nakanishi, et al.**, Dept. of Orthop. Surg., Kawasaki Medical School
- 2-7-RS2-5      Generating Real World Evidence from the JSSR-DB: Current Status and Future Directions of Registry-Based Research .....410  
**H. Arima, et al.**, Database Committee, Japanese Society for Spine Surg. and Related Research

## Luncheon Seminar 17

11 : 50~12 : 50

Moderator : **N. Hara**

### The Future of Minimally Invasive Endoscopic Spine Surgery: Evolving Surgical Decision -Making and Outcomes

- 2-7-LS17-1      Evolution of Endoscopic Spine Surgery: Technical Features and Learning Curves of UBE/FESS and the Utility of NextAR Navigation .....411  
**S. Yamaya**, Endoscopic Spine Surg. Center, Dept. of Orthop. Surg., Sendai Nishitaga Hosp.
- 2-7-LS17-2      Navigation Assisted Recognition of Invisible Osseous Anatomy in Lumbar Interbody Fusion Using Unilateral Biportal Endoscopy .....411  
**T. Mizuno, et al.**, Seirei Hamamatsu General Hosp.

## Luncheon Seminar 27

13 : 00~14 : 00

Moderator : **K. Fujiyoshi**

### Spinal Cord Stimulation (SCS) : Why It Matters for Spine Surgeons

- 2-7-LS27-1 A Paradigm Shift in Chronic Low Back Pain Treatment: Spinal Cord Stimulation as High-Value Healthcare .....412  
*J. Katayanagi*, Dept. of Orthop. Surg., Dokkyo Medical Univ. Saitama Medical Center
- 2-7-LS27-2 Early Outcomes of Spinal Cord Stimulation for Chronic Low Back and Leg Pain: Surgical Technique and Quantitative Gait Analysis .....412  
*Y. Kobayashi*, Dept. of Orthop. Surg., NHO Murayama Medical Center

## Free Papers 37

14 : 10~15 : 10

Moderator : **K. Watanabe**

### Spinal Deformity 2

- 2-7-F37-1 Surgical outcomes of residual adolescent idiopathic scoliosis with Lenke type 5C in middle-aged patients .....413  
*Y. Suematsu, et al.*, Dept. of Orthop. Surg., Keio Univ.
- 2-7-F37-2 Impact of Pre-/Postoperative Shift in Lower Instrumented Vertebra -Sagittal Vertical Axis on Sagittal Balance and DJK in Lenke Type 1/2 AIS .....413  
*K. Uotani, et al.*, Dept. of Musculoskeletal Traumatology, Faculty of Medicine, Dentistry, and Pharmaceutical Sciences, Okayama Univ.
- 2-7-F37-3 Influence of pelvic incidence on posterior surgery for Lenke1 adolescent idiopathic scoliosis: analysis in surgery using anatomical rods .....414  
*K. Yamada, et al.*, Dept. of Orthop. Surg., Faculty of Medicine and Graduate School of Medicine, Hokkaido Univ.
- 2-7-F37-4 The proximal-main thoracic curve flexibility ratio in adolescent idiopathic scoliosis Lenke type1 predicts postoperative shoulder balance .....414  
*T. Abe, et al.*, Dept. of Orthop. Surg., Oita Univ.
- 2-7-F37-5 Clinical Characteristics of adolescent idiopathic scoliosis treated in adulthood by posterior correction and fusion surgery .....415  
*K. Watanabe, et al.*, Dept. of Orthop. Surg., Keio Univ.
- 2-7-F37-6 Surgical outcomes of Vertebral Coplanar Alignment for severe adolescent idiopathic scoliosis .....415  
*K. Yamada, et al.*, Dept. of Orthop. Surg., Yokohama Brain and Spine Center

- 2-7-F37-7 Why Does the Rod Bend-Back? Intraoperative Positioning as a Key Determinant in AIS Posterior Corrective Fusion .....416  
**N. Yokogawa, et al.**, Dept. of Orthop. Surg., Graduate School of Medical Sciences, Kanazawa Univ.

### Researches Initiated by JSSR2026 3

15 : 20~16 : 05

Moderator : **T. Yoshii**

- 2-7-RS3-1 Cost-Effectiveness of Non-Surgical Treatment for Adult Spinal Deformity: A Multicenter Observational Study .....416  
**K. Nagata, et al.**, Dept. of Orthop. Surg., Wakayama Medical Univ.
- 2-7-RS3-2 Multicenter Evaluation of the Economic Impact and Cost-Effectiveness of Adult Spinal Deformity Surgery in Japan .....417  
**Y. Yamato, et al.**, Dept. of Orthop. Surg., Hamamatsu Univ. School of Medicine
- 2-7-RS3-3 Efficacy of nerve root block for lumbar spinal diseases: A multi-center study .....417  
**M. Miyagi, et al.**, Dept. of Orthop. Surg., Kitasato Univ., School of Medicine.
- 2-7-RS3-4 A Multicenter Randomized Controlled Trial on the Efficacy of Postoperative External Fixation for Cervical Spine Surgery .....418  
**T. Furuya, et al.**, Dept. of Orthop. Surg., Chiba Kaihin Hosp.

### Researches Initiated by JSSR2026 4

16 : 05~16 : 50

Moderator : **N. Hosogane**

- 2-7-RS4-1 Evaluation of Efficacy and Safety of OLIF51: From Proctor Institution Preliminary Registry to Large-Scale General Facility Data .....418  
**S. Orita, et al.**, Center for Frontier Medical Engineering, Chiba Univ.
- 2-7-RS4-2 XLIF® ACR® in Japan: A Comprehensive Registry Report of the Initial Five Years .....419  
**H. Ueda, et al.**, Dept. of Orthop. Surg., Dokkyo Medical Univ.
- 2-7-RS4-3 Cervical Total Disc Replacement -Present and Future- .....419  
**K. Sakai, et al.**, Dept. of Orthop. Surg., Saiseikai Kawaguchi General Hosp.
- 2-7-RS4-4 Promoting the Appropriate Use of Percutaneous Vertebroplasty: Indications and Challenges .....420  
**S. Takahashi, et al.**, Vertebroplasty WG, New Tech. Assess. Committee, JSSR

## Room 8

### Morning Seminar 2

7 : 00~8 : 00

Moderator : **D. Togawa**

#### Surgical Treatment of Vertebral Fractures from the Perspective of Patient Satisfaction: How Effective is BKP?

- 2-8-MS2-1 Surgical Treatment for Osteoporotic Vertebral Fractures from the Perspective of Patient Satisfaction .....420  
*T. Hikata*, Dept. of Orthop. Surg., Kitasato Univ. Kitasato Institute Hosp.
- 2-8-MS2-2 Efficacy of Early Balloon Kyphoplasty for Osteoporotic Vertebral Fractures at the Thoracolumbar Junction .....421  
*J. Yamada*, Dept. of Orthop. Surg., Matsusaka Municipal Hosp.

### Free Papers 38

8 : 10~9 : 20

Moderator : **M. Chazono**

#### Spinal Deformity 3

- 2-8-F38-1 Longitudinal evaluation of unfused lumbar disc degeneration ten years after surgery for adolescent idiopathic with a structural lumbar curve .....421  
*S. Suzuki, et al.*, Dept. of Orthop. Surg., Keio Univ.
- 2-8-F38-2 Ten-year course of shoulder balance after posterior spinal fusion for thoracic adolescent idiopathic scoliosis .....422  
*M. Ohashi, et al.*, Div. of Orthop. Surg., Dept. of Regenerative and Transplant Medicine, Niigata Univ. Graduate School of Medical and Dental Sciences
- 2-8-F38-3 Impact of Medial Shoulder Imbalance on Clinical Outcomes in Lenke Type 1: Relation to Thoracic Kyphosis and UIV Level .....422  
*A. Shimura, et al.*, Dept. of Orthop., Juntendo Univ.
- 2-8-F38-4 Long-term outcomes of Spinal surgery in Achondroplasia: A minimum 10-Year Follow-up Study .....423  
*H. Nakarai, et al.*, Dept. of Orthop. Surg., The Univ. of Tokyo Hosp., The Univ. of Tokyo
- 2-8-F38-5 How change does sitting height after surgery for flaccid neuromuscular scoliosis? .....423  
*Y. Horiuchi, et al.*, Dept. of Orthop. Surg., Kitasato Univ.
- 2-8-F38-6 The effectiveness of preserving postoperative UIV tilt in maintaining shoulder balance in Lenke type 1 adolescent idiopathic scoliosis .....424  
*R. Tanaka, et al.*, Dept. of Orthop. Surg., Keio Univ.

2-8-F38-7	Correlation between Thoracic Kyphosis Gain and Normalization of L1 Pelvic Angle in Thoracic AIS .....424
	<i>Y. Hori, et al.</i> , Scoliosis Center, Osaka City General Hosp.
2-8-F38-8	Postop Coronal Imbalance After Selective Thoracolumbar/Lumbar Fusion in Lenke 5 Adolescent Idiopathic Scoliosis .....425
	<i>K. Kai, et al.</i> , Higashiumiyosimorimoto Hosp.

## Free Papers 39

9 : 30 ~ 10 : 30

Moderator : **S. Seki**

### Spinal Deformity 4

2-8-F39-1	Impact of Brace Discontinuation and Risk Factors for Curve Progression in Adolescent Idiopathic Scoliosis .....425
	<i>M. Mizutani, et al.</i> , Dept. of Orthop. Surg., Graduate School of Medicine, Chiba Univ.
2-8-F39-2	Outcomes of Growing Rod Treatment for Early-Onset Scoliosis: Evaluation of the Effectiveness of the Staged Surgery .....426
	<i>K. Watanabe, et al.</i> , Dept. of Orthop. Surg., Keio Univ.
2-8-F39-3	Relationship between PJK and Sagittal Alignment Changes following Growing Rod Surgery in Pediatric Scoliosis .....426
	<i>M. Ueda, et al.</i> , Dept. of Orthop. Surg., Science of Functional Recovery and Reconstruction, Faculty of Medicine, Dentistry, and Pharmaceutical Sciences, Okayama Univ.
2-8-F39-4	Characteristics of AIS Patients with Cobb Angle Improvement after Bracing: Focus on Cobb Angle and C7-CSVL of post-brace application .....427
	<i>J. Teramoto, et al.</i> , Dept. of Orthop., Juntendo Univ.
2-8-F39-5	Initial In-Brace Correction in Adolescent Idiopathic Scoliosis: A Comparison Between traditional TLSO and Rigo-Cheneau Braces .....427
	<i>M. Sato, et al.</i> , Div. of Orthop. Surg., Dept. of Regenerative and Transplant Medicine, Niigata Univ. Graduate School of Medical and Dental Sciences
2-8-F39-6	Effectiveness of Dual Rod Translation in Thoracic Kyphosis Restoration for AIS: A Comparison with the Conventional Technique .....428
	<i>Y. Hori, et al.</i> , Scoliosis Center, Osaka City General Hosp.
2-8-F39-7	Anterior Vertebral Overgrowth in AIS: Clinical Characteristics and its Impact on Thoracic Kyphosis Restoration and Postoperative Outcomes .....428
	<i>Y. Sensui, et al.</i> , Dept. of Orthop. Surg., Shinshu Univ.

## Free Papers 40

10 : 40~11 : 30

Moderator : **E. Nakamura**

### Surgical Site Infections Prevention & Others

- 2-8-F40-1 Evaluation of the Efficacy of Prophylactic Negative Pressure Wound Therapy (NPWT) for Primarily Closed Incisions in Adult Spinal Deformity .....429  
**S. Katsumi, et al.**, Dept. of Orthop. Surg., The Jikei Univ. School of Medicine
- 2-8-F40-2 Effect of Closed-Incision Negative Pressure Wound Therapy on SSI in High-Risk Spinal Surgery: Analysis Based on the Number of Risk Factors .....429  
**A. Hiyama, et al.**, Dept. of Orthop. Surg., Surgical Science, Tokai Univ.
- 2-8-F40-3 Predicting Postoperative Surgical Site Infection after Spine Surgery: Usefulness of Preoperative NLR, PNI, and GNRI .....430  
**F. Inoue, et al.**, Dept. of Orthop. Surg., Saga Univ.
- 2-8-F40-4 Interventions in the operation room environment reduce the incidence of surgical site infections following spinal fusion surgery .....430  
**S. Hasebe, et al.**, Red Cross Musashino Hosp.
- 2-8-F40-5 Risk factors for surgical site infection following spinal instrumentation surgery .....431  
**T. Tabata, et al.**, Spine Center, Japanese Red Cross Shizuoka Hosp.

### Luncheon Seminar 18

11 : 50~12 : 50

Moderator : **M. Nakamura**

### Differential Diagnosis of Peripheral Nerve and Neuromuscular Disorders Mimicking Spine Disease

- 2-8-LS18-1 Recognizing Treatable Neuromuscular Disorders: Key Clinical Clues in the Spine Clinic .....431  
**S. Misawa**, Dept. of Neurology and Neurological Science, Graduate School of Medical and Dental Sciences, Institute of Science Tokyo
- 2-8-LS18-2 The peripheral neuropathy, spine surgeons need to know. ....432  
**S. Yamamoto**, Hand and Peripheral Nerve Surg., Yokohama Rosai Hosp.

## Luncheon Seminar 28

13 : 00~14 : 00

Moderator : **K. Nishida**

### Update on Endoscopic Spine Surgery

- 2-8-LS28-1 Troubleshooting of Visualization and Hemostasis in UBE .....432  
**K. Sasaki**, Orthop. Seirei hosp.
- 2-8-LS28-2 Great merits of Trans-Kambin full-endoscopic spine surgery: local anesthesia and no drainage.  
.....433  
**K. Sairyo**, Dept. Orthop. Tokushima Univ.

## Free Papers 41

14 : 10~15 : 10

Moderator : **H. Mihara**

### Anterior Cervical Surgery

- 2-8-F41-1 Postoperative Influences on Adjacent Segments Following Two Level Anterior Cervical Spine Surgery. Comparison of ADF, TDR, Hybrid Surgery. ....433  
**T. Niimura, et al.**, Dept. of Orthop. Surg., Yokohama Minami kyousai Hosp.
- 2-8-F41-2 Risk factors for insufficient indirect decompression of posterior compression following anterior cervical discectomy and fusion .....434  
**H. Kimura, et al.**, Dept. of Orthop. Surg., Amagasaki General Medical Center
- 2-8-F41-3 Early Cases of Single-Level Cervical Total Disc Replacement in Japan - Short-Term Safety Assessment Using Registry Data .....434  
**K. Utagawa, et al.**, Dept. of Orthop. and Spinal Surg., Graduate School of Medical and Dental Sciences, Institute of Science Tokyo
- 2-8-F41-4 How Effectively Does Anterior Cervical Decompression and Fusion Restore Function? A Multi-center Study of Over 1000 Cases .....435  
**T. Hirai, et al.**, Dept. of Orthop. and Spinal Surg., Graduate School of Medical and Dental Sciences, Institute of Science Tokyo
- 2-8-F41-5 Microendoscopic Anterior Cervical Decompression and Fusion Surgery: Assessment of Retropharyngeal Swelling and Postoperative Recovery .....435  
**Y. Yamamoto, et al.**, Dept. of Orthop. Surg., Wakayama Medical Univ.
- 2-8-F41-6 Comparison of ACCF and Hybrid Surgery (ACDF and ACCF) for Cervical OPLL - A Multicenter Study .....436  
**M. Hashimoto, et al.**, Dept. of Orthop. and Spinal Surg., Graduate School of Medical and Dental Sciences, Institute of Science Tokyo

2-8-F41-7	A comparative study of short-term surgical outcomes between 2-level and 1-level cervical total disc replacement .....436
	<i>H. Haba, et al.</i> , Sapporo Orthop. Hosp.

## Free Papers 42

15 : 20~16 : 20

Moderator : **I. Oda**

### Cervical Spine

2-8-F42-1	Prediction of postoperative recovery in cervical radiculopathy with muscle weakness using electromyographic interference patterns .....437
	<i>Y. Takamizawa, et al.</i> , Keiyu Orthop Hosp
2-8-F42-2	Improved cervical collar fixation method for cervical radiculopathy and its evaluation using MRI bone-like imaging .....437
	<i>T. Ishikawa, et al.</i> , Orthop. Surg., Sanmu Medical Center
2-8-F42-3	Analysis of revision cases after posterior cervical spine surgeries over 20 years at our institution .....438
	<i>T. Muramoto, et al.</i> , Dept. of Orthop. Surg., School of Medicine, Univ. of Occupational and Environmental Health
2-8-F42-4	A Novel Quantitative Assessment of Gait Function in Patients with Cervical Myelopathy Using Wearable IMU Sensors .....438
	<i>R. Miyamoto, et al.</i> , Dept. of Orthop. and Spinal Surg., Graduate School of Medical and Dental Sciences, Institute of Science Tokyo
2-8-F42-5	Prospective Comparison of Posterior Decompression and ACDF for 1 to 2-Level Degenerative Cervical Myelopathy .....439
	<i>T. Yamamoto, et al.</i> , Spine center, Japanese Red Cross Shizuoka Hosp.
2-8-F42-6	Surgical Outcomes of Cervical Spondylotic Myelopathy with Cervical Spondylolisthesis: A Multi-center Prospective Study .....439
	<i>R. Shibata, et al.</i> , Dept. of Orthop. Surg., NHO Murayama Medical Center
2-8-F42-7	Patient Demographics of Cervical Spine Surgery in Japan: Large-Scale Prospective Multicenter Study .....440
	<i>Y. Kobayashi, et al.</i> , NHO Murayama Medical Center

## Free Papers 43

16 : 30~17 : 30

Moderator : **K. Ono**

### Endoscopic Spine

- 2-8-F43-1 Comparison of Facet Joint and Inferior Articular Process Preservation between UBE and MEL .....440  
*Y. Akai, et al.*, Dept. of Orthop. Surg., Nishinomiya Watanabe Hosp.
- 2-8-F43-2 Postoperative Complications and Reoperations After 300 Cases of Full-Endoscopic Spine Surgery Performed Under Local Anesthesia .....441  
*T. Inokuchi, et al.*, Dept. of Orthop. Surg., Chikamori Hosp.
- 2-8-F43-3 Short-term Outcomes in Unilateral Biportal Endoscopic Laminectomy (UBEL) for Lumbar Spinal Canal Stenosis .....441  
*K. Fujita, et al.*, Aichi Spine Hosp.
- 2-8-F43-4 Approach-related safety considerations for transforaminal full-endoscopic lumbar spine surgery .....442  
*T. Inokuchi, et al.*, Dept. of Orthop. Surg., Chikamori Hosp.
- 2-8-F43-5 Properly selected cases to learn full-endoscopic spine surgery safely .....442  
*H. Yoshimatsu, et al.*, Dept. of Spine Surg., Fukuoka Kinen Hosp.
- 2-8-F43-6 Comparison of approach-side facet joint resection in unilateral laminoplasty between supervising and non-supervising surgeons .....443  
*R. Shibata, et al.*, Dept. of Orthop. Surg., NHO Murayama Medical Center
- 2-8-F43-7 Analysis of the learning curve for microendoscopic spine surgery using the CUSUM method .....443  
*Y. Ueda, et al.*, Dept. of Orthop. Surg., Fukui Prefectural Hosp.

## Room 9

### Main Theme 6

8 : 10~9 : 10

Moderator : **S. Ebata**

#### Treatment Strategies for Metastatic Spinal Tumors in the Elderly

- 2-9-M6-1 Assessment of postoperative functional recovery and survival in elderly MESCC patients .....444  
*K. Abe, et al.*, Dept. of Orthop. Surg., Tokyo Metropolitan Komagome Hosp.
- 2-9-M6-2 Investigation of the complications associated with embolization of segmental artery prior to TES .....444  
*Y. Ishino, et al.*, Dept. of Orthop. Surg., Graduate School of Medical Sciences, Kanazawa Univ.
- 2-9-M6-3 Treatment outcomes of minimally invasive spine stabilization for metastatic spinal tumors in patients aged 75 years and older .....445  
*H. Uei, et al.*, Dept. of Orthop. Surg., Nihon Univ. Hosp.

2-9-M6-4	Nomogram of ambulation restoration/recovery prediction for patients with walking impairment due to spinal metastasis .....445 <b>A. Iwata, et al.</b> , Dep. of Musculoskeletal Onco., NHO Hokkaido Cancer Cent.
2-9-M6-5	Comparative analysis of tumor microenvironment in bone and spinal metastases of lung cancer and renal cell carcinoma .....446 <b>Y. Kaneuchi, et al.</b> , Dept. of Orthop. Surg., Fukushima Medical Univ.
2-9-M6-6	Investigation of Imaging Follow-up Practices for Patients with Spinal Metastases in Primary Oncology Departments .....446 <b>M. Kawai, et al.</b> , NHO Kanazawa Medical Center

## Main Theme 7

9 : 20~10 : 20

Moderator : **D. Kudo**

### Surgery for Spinal Ligament Ossification

2-9-M7-1	Modifications to Anterior Surgery with Floating Method for Cervical OPLL .....447 <b>K. Sakai, et al.</b> , Dept. of Orthop. Surg., Saiseikai Kawaguchi General Hosp.
2-9-M7-2	Postoperative course of cervical OPLL with cerebrospinal fluid leak due to multilevel corpectomy, Focus on airway obstruction .....447 <b>R. Kadota, et al.</b> , Dept. of Orthop. Surg., Numazu City Hosp.
2-9-M7-3	Technical Considerations in Posterior Decompression and Fusion for K-line (-) Cervical OPLL: Outcomes with Patient-Reported Evaluations .....448 <b>K. Katsumi, et al.</b> , Niigata Central Hosp.
2-9-M7-4	Imaging findings in a case of relapse following surgery for thoracic ossification of ligamentum flavum .....448 <b>S. Komatsubara, et al.</b> , Dept. of Orthop. Surg., Kagawa Univ.
2-9-M7-5	Increased C7 sagittal vertical axis is associated with reduced postoperative cervical JOA score in patients with OPLL .....449 <b>J. Hashimoto, et al.</b> , Dept. of Orthop. Surg., Kudanzaka Hosp.
2-9-M7-6	Two-staged surgery for cervical ossification of the posterior longitudinal ligament: clinical characteristics and outcomes .....449 <b>H. Futakawa, et al.</b> , Dept. of Orthop. Surg., Faculty of Medicine, Univ. of Toyama

## Main Theme 8

10 : 30~11 : 30

Moderator : **Y. Fujiwara**

### Registry & Multicenter Spine Research

- 2-9-M8-1 Does Postoperative Cervical Collar Use Improve Clinical Outcomes? -A Multicenter Prospective Study- .....450  
**Y. Kamata, et al.**, JCHO Saitama Medical Center
- 2-9-M8-2 Prospective Multicenter Registry of Conservative Cervical Ossification of the Posterior Longitudinal Ligament: 582 Initial Cases .....450  
**H. Onuma, et al.**, Dept. of Orthop. and Spinal Surg., Graduate School of Medical and Dental Sciences, Institute of Science Tokyo
- 2-9-M8-3 Perioperative Complications in Pediatric Spinal Deformity Surgery: A Nationwide Database Study from the JSIS .....451  
**Y. Hori, et al.**, Database Committee of the JSIS
- 2-9-M8-4 New diagnosis and treatment for pyogenic spondylitis (PS) -a prospective study- .....451  
**M. Machida, et al.**, Dept. of Ortho. Surg., Hakujuikai General Hosp.
- 2-9-M8-5 Early Complications in Adult Spinal Deformity Surgery: JSIS-DB analysis .....452  
**J. Katayanagi, et al.**, Database Committee of the Japanese Spinal Instrumentation Society
- 2-9-M8-6 Current state of spinal instrumentation surgery in Japan: An report from JSIS-DB 2018-2022 .....452  
**H. Ueda, et al.**, Dept. of orthop. surg. Dokkyo Med. Univ.
- 2-9-M8-7 Predictive valuables of adverse events following surgery for spinal metastasis .....453  
**K. Miura, et al.**, Dept. of Spine and Spinal Cord Surg., Nagaoka Red Cross Hosp.

## Luncheon Seminar 19

11 : 50~12 : 50

Moderator : **H. Murakami**

### Toward a New Era of Spinal Surgery

#### - Updating Surgical Techniques and Strategies for Today's Diverse and Advanced Spine Care -

- 2-9-LS19-1 Surgical Strategies and Practical Techniques for Complex Adult Spinal Deformity .....453  
**Y. Yamato**, Dept. of Orthop. Surg., Hamamatsu Univ. School of Medicine
- 2-9-LS19-2 Treatment strategies and surgical techniques for spinal tumors and thoracic OPLL .....454  
**S. Kato**, Dept. of Orthop. Surg., Graduate School of Medical Sciences, Kanazawa Univ.

## Luncheon Seminar 29

13 : 00~14 : 00

Moderator : **S. Ebara**

### Next-Generation Spine Surgery with Siemens Healthineers

- 2-9-LS29-1 Spine Surgery Using a Self-Propelled Mobile 3D C-arm .....454  
**H. Koike, et al.**, Spine and Spinal Cord Center, Midorigaoka Hosp
- 2-9-LS29-2 In sine hybrid or, 41100 vertebral screws (5268 robot) inserted for scoliosis Surgery -new mechanical correction method "double binder" .....455  
**S. Ebara**, Shonan Fujisawa Tokushukai Hosp.

## Main Theme 9

14 : 10~15 : 10

Moderator : **T. Ushida**

### Multidisciplinary Spine Care

- 2-9-M9-1 12th Rib Length Correlates with Conus Medullaris Level and L4 Nerve Morphology: A New Marker Predicting Atypical Radicular Symptoms .....455  
**J. Teramoto, et al.**, Dept. of Orthop., Juntendo Univ.
- 2-9-M9-2 Impact of Genetic Predisposition on Curve Characteristics in Adolescent Idiopathic Scoliosis: Radiographic and CT-based Analysis .....456  
**K. Takeda, et al.**, Dept. of Orthop. Surg., Keio Univ.
- 2-9-M9-3 Dropout Cases in Brace Treatment for Adolescent Idiopathic Scoliosis: Analysis of 155 Patients Encouraged to Return for Follow-up .....456  
**J. Teramoto, et al.**, Dept. of Orthop., Juntendo Univ.
- 2-9-M9-4 Regional Effects of Visceral and Subcutaneous Fat on Spinal Ligament Ossification: A Whole-Spine CT Analysis in Patients with OPLL .....457  
**T. Endo, et al.**, Dept. of Orthop. Surg., Faculty of Medicine and Graduate School of Medicine, Hokkaido Univ.
- 2-9-M9-5 Potential effects of serotonin-noradrenaline reuptake inhibitors: Characteristics of the patients with improvement in dropped head symptoms .....457  
**H. Funao, et al.**, Dept. of Orthop. Surg., International Univ. of Health and Welfare
- 2-9-M9-6 Obesity-Related Pathophysiology in OPLL: Insights from Body Composition Analysis .....458  
**T. Endo, et al.**, Dept. of Orthop. Surg., Faculty of Medicine and Graduate School of Medicine, Hokkaido Univ.

## Main Theme 10

15 : 20~16 : 20

Moderator : **K. Kakutani**

### Regenerative Medicine for the Spine

- 2-9-M10-1 Synergistic effects of human iPSC-derived neural progenitor cell transplantation and EES for chronic severe spinal cord injury .....458  
**Y. Ichihara, et al.**, Dept. of Orthop. Surg., Keio Univ.
- 2-9-M10-2 Therapeutic Efficacy of Intrathecal Hepatocyte Growth Factor for Severe Cervical Spinal Cord Injury .....459  
**K. Kitamura, et al.**, Dept. of Orthop. Surg., National Defense Medical College
- 2-9-M10-3 Neural Progenitor Cells Derived from Clinically Relevant Human iPSCs Transplantation for Chronic Cervical Spinal Cord Injury .....459  
**R. Ogaki, et al.**, Dept. of Orthop. Surg., Keio Univ.
- 2-9-M10-4 Intradiscal Leukocyte-poor Platelet-Rich Plasma (Lp-PRP) Injection for Refractory Discogenic Low Back Pain: Short-term Clinical Outcomes .....460  
**T. Sainoh, et al.**, Sainou Hosp.
- 2-9-M10-5 Investigation of neural plasticity changes induced by non-invasive brain stimulation in a non-human primate model of spinal cord injury.....460  
**T. Shimizu, et al.**, Dept. of Orthop. Surg., Keio Univ.
- 2-9-M10-6 Development of a Freeze-Dried iPSC-Derived Megakaryocyte/Platelet Product: Infection-Resilient Bone Regeneration .....461  
**Y. Shiga, et al.**, Dept. of Orthop. Surg., Graduate School of Medicine, Chiba Univ.

## Main Theme 11

16 : 30~17 : 30

Moderator : **K. Harimaya**

### Prevention of Complications in Spine Surgery for the Elderly

- 2-9-M11-1 Prediction of Revision Surgery After BKP Based on a Novel CT-Based Endplate Injury Classification for Osteoporotic Vertebral Fractures .....461  
**M. Iwamae, et al.**, Dept. of Orthop. Surg., Osaka Metropolitan Univ. Graduate School of Medicine
- 2-9-M11-2 Risk factors for intravenous cement leakage in cement-augmented pedicle screw fixation: A multi-center retrospective cohort study .....462  
**S. Tamagawa, et al.**, Dept. of Orthop., Juntendo Univ.
- 2-9-M11-3 The pedicle screw dynamization system is effective in reducing proximal junctional failure in surgery for adult spinal deformity .....462  
**Y. Onishi, et al.**, Japanese Red Cross Medica Center Spine and Orthop Surg.

- 2-9-M11-4 Validation of New Criteria for Floating Fusion in Kyphotic Correction of Osteoporotic Vertebral Fractures .....463  
**Y. Sawada, et al.**, Dept. of Orthop. Surg., Osaka Metropolitan Univ. Graduate School of Medicine
- 2-9-M11-5 Adjuvant romosozumab therapy for the osteoporotic spine: influence of administration period from the perspective of bone histomorphometry .....463  
**K. Sawakami, et al.**, Dept. of Orthop. Surg., Tominaga-Kusano Hosp.
- 2-9-M11-6 Dysphagia in older patients with degenerative cervical myelopathy: A longitudinal analysis of subaxial posterior cervical surgery .....464  
**S. Nagai, et al.**, Dept. of Orthop. Surg., Fujita Health Univ.

## Room 10

### Morning Seminar 3

7 : 00~8 : 00

Moderator : **T. Ono**

- 2-10-MS3-1 Surgical Techniques to Enhance the Reproducibility of Open-Door Laminoplasty: A Video Based Demonstration .....464  
**S. Ueda**, Shin-ai Kai Spine Center

### Sponsored Symposium

8 : 10~9 : 40

Moderators : **S. Imagama**  
**D. Sakai**

#### Japanese Approach! Implementing Bone Health Optimization in Spinal Surgery for the Elderly

- 2-10-SS-1 Osteoporosis in spinal fusion surgery: Current issues and global perspectives .....465  
**G. Inoue**, Dept. of Orthop. Surg., Kitasato Univ.
- 2-10-SS-2 Optimizing Bone Health Screening and Bone Quality Assessment in the Perioperative Management of Spinal Fusion Surgery .....465  
**M. Yagi**, Dept. of Orthop. Surg., International Univ. of Health and Welfare
- 2-10-SS-3 Optimizing Bone Quality and Reducing Implant-Related Complications in Spinal Fusion: The Role of Osteoporosis Treatments .....466  
**T. Kaito**, Dept. of Orthop. Surg., Osaka Rosai Hosp.
- 2-10-SS-4 Spinal fusion for elderly -focus on graft materials- .....466  
**T. Yoshii**, Dept. of Orthop. and Spinal Surg., Graduate School of Medical and Dental Sciences, Institute of Science Tokyo
- 2-10-SS-5 Surgical Strategies for Spinal Instrumentation in Osteoporotic Bone - Implant Selection Based on Clinical Experience - .....467  
**K. Nishida**, Orthop. Surg., Graduate School of Medicine, Univ. of the Ryukyus

## Free Papers 44

10 : 30~11 : 30

Moderator : **H. Uei**

### Tips and Techniques for Screw Insertion 1

- 2-10-F44-1 New type probe for safe percutaneous pedicle screw insertion .....467  
**T. Aoyama, et al.**, Teine Keijinkai Hosp.
- 2-10-F44-2 The Utility of the Reference Frame (RF) for Percutaneous Pedicle Screw (PPS) Attachment:  
A Technique to Prevent Skiving .....468  
**N. Manabe, et al.**, East Maebashi Orthop. Hosp.
- 2-10-F44-3 Innovative Creation of Screw Insertion Points on 3D Images Using VINCENT Software .....468  
**Y. Tanaka, et al.**, Dept. of Orthop. Surg., Div. of Disease Control, Research field of Medical Sciences, Graduate School of Medicine, Gifu Univ.
- 2-10-F44-4 Minimally invasive benefits and radiation exposure reduction achieved by the CBT screw technique using patient-specific template guide .....469  
**A. Fukushima, et al.**, Hokkaido Orthop. Memorial Hosp.
- 2-10-F44-5 Comparison of Radiation Exposure and Screw Deviation Between Percutaneous and Freehand Pedicle Screw Insertion .....469  
**T. Kaneda, et al.**, Dept. of Orthop. Surg., JuntendoTokyo Koto Geriatric Medical Center
- 2-10-F44-6 The Safety of Screw Insertion in Spinal Surgery Robots from the Perspective of the Shift and Skive Classification .....470  
**A. Yoshida, et al.**, Dept. of Orthop. Surg., St. Marianna Univ. School of Medicine
- 2-10-F44-7 A Safe Technique for C1 Lateral Mass Screw Insertion Using Intraoperative Anteroposterior Fluoroscopic Imaging .....470  
**D. Iida, et al.**, AGH

### Luncheon Seminar 20

11 : 50~12 : 50

Moderator : **S. Orita**

#### Digital Transformation and AI in Surgical Practice

- 2-10-LS20-1 The Ultimate Guide to Generative AI for Spine Surgeons: From Model Comparison to Clinical Decision-Making, Writing, and Presentation Design .....471  
**S. Maki**, Dept. of Orthop. Surg., Graduate School of Medicine, Chiba Univ.
- 2-10-LS20-2 Surgeons shouldn't be tied to desks: How DX an AI empower surgical team-based care .....471  
**J. Ohya**, Quotomy

## Luncheon Seminar 30

13 : 00~14 : 00

Moderator : **T. Morimoto**

2-10-LS30-1

Spinal Surgery in the Hybrid Operating Room Era: The Evolution of Instrumentation Brought by Navigation and Robot Implementation .....472

**K. Kobayashi**, Dept. of Orthop. Surg. Japan Red Cross Nagoya Daini Hosp.

## Hands-on Seminar 4

### Trans-Sacral Canal Plasty Hands-on Seminar

15 : 20~16 : 50

Speakers : **K. Yokosuka**

**K. Nakanishi**

## Room 11

## Hands-on Seminar 3

### Advances in BKP Technology and Techniques

9 : 50~11 : 20

Moderator : **D. Togawa**

Speakers : **Y. Nakagawa**

**S. Makio**

**S. Takahashi**

## Hands-on Seminar 5

### Cervical disc arthroplasty with Mobi-C: hands-on seminar

15 : 20~16 : 50

Moderator : **K. Ishii**

Speaker : **D. Sakai**

## Poster Room 1

### Poster 16

8 : 30~9 : 00

Moderator : **T. Fujimori**

#### Postoperative Complications in Cervical Spine Surgery

- P16-1 Radiographic Factors Associated with Spontaneous Fusion after Cervical Total Disc Replacement .....472  
*J. Hashimoto, et al.*, Dept. of Orthop. Surg., Kudanzaka Hosp.
- P16-2 Risk Factors for Poor Surgical Outcomes after Anterior Cervical Surgery for Cervical Spondylotic Myelopathy .....473  
*Y. Komiya, et al.*, Dept. of Orthop. and Spinal Surg., Graduate School of Medical and Dental Sciences, Institute of Science Tokyo
- P16-3 Factors of kyphosis deformity occurrence in segmental partial laminectomy for cervical spondylotic myelopathy. ....473  
*T. Seki, et al.*, Dept. of Orthop. Surg., Fukushima Medical Univ.
- P16-4 Postoperative C5 palsy after posterior cervical decompression: incidence and preoperative factors in CSM vs OPLL .....474  
*S. Gushiken, et al.*, Dept. of Orthop. Surg., Graduate School of Medicine, Chiba Univ.
- P16-5 Study on Bony Foramen Restenosis following Full-Endoscopic Posterior Cervical Foraminotomy (FPCF) .....474  
*Y. Endo, et al.*, Nippon Koukan Hosp.

### Poster 17

9 : 10~9 : 40

Moderator : **H. Inose**

#### Surgery for Osteoporotic Vertebral Fractures 2

- P17-1 Biomechanical comparative analysis of anterior reconstruction methods for osteoporotic vertebral fracture: finite element analysis .....475  
*K. Murai, et al.*, Dept. of Orthop. Surg., Wakayama Medical Univ.
- P17-2 Comparison Between Xcore-2 Vertebral Body Replacement and Posterior Fixation for Osteoporotic Thoracolumbar Junction Vertebral Fractures .....475  
*T. Hashimura, et al.*, Dept. of Orthop. Surg., Kobe City Medical Center West Hosp.
- P17-3 Indirect decompression effect and intravertebral canal remodeling of lateral access corpectomy on osteoporotic vertebral collapse .....476  
*S. Uchida, et al.*, Dept. of Orthop. Surg., Kansai Medical Univ. Hosp.

- P17-4 Effects of preoperative romosozumab or denosumab on screw loosening, cage subsidence, and bone union after lumbar interbody fusion .....476  
**K. Kuroshima, et al.**, Dept. of Orthop. Surg., Kobe Univ. Graduate School of Medicine
- P17-5 Establishment of Criteria for Floating Fusion in Kyphotic Correction of Osteoporotic Vertebral Fractures .....477  
**Y. Sawada, et al.**, Dept. of Orthop. Surg., Osaka Metropolitan Univ. Graduate School of Medicine
- P17-6 Are prevalent vertebral fractures a risk factor for poor clinical outcomes after lumbar instrumented fusion surgery? .....477  
**H. Oishi, et al.**, Miyoshi Hosp.

## Poster 18

9 : 50~10 : 30

Moderator : **T. Sasagawa**

### Prognosis of Osteoporotic Vertebral Fractures

- P18-1 Determinants of Mortality in the Conservative Treatment of Vertebral Fractures: A Community Hospital Cohort Analysis .....478  
**H. Ogi, et al.**, Dept. of Orthop. Surg., Hamamatsu Univ. School of Medicine
- P18-2 Clinical characteristics of lower lumbar osteoporotic vertebral fracture based on conservative treatment outcome .....478  
**K. Uomi, et al.**, National Center for Geriatrics and Gerontology
- P18-3 The Association Between Thoracolumbar Vertebral Fractures And Intervertebral Disc Degeneration .....479  
**K. Tsuchiya, et al.**, Dept. of Orthop. Surg., Showa Medical Univ. School of Medicine, Tokyo
- P18-4 Investigation of factors associated with mortality in older adults aged 75 years and older with osteoporotic vertebral fractures .....479  
**T. Nakamae, et al.**, Dept. of Orthop. Surg., Graduate School of Biomedical and Health Sciences, Hiroshima Univ.
- P18-5 Influence of lumbar vertebral fractures on fatty infiltration of the paraspinal muscles .....480  
**K. Kobayashi, et al.**, Dept. of Orthop. Surg., Fukushima Medical Univ.
- P18-6 Clinical Features and Outcomes of Vertebroplasty for Osteoporotic Lumbar Vertebral Fractures with Radiculopathy: A Multicenter Study .....480  
**T. Shimizu, et al.**, Dept. of Orthop. Surg., Graduate School of Medical Sciences, Kanazawa Univ.
- P18-7 Prognosis of low back pain in osteoporotic vertebral fractures: A study using Pain trajectory .....481  
**Y. Abe, et al.**, Sapporo Maruyama Orthop.
- P18-8 The incidence and risk factor of subsequent domino OVF after conservative treatment with initial hospitalization and rigorous bed rest .....481  
**Y. Shimamura, et al.**, Yamagata spine center

## Poster 19

10 : 40~11 : 25

Moderator : **S. Nozawa**

### Implant-related Complications

- P19-1 Relationship between osteoporosis-related complications and HU value and VBQ score after posterior lumbar interbody fusion .....482  
**K. Kiyasu, et al.**, Dept. of Orthop. Surg., Kochi Medical School, Kochi Univ.
- P19-2 Preventive Effect of PJK after Adult Spinal Deformity Surgery using Translaminar Spinal Tethering Technique .....482  
**F. Arizumi, et al.**, Dept. of Orthop. Surg., Hyogo Medical Univ.
- P19-3 A Study on Risk Factors for Proximal Junctional Fracture after Lumbosacral Fusion for Degenerative Lumbar Scoliosis .....483  
**H. Nishikawa, et al.**, Dept. of Neuro Surg., Mie Univ.
- P19-4 In lumbar degenerative scoliosis, pedicle HU values are lower on the convex side, where screws are more prone to loosening. ....483  
**S. Yamamoto, et al.**, Dept. of Orthop. Surg., Kagawa Univ.
- P19-5 Prediction of screw loosening after Lumbar Interbody Fusion using pedicle Hounsfield Units value .....484  
**T. Miyazaki, et al.**, Dept. of Neurosurg., Mie Univ. Hosp.
- P19-6 Evaluation of factors associated with L5/S nonunion and S1 pedicle screw loosening after lumbosacral interbody fusion surgery .....484  
**H. Yasuda, et al.**, Higashisumiyoshi Morimoto Hosp.
- P19-7 Reduced Total Lumbar Range of Motion Is a Risk Factor for Clear Zone Formation after Transforaminal Lumbar Interbody Fusion .....485  
**T. Kataoka, et al.**, Shiga Spine Center
- P19-8 Risk factors for mechanical failure after adult spinal deformity surgery .....485  
**T. Nitta, et al.**, Dept. of Orthop. and Spinal Surg., Graduate School of Medical and Dental Sciences, Institute of Science Tokyo
- P19-9 Number of remaining teeth can predict pedicle screw loosening after lumbar interbody fusion .....486  
**K. Shiota, et al.**, Hakodate Central General Hosp.

## Poster 20

14 : 20~15 : 00

Moderator : **K. Kobayashi**

### Perioperative Complication 1

- P20-1 Comparative study of lumbar decompression surgery in patients with versus without anticoagulant use .....486  
**H. Takaoka, et al.**, New Tokyo Hosp.
- P20-2 Safety of perioperative anticoagulant continuation in spine surgery: retrospective cohort study of 132 cases .....487  
**T. Suzuki, et al.**, Dept. of Orthop. Surg., OGMC
- P20-3 Impact of Antiplatelet or Anticoagulant Therapy on Emergency Cervical Spine Surgery: A Retrospective Analysis of 61 Posterior Approach Cases .....487  
**T. Nakamura, et al.**, Dept. of Orthop. Surg., Tottori Univ.
- P20-4 Emergency cervical trauma surgery with anticoagulants showed comparable blood loss and complication rates to controls .....488  
**S. Nomura, et al.**, Dept. of Orthop. Surg., Surgical Science, Tokai Univ.
- P20-5 Validation of the usefulness of autologous fibrin glue in scoliosis surgery .....488  
**T. Tsuji, et al.**, Dept. of Orthop. & Spine Surg., Toyota Kosei Hosp.
- P20-6 Effect of tranexamic acid dosing frequency on perioperative blood loss in lumbar spinous process-splitting laminoplasty.....489  
**Y. Chiba, et al.**, Dept. of Orthop. Surg., Yamagata Univ.
- P20-7 A Study on Perioperative Safety of Lumbar Posterior Interbody Fusion Undergoing While Continuing Low-Dose Aspirin Oral Therapy .....489  
**H. Yamagata, et al.**, New Tokyo Hosp.

## Poster 21

15 : 10~15 : 50

Moderator : **D. Takeuchi**

### Perioperative Complication 2

- P21-1 Analysis of reoperation causes and associated risk factors within 90 days following instrumented surgery for lumbar spinal stenosis .....490  
**T. Nakano, et al.**, Japanese Red Cross Shizuoka Hosp.
- P21-2 Analysis of complication rates according to the upper instrumented level in thoracic-to-pelvic fixation. ....490  
**H. Ito, et al.**, Dept. of Orthop./Anjo kosei Hosp.

- P21-3 Effect of the decompression style of upper adjacent segment on occurrence of adjacent segment disease after PLIF. ....491  
**Y. Goto, et al.**, KARIYA TOYOTA General Hospital
- P21-4 Perioperative complications in hemodialysis patients undergoing spinal surgery: A retrospective analysis at our institution .....491  
**M. Mikami, et al.**, Dept. of Orthop. Surg., YPCH
- P21-5 Perioperative complications in spinal surgery for dialysis patients: Long-term dialysis may be associated with medical complications .....492  
**Y. Katsumata, et al.**, Dept. of Orthop. Surg., JCHO Sendai Hosp.
- P21-6 Statistical study on risk factors for Cement Leakage in Cement-Augmented Pedicle Screws .....492  
**S. Watanabe, et al.**, Dept. of Orthop. and Rehabilitation Medicine, Faculty of Medical Sciences, Univ. of Fukui
- P21-7 Study of intraoperative complications related to needles and guidewires in spinal surgery .....493  
**K. Watanabe, et al.**, Dept. of Orthop. Surg., Japanese Red Cross Ise Hosp.

## Poster 22

16 : 00~16 : 40

Moderator : **K. Mori**

### Perioperative Complication 3

- P22-1 Efficacy and Limitations of Pulmonary Embolism Prevention Strategies in Perioperative Spinal Surgery .....493  
**Y. Yamamoto, et al.**, Dept. of Spine Surg., Nara Prefecture General Medical Center
- P22-2 Incidence and Risk Factors of Postoperative Hyponatremia after Spine Surgery .....494  
**S. Mizobuchi, et al.**, Dept. of Orthop. Surg., Kochi Medical School, Kochi Univ.
- P22-3 Radiological Progression of Destructive Spondyloarthropathy in Hemodialysis Patients: A Five-year Prospective Study. ....494  
**K. Yokota, et al.**, Dept. of Orthop. Surg., Nagasaki Univ. Graduate School of Biomedical Sciences
- P22-4 Multifidus Atrophy and Disc Height Loss After Posterior Lumbar Decompression in Hemodialysis Patients .....495  
**K. Sahara, et al.**, Dept. of Orthop. Surg., Sumitomo Hosp.
- P22-5 Decrease in the Number of Skeletal Muscle Stem Cell Leads to Impaired Muscle Regeneration in Chronic Kidney Disease .....495  
**H. Sasaki, et al.**, Dept. of Orthop. Surg., National Defense Medical College
- P22-6 Investigation of deep vein thrombosis after spine surgery in our hospital .....496  
**S. Takada, et al.**, Yamagata Saisei Hosp.

- P22-7 Operative time as a predictor for major complications in spinal surgery for ASA-PS III patients: a multicenter cohort analysis .....496  
**H. Kodama, et al.**, Dept. of Orthop. Surg., The Univ. of Tokyo Hosp., The Univ. of Tokyo

## Poster Room 2

### Poster 23

8 : 30~9 : 00

Moderator : **H. Hamanaka**

#### Epidural Hematoma

- P23-1 Diagnostic Delay and Neurological Outcomes in Spontaneous Spinal Epidural Hematoma: Analysis of Severe Paralysis Cases Undergoing Surgery .....497  
**A. Kawamoto, et al.**, Advanced Center for Emergency and Critical Care Medicine, Saitama Medical Center, Saitama Medical Univ.
- P23-2 Impact of Pharmacologic Antithrombotic Therapy on Spine Surgery: A Nationwide Analysis Using the Swedish Spine Register (Swespine) .....497  
**R. Fujita, et al.**, Dept. of Orthop. Surg., Faculty of Medicine and Graduate School of Medicine, Hokkaido Univ.
- P23-3 Symptomatic Epidural Hematoma Following Spinal Decompression Surgery .....498  
**D. Matsushima, et al.**, Asa Citizens Hosp.
- P23-4 Reliability of Preoperative MRI in Differentiating Spinal Subdural and Epidural Hematomas: A Multi-Institutional Study .....498  
**S. Okuwaki, et al.**, Univ. of Tsukuba
- P23-5 Characteristics of Patients Indicated for Conservative Management of Spontaneous Cervical Epidural Hematoma .....499  
**H. Takemura, et al.**, Dept. of Orthop. Surg., Yonemori Hosp.

### Poster 24

9 : 10~9 : 40

Moderator : **T. Hikata**

#### Lumbar Disc Herniation

- P24-1 Imaging Changes of Lumbar Disc Herniation on Upright MRI .....499  
**S. Fujii, et al.**, Dept. of Orthop. Surg., Saiseikai Kawaguchi General Hosp.
- P24-2 One-year Body Mass Index Change and Subsequent Risk of Lumbar Disc Herniation: A Population-based Cohort Study .....500  
**S. Masuda, et al.**, Dept. of Pharmepi., Kyoro Univ.
- P24-3 Indications for and outcomes of full endoscopic lumbar discectomy between spinal levels. ....500  
**Y. Nanjo, et al.**, Dept. of Orthop. Surg., Matsue City Hosp.

- P24-4 Incidence of discal pseudocyst after endoscopic lumbar discectomy for adolescent lumbar disc herniation: comparison of FELD and MED. ....501  
**R. Watanabe, et al.**, Iwai Orthop Hosp
- P24-5 Characteristics of endplate changes following discectomy and their effects on clinical symptoms in patients with lumbar disc herniation .....501  
**K. Kawaguchi, et al.**, Dept. of Rehabilitation Medicine, Kyushu Univ. Hosp.
- P24-6 Clinical Outcomes of MED for Recurrent Lumbar Disk Herniation .....502  
**M. Oka, et al.**, Dept. Orthop. Surg., Shimada Hosp.

## Poster 25

9 : 50 ~ 10 : 30

Moderator : **K. Yamada**

### Surgical Prognosis Prediction

- P25-1 Preoperative Ligamentum Flavum Thickness and Facet Joint Degeneration Predict Cranial Adjacent Ligamentum Flavum Hypertrophy after PLIF .....502  
**T. Takekawa, et al.**, Dept. of Orthop. Surg., Teikyo Univ.
- P25-2 Multicenter Data Analysis of Prognostic Factors for Surgical Outcomes in Proximal Cervical Spondylotic Amyotrophy .....503  
**Y. Ichihara, et al.**, Dept. of Orthop. Surg., Yamaguchi Univ. Graduate School of Medicine
- P25-3 High Bone Density as a Risk Factor for Upper Limb Palsy after Cervical Laminoplasty: Supporting the Thermal Injury Hypothesis" .....503  
**H. Fujiwara, et al.**, JCHO Hoshigaoka Medical Center
- P25-4 Preoperative factors associated with gait acquisition days after lumbar fusion surgery .....504  
**R. Nishi, et al.**, Rehabilitation Center, East Maebashi Orthop Hosp
- P25-5 Predictive factors for postoperative motor recovery of proximal upper limb in patients with cervical degenerative disease .....504  
**N. Isogai, et al.**, Dept. of Orthop. Surg., International Univ. of Health and Welfare
- P25-6 Correlation and Surgical Changes of Outcome Measures for Upper Limb Function in Cervical Spinal Cord Syndrome .....505  
**T. Yoshihara, et al.**, Dept. of Orthop. Surg., Saga Univ.
- P25-7 Characteristics of complete block in lumbar myelography and its effect on lumbar decompression .....505  
**T. Noguchi, et al.**, Yodakubo Hosp
- P25-8 A Study on Lumbar Spine and Pelvic Parameters Affecting Residual Low Back Pain After Decompression Surgery for Lumbar Spinal Stenosis .....506  
**T. Murakami, et al.**, Dept. of Spine and Spinal Surg., Yamaguchi Rosai Hosp.

## Poster 26

10 : 40~11 : 25

Moderator : **H. Shigematsu**

### Spinal Alignment

- P26-1 Association between the remaining teeth and the spinopelvic alignment .....506  
**K. Ura, et al.**, Dept. of Orthop. Surg., Otaru general hosp.
- P26-2 Impact of spinopelvic sagittal malalignment on postoperative clinical outcomes in patients with lumbar spinal stenosis .....507  
**S. Tamagawa, et al.**, Dept. of Orthop., Juntendo Univ.
- P26-3 Sagittal Spinal Alignment and Mortality Risk in a Community Health Check up Cohort .....507  
**S. Ito, et al.**, Dept. of Orthop./Rheumatology, Musculoskeletal and Cutaneous Surg., Program in Integrated Medicine, Graduate School of Medicine, Nagoya Univ.
- P26-4 Association Between Body Composition and Spinal Alignment in Patients With Severe Osteoporosis .....508  
**Y. Ishihama, et al.**, Dept. of Orthop. Surg., Kindai Univ. Faculty of Medicine
- P26-5 Two-year effects of locomotion training-based outpatient rehabilitation on the whole-spine sagittal alignment in locomotive syndrome .....508  
**T. Yurube, et al.**, Dept. of Orthop. Surg., Kobe Univ. Graduate School of Medicine
- P26-6 Influence of Car Seat Reclining on Global Spinal Alignment .....509  
**N. Nishida, et al.**, Dept. of Orthop. Surg., Yamaguchi Univ. Graduate School of Medicine
- P26-7 Influence of cranium orientation on cervical sagittal alignment during radiographic examination: a radiographic analysis .....509  
**T. Fujishiro, et al.**, Osaka Med/Pharm Univ.
- P26-8 Normality of sagittal spinal alignment reveals evolutionary signals from the MEANS database: key parameters and overall trends .....510  
**K. Hasegawa, et al.**, Niigata Spine Surg. Center
- P26-9 Effect of Nutritional and Exercise Intervention on Whole-Spine Radiographic Alignment in Older Adults Undergoing Community Health Checkups .....510  
**S. Oe, et al.**, Dept. of Geriatric Musculoskeletal Health, Hamamatsu Univ. School of Medicine

## Poster 27

14 : 20~15 : 00

Moderator : **B. Otsuki**

### Spinal Deformity/Adult Spinal Deformity

- P27-1 A Comparison of Clinical Outcomes between One-Stage and Two-Stage Surgery in CMIS for Adult Spinal Deformity. ....511  
**K. Kawashima, et al.**, Dept. of Orthop. Surg., Kansai Medical Univ.

P27-2	Clinical Outcomes of Posterior Spinal Fusion for Severe Adolescent Idiopathic Scoliosis .....511 <b>M. Kawamura, et al.</b> , Scoliosis Center, Osaka City General Hosp
P27-3	Surgical outcomes of posterior spinal fusion for syndromic scoliosis in severely disabled patients .....512 <b>T. Shimabukuro, et al.</b> , Orthop. Surg., Univ. of the Ryukyus Hosp.
P27-4	Perioperative Complication and Clinical Course of Severe Scoliosis Cases: Comparison Study with Moderate Curvature. ....512 <b>T. Yamamoto, et al.</b> , Dept. of Orthop. Surg., Kagoshima City Hosp.
P27-5	Does the sagittal touched vertebra classification determine the results of adult spinal deformity surgeries? .....513 <b>Y. Mihara, et al.</b> , Dept. of Orthop. Surg., Iwata city Hosp.
P27-6	Finite Element Analysis of Pedicle Screw Insertion Direction at the UIV: T7-Pelvis Adult Spinal Deformity Corrective Surgery Model .....513 <b>M. Ohno, et al.</b> , Scoliosis center, Dept. of Orthop. Surg. Osaka City General Hosp.
P27-7	Minimally invasive PSO (MIS-PSO) for adult spinal deformity: Achieving strong correction with less invasiveness .....514 <b>M. Ishihara, et al.</b> , Dept. of Orthop. Surg., Kansai Medical Univ.

## Poster 28

15 : 10~15 : 50

Moderator : **K. Sakai**

### Ossification of Ligaments & Others

P28-1	Influence of whole spine alignment on neck pain in cervical OPLL surgery .....514 <b>J. Hashimoto, et al.</b> , Dept. of Orthop. Surg., Kudanzaka Hosp.
P28-2	A study on spinal cord impairment areas and cervical spine mobility in patients with cervical OPLL .....515 <b>A. Shukur, et al.</b> , Dept. of Orthop. Surg., Faculty of Medicine, Univ. of Toyama
P28-3	Multi-rod reinforcement reduces postoperative kyphosis progression after posterior decompression and instrumented fusion for thoracic OPLL .....515 <b>T. Funayama, et al.</b> , Dept. of Orthop. Surg., Univ. of Tsukuba
P28-4	ABO blood type influence the incidence of spinal disorders? .....516 <b>M. Wakasugi, et al.</b> , Niigata Central Hosp.
P28-5	Utility and Safety of CT Myelography for Preoperative Planning in Thoracic Ossification of the Posterior Longitudinal Ligament .....516 <b>N. Takino, et al.</b> , Dept. of Orthop. Surg., Graduate School of Medical Sciences, Kanazawa Univ.

- P28-6 Clinical Characteristics of Lumbar OPLL: Association with Obesity and Diffuse Ossification Distribution .....517  
**Y. Koike, et al.**, Dept. of Orthop. Surg., Faculty of Medicine and Graduate School of Medicine, Hokkaido Univ.

## Poster 29

16 : 00~16 : 40

Moderator : **A. Hiyama**

### Bone Quality Evaluation

- P29-1 Relationship between Remaining Number of Teeth and Spinal Hounsfield Units .....517  
**R. Fujita, et al.**, Dept. of Orthop. Surg., Faculty of Medicine and Graduate School of Medicine, Hokkaido Univ.
- P29-2 Comparison of the Usefulness of Hounsfield Unit Values and Anteroposterior and Lateral Lumbar DXA in Predicting Cage Subsidence after XLIF .....518  
**H. Kawaguchi, et al.**, Dept. of Orthop. Surg., Nippon Medical School Chiba Hokusoh Hosp.
- P29-3 Bone Strength Assessment in Marfan Syndrome Scoliosis Using Lumbar Vertebral Hounsfield Units .....518  
**H. Matsuoka, et al.**, Dept. of Orthop. Surg., Graduate School of Medicine, Osaka Univ.
- P29-4 Optimizing Reconstruction Parameters of Photon-Counting Detector CT for Lumbar Spine Bone Microarchitecture Evaluation .....519  
**K. Yamada, et al.**, Dept. of Orthop. and Spinal Surg., Graduate School of Medical and Dental Sciences, Institute of Science Tokyo
- P29-5 Association of the Number of Remaining Teeth With Trabecular Bone Remodeling and Vertebral Endplate Cysts: A Retrospective Cohort Study .....519  
**S. Yokoyama, et al.**, Dept. of Orthop. Surg., Otaru General Hosp.
- P29-6 Preoperative Prevalence of Osteoporosis, Vitamin D, and Vitamin K Deficiency in Adult Spinal Fusion Surgery. ....520  
**M. Terakawa, et al.**, Dept. of Orthop. Surg., Osaka Rosai Hosp.
- P29-7 Disease-Specific Vertebral Hounsfield Unit Values in Patients with Flaccid Type of Neuromuscular Scoliosis .....520  
**Y. Yokozeki, et al.**, Dept. of Orthop. Surg., Kitasato Univ.

## Poster Room 3

### Poster 30

8 : 30~9 : 00

Moderator : **T. Morino**

#### Diffuse Idiopathic Skeletal Hyperostosis (DISH)

- P30-1 A Single-Center Study on Surgical Outcomes for Forestier's Disease .....521  
**K. Muto, et al.**, Dept. of Orthop. Surg., Kumamoto Rosai Hosp.
- P30-2 Clinical Outcomes of Transdiscal Screws for DISH-Associated Spinal Fractures with Large Anterior Gap .....521  
**R. Ugawa, et al.**, Dept. of Orthop. Surg., Kochi Health Sciences Cent.
- P30-3 Clinical results of thoracolumbar burst fracture with DISH by Penetrating Endplate Screw- Comparison with PS fixation- .....522  
**Y. Tamaki**, Dept. of Orthop. Surg., Janapanese red cross society Wakayama medical center
- P30-4 Assessment of Muscle Quality and Quantity in Individuals with Diffuse Idiopathic Skeletal Hyperostosis .....522  
**K. Ono, et al.**, Dept. of Orthop. Surg., Graduate School of Medicine, Kyoto Univ.
- P30-5 Association of red blood cell distribution width (RDW) in idiopathic diffuse skeletal hyperostosis (DISH) .....523  
**T. Suzuki, et al.**, Dept. of Orthop. Surg., Yamagata Univ.

### Poster 31

9 : 10~9 : 40

Moderator : **T. Nakamae**

#### Evaluation of Osteoporosis 1

- P31-1 Diagnostic Utility of Thoracic Vertebral Hounsfield Units on Chest CT for Osteoporosis Detection .....523  
**J. Saito, et al.**, Dept. of Orthop. Surg., Toho Univ. (Sakura)
- P31-2 Association between Intradiscal Vacuum Phenomenon and Vertebral Fractures in the General Adult Population .....524  
**T. Arai, et al.**, Dept. of Orthop. Surg., Eastern Chiba Medical Center
- P31-3 Survey of Relationship Between Prevalent Vertebral Fractures and Bone Strength Evaluation Indicators in Whole Spine CT .....524  
**N. Kondo, et al.**, Dept. Orthop. Yokohama City Univ Hosp.
- P31-4 Localization and Initial Site of Spinal Compression Fractures - Investigation of Proximal Femur Fractures Cases - .....525  
**H. Tatsumi, et al.**, Dept. of Orthop. Surg., Hiroshima Prefectural Hosp.

- P31-5 Osteoporosis Assessment in Spine Surgery Patients: Association of Femoral Neck BMD, Vertebral HU Values, and Aortic Calcification .....526  
**T. Nagai, et al.**, Div. of Orthop. Surg., Dept. of Medicine of Sensory and Motor Organs, Faculty of Medicine, Univ. of Miyazaki
- P31-6 Comparison of sagittal and axial CT-based lumbar vertebral Hounsfield units and their diagnostic performance for osteoporosis .....526  
**J. Saito, et al.**, Dept. of Orthop. Surg., Toho Univ. (Sakura)

## Poster 32

9 : 50~10 : 30

Moderator : **T. Miyashita**

### Long-term Outcomes of Spinal Fusion

- P32-1 Complications and Reoperation Rates in Adult Spinal Deformity Surgery with Over 5 Years of Follow-up .....526  
**H. Watanabe, et al.**, Keiyu Orthop. Hosp.
- P32-2 Mid-term image and clinical symptoms evaluation of lumbar posterior fusion (2 or more levels) .....527  
**T. Ikeda, et al.**, Dept. of Orthop.Surg., Kindai Univ. Faculty of Medicine
- P32-3 Long-term outcomes after spinal deformity correction surgery in adults - A study of follow-up cases 10 years after surgery .....527  
**K. Kusano, et al.**, Dept. of orthop. Surg., Kudanzaka Hosp.
- P32-4 Comparison of long-term results after scoliosis surgery for neuromuscular scoliosis between ambulatory and non-ambulatory patients .....528  
**K. Wada, et al.**, Depart. of Orthop. Surg., Hiroaski Univ.
- P32-5 Good 10-year postoperative outcomes after facet fusion with percutaneous pedicle screw for degenerative lumbar spondylolisthesis .....528  
**T. Miyashita, et al.**, Spine Center, Matsudo City General Hosp.
- P32-6 Postoperative Coronal Imbalance Predicts Late Mechanical Failure and Revision Surgery After Adult Spinal Deformity Surgery .....529  
**T. Yamada, et al.**, Dept. of Orthop. Surg., Hamamatsu Univ. School of Medicine
- P32-7 Long-term Clinical Outcomes Following Postoperative Vertebral Fracture after Posterior Lumbar Interbody Fusion .....529  
**T. Takahashi, et al.**, Dept. of Orthop. Surg., Saiseikai Kawaguchi General Hosp.
- P32-8 Changes in Adjacent Segments More Than 10 Years After Corrective Fusion for Adult Spinal Deformity: Evaluation by MRI .....530  
**M. Kawamura, et al.**, Osaka City General Hosp, Scoliosis Center

## Poster 33

10 : 40~11 : 20

Moderator : **M. Kashii**

### Evaluation of Osteoporosis 2

- P33-1 Rate of bone health assessment and preoperative osteoporosis treatment in spinal reconstruction surgery .....530  
**T. Yanase, et al.**, Dept. of Orthop. Surg., Dokkyo Medical Univ. Saitama Medical Center
- P33-2 Usefulness of FRAX Implementation for Fracture Risk Assessment in Specific Health Checkups .....531  
**H. Yamane, et al.**, Dept. of Orthop. Surg. Obase Hosp.
- P33-3 Who is Prone to Sacral Insufficiency Fractures? Comparison of Spinopelvic Alignment in SIF and FNF .....531  
**K. Kimura, et al.**, NTT Medical Center Tokyo
- P33-4 Association between Osteoporotic Vertebral Fractures and Intravertebral Fat Volume and Bone Mineral Density .....532  
**Y. Kasukawa, et al.**, Dept. of Rehabilitation Medicine, Akita Univ. Hosp.
- P33-5 Correlation between Hounsfield Unit and DXA Values in Spine Surgery Patients: Influence of Sex and Aging .....532  
**S. Kurogi, et al.**, Div. of Orthop. Surg., Dept. of Medicine of Sensory and Motor Organs, Faculty of Medicine, Univ. of Miyazaki
- P33-6 Association Between Genant Semi-Quantitative Grading (SQ) and DXA Findings: A Retrospective Analysis of 202 Hip Fracture Patients .....533  
**Y. Isobe, et al.**, Nagasaki Rousai Hosp.
- P33-7 Impact of a Multidisciplinary Liaison Team on Clinical Outcomes in Elderly Hospitalized Patients with Osteoporotic Vertebral Fractures .....533  
**H. Ushirozako, et al.**, Dept. of Orthop. Surg., Hamamatsu Univ. School of Medicine
- P33-8 Preoperative Osteoporosis Screening in a Japanese Population Using Hounsfield Unit Values from Routine Cervical CT .....534  
**M. Furuya, et al.**, Dept. of Orthop. Surg., Graduate School of Medicine, Osaka Univ.

## Poster 34

14 : 20~15 : 00

Moderator : **T. Banno**

### Intervertebral Disc Disorder Treatment

- P34-1 Outcomes and Imaging Changes of Intradiscal Enzyme Injection Therapy and Their Association with Intervertebral Disc Degeneration .....534  
**A. Tsukamoto, et al.**, Dept. of Orthop. Surg., Sapporo Medical Univ.

- P34-2 Epidural spread with 1-mL discography and its MRI correlation: clinical implications for intradiscal condoliase injection .....535  
**T. Hara, et al.**, Spine center, Juntendo Univ.
- P34-3 T2 value within the intervertebral disc following intradiscal injection of condoliase .....535  
**F. Tominaga, et al.**, Fukuoka Orthop. Hosp., Dept. of Orthop.
- P34-4 Evaluation of optimal use of intradiscal injection therapy with condoliase .....536  
**F. Tominaga, et al.**, Fukuoka Orthop. Hosp., Dept. of Orthopaedics
- P34-5 The effectiveness of intradiscal condoliase injection therapy for disc herniation after lumbar spinal surgery .....536  
**H. Ishibashi, et al.**, Dept. of Orthop., Graduate School of Medical Science, Kyoto Prefectural Univ. of Medicine
- P34-6 Advanced Disc Degeneration (Pfirrmann 3/4) in Early Recurrent Lumbar Disc Herniation .....537  
**K. Itohda, et al.**, Dept. of Orthop. Surg., SADA hosp.
- P34-7 Comparison of Morphological Features of Lumbar Disc Herniation in Surgical Cases Across Different Age Groups .....537  
**M. Ito, et al.**, Depy. of Orthop. Surg, St. lukes international Hosp.
- P34-8 Which types of lumbar disc disorders are effective for platelet-rich plasma (PRP) intradiscal injection therapy? .....538  
**K. Akeda, et al.**, Dept. of Musculoskeletal Surg., Dept. of Multimodality Therapy for Cancer, Mie Univ. Graduate School of Medicine

## Poster 35

15 : 10~15 : 50

Moderator : **K. Miyamoto**

### Upper Cervical Spine 1

- P35-1 Surgical Outcomes of Atlantoaxial Subluxation in Infants and Young Children Presenting with Severe Preoperative Spinal Cord Injury .....538  
**Y. Takeshita, et al.**, Dept. of Orthop. & Spine Surg., Yokohama Rosai Hosp.
- P35-2 Investigation of Imaging-Based Criteria for Surgical Decision-Making in Retro-Odontoid Pseudotumor .....539  
**Y. Ishihama, et al.**, Dept. of Orthop. Surg., Kindai Univ. Faculty of Medicine
- P35-3 Surgical Outcomes and Screw Placement Accuracy of O-arm Navigated MICEPS for Upper Cervical Fixation .....539  
**R. Joko, et al.**, Okayama Red Cross Hosp.
- P35-4 Improvement of percutaneous posterior atlantoaxial arthrodesis techniques .....540  
**T. Tokioka, et al.**, Dept. of Orthop. Surg., Okayama Kyokuto Hosp.

- P35-5 Correlation between dynamic CT myelography findings and postoperative decompression in non-rheumatic retro-odontoid pseudotumor .....540  
**T. Fujiki, et al.**, Dept. of Orthop. Surg., Kagawa Univ.
- P35-6 Reoperations after occipitocervical fusion .....541  
**T. Arabiki, et al.**, Div. of Orthop. Surg., Dept. of Regenerative and Transplant Medicine, Niigata Univ. Graduate School of Medical and Dental Sciences
- P35-7 Risk Analysis of Anterior Arch Fracture of the Atlas Following C1 Laminectomy Without Fusion .....541  
**M. Honda, et al.**, Takeda General Hosp.
- P35-8 Impact of Occipitocervical Fusion versus Atlantoaxial Fusion Subaxial Cervical Alignment .....542  
**T. Tsukui, et al.**, Dept. of Orthop. Surg., Gunma Univ. Graduate School of Medicine

## Poster 36

16 : 00 ~ 16 : 40

Moderator : **T. Hayashi**

### Upper Cervical Spine 2

- P36-1 New O-C2 angle measurement method .....542  
**Y. Aonuma, et al.**, Dept. of Orthop. Surg., Showa Medical Univ. Fujigaoka Hosp.
- P36-2 Navigation-Assisted Percutaneous Acutrak 2 Screw Fixation for Hangman's Fracture: Clinical Outcomes of Nine Cases .....543  
**Y. Fujiwara, et al.**, Kochi HSC
- P36-3 The efficacy of microscopic foraminotomy at C1-C2 for occipital pain due to the C2 cervical spondylotic radiculopathy .....543  
**Y. Fujiwara, et al.**, Asa Citizens Hosp.
- P36-4 The reliability and vulnerability of measuring cervical parameters of patients with Down syndrome .....544  
**M. Machida, et al.**, Dept. of Orthop. Surg., Saitama Children's Medical Center
- P36-5 A New Classification of C2 Lateral Atlantoaxial Joint Injuries: A Morphological Reconstruction Incorporating Atypical Hangman's Fracture .....544  
**A. Itoi, et al.**, Dept. of Orthop. Surg., Juntendo Univ. Shizuoka Hosp.
- P36-6 Prevalence and Progression Risk of Atlantoaxial Osteoarthritis (C1-2 OA) .....545  
**T. Nose, et al.**, Dept. of Orthop. Surg., Graduate School of Medicine, Kyoto Univ.

## Poster Room 4

### Poster 37

8 : 30~9 : 00

Moderator : **T. Takeuchi**

#### Osteoporosis Treatment

- P37-1 Study on the Optimal Timing of Teriparatide Initiation for Osteoporotic Vertebral Fractures...545  
**T. Ogura, et al.**, Dept. of Orthop. Surg., Graduate School of Medical and Dental Sciences, Kagoshima Univ.
- P37-2 Comparison of Vertebral Collapse Progression in Acute Osteoporotic Vertebral Fractures Treated with Bisphosphonates versus Romosozumab .....546  
**K. Okamoto, et al.**, Dept. of Orthop. Surg., Yuri General Hosp.
- P37-3 Osteoporosis treatment and tests in older adults aged 75 years and older with osteoporotic vertebral fractures .....546  
**T. Nakamae, et al.**, Dept. of Orthop. Surg., Graduate School of Biomedical and Health Sciences, Hiroshima Univ.
- P37-4 Intravital two-photon imaging of the bone remodeling transition reveals direct osteoclast-osteoblast interactions .....547  
**K. Shinyashiki, et al.**, Dept. of Orthop. Surg., Graduate School of Medicine, Osaka Univ.
- P37-5 Responder analysis of bone mineral density improvement after romosozumab: impact of baseline bone mass .....547  
**A. Hiyama, et al.**, Dept. of Orthop. Surg., Surgical Science, Tokai Univ.

### Poster 38

9 : 10~9 : 40

Moderator : **M. Yoshimoto**

#### Endoscopic Spine (Fusion) 2

- P38-1 Transition of Lumbar Interbody Fusion Techniques: From OLIF to UBE-LIF and Evaluation of the Navigation-Assisted Unilateral Approach .....548  
**K. Ishii, et al.**, Dept. of Orthop. Surg., Seirei Hamamatsu Hosp.
- P38-2 Comparison of Unilateral and Bilateral Approaches in UBE-ELIF: Radiographic and Clinical Outcomes .....548  
**T. Mizuno, et al.**, Seirei Hamamatsu General Hosp.
- P38-3 Relationship between cage subsidence and hounsfield units in UBE-ELIF .....549  
**T. Miyake, et al.**, Seirei Hamamatsu General Hosp.
- P38-4 Comparison of clinical outcomes between UBELF and FELF .....549  
**Y. Kondo, et al.**, Aichi Spine Hosp.

- P38-5 Endoscopic Interbody Fusion Using a Expandable Cage with Intraoperative Navigation Focused on Lumbar Lordosis and Bone Union .....550  
**H. Matsumori, et al.**, Dept. of Orthop. Surg., Kashiba Asahigaoka Hosp.
- P38-6 Results of mELIF: comparison for degenerative spondylolisthesis, isthmic spondylolisthesis and foraminal stenosis .....550  
**M. Shibayama, et al.**, Aichi Spine Hosp.

## Poster 39

9 : 50 ~ 10 : 30

Moderator : **O. Kawano**

### Spinal Trauma

- P39-1 Diaphragmatic Hernia after Vertebral Body Replacement for Delayed Union of an L1 Fracture: A Case Report .....551  
**Y. Shimizu, et al.**, Dept. of Orthop. Surg., Kyoto Chubu Medical Center
- P39-2 Risk Factors for Post-Implant Removal Correction Loss in Thoracolumbar Burst Fractures: A Retrospective Analysis .....551  
**T. Morita, et al.**, Dept. of Orthop. Surg., Kobe Red Cross Hosp.
- P39-3 Factors Associated with Early Re-collapse After Posterior Fixation for Thoracolumbar Burst Fractures: A Retrospective Study in Scandinavia .....552  
**R. Mori, et al.**, Dept. of Orthop. Surg., Faculty of Medicine and Graduate School of Medicine, Hokkaido Univ.
- P39-4 Intermediate screw fixation at burst-fractured vertebra on short segment fixation with HA vertebroplasty are effective ? .....552  
**K. Nishida, et al.**, Dept. of Orthop. Surg., Hiroshima Prefectural Hosp.
- P39-5 Significance of the vertebroplasty in the posterior fixation for the thoracolumbar burst fracture .....553  
**Y. Tamaki**, Dept. of Orthop. Surg., Japanese red cross society Wakayama medical center
- P39-6 Risk factors for anterior ring nonunion following Transiliac Rod and Screw Fixation (TIRF) for pelvic ring fractures .....553  
**Y. Fujiwara, et al.**, Dept. of Orthop. Surg., Japanese Red Cross Kobe Hosp.
- P39-7 Analysis of Acute-Phase Medical Costs in Patients With Cervical Spine and Spinal Cord Injury .....554  
**T. Takigawa, et al.**, Depart. of Orthop. Surg., Kobe Red Cross Hosp.

## Poster 40

10 : 40~11 : 20

Moderator : **S. Ikegami**

### Muscle Mass and Strength Evaluation

- P40-1 Impact of musculoskeletal pain on loss of skeletal muscle mass - Yakumo study- .....554  
**Y. Okada, et al.**, Dept. of Orthop./Rheumatology, Musculoskeletal and Cutaneous Surg., Program in Integrated Medicine, Graduate School of Medicine, Nagoya Univ.
- P40-2 Clinical Significance of Trunk Extensor Strength in Older Women: Strength Rather Than Muscle Mass Determines Physical Function .....555  
**I. Takahashi, et al.**, Ishii Orthop. & Rehabilitation Clinic
- P40-3 Novel Insights into Muscle Characteristics from AI-Based Quantification of Trunk Muscle Composition .....555  
**K. Gono, et al.**, Hitachi Health Care Center
- P40-4 Association Between Skeletal Muscle Index and Muscle Strength, Physical Function, and Low Back Pain in Women With Severe Osteoporosis .....556  
**Y. Ono, et al.**, Dept. of Orthop. Surg., Akita Univ. Graduate School of Medicine
- P40-5 Bone Mineral Density Assessment Using Hounsfield Unit Values of Vertebrae, Muscle, and Fat with a CT Image Analysis Application .....556  
**Y. Yamamoto, et al.**, Dept. of Spine Surg., Nara Prefecture General Medical Center
- P40-6 Sarcopenia Index Correlates with Trunk Muscle Mass and Fat Infiltration in Patients with Osteoporotic Vertebral Fracture .....557  
**K. Abe, et al.**, Omagari Kousei Medical Center
- P40-7 Association Between Muscle Function and Clinical Outcomes in Postoperative Patients with Lumbar Spinal Stenosis and Low Bone Mass .....557  
**Y. Kitsuda, et al.**, Rehabilitation Div., Tottori Univ. Hosp.
- P40-8 Can quadriceps muscle weakness for lumbar spine disease be assessed clinically using MMT? .....558  
**A. Tachibana, et al.**, Keiyu Orthop. Hosp. Keiyu Spine Center

## Poster 41

14 : 20~15 : 00

Moderator : **H. Aono**

### Lumbar Fusion 1

- P41-1 Outcomes of Short Fusion in Lumbar Degenerative Disease: Focusing on Bone Marrow Edema .....558  
**H. Fukui, et al.**, Dept. of Orthop. Surg., Graduate School of Biomedical and Health Sciences, Hiroshima Univ.

- P41-2 The occurrence of ASD after posterior lumbar interbody fusion for lumbar degenerative disease .....559  
**K. Masuda, et al.**, Dept. of Orthop. Surg., Hiratsuka Kyosai Hosp.
- P41-3 An innovative drug delivery system for bone regeneration: Acidic peptide-bound chondroitin sulfate .....559  
**S. Nozawa, et al.**, Dept. of Orthop. Surg., Div. of Disease Control, Research field of Medical Sciences, Graduate School of Medicine, Gifu Univ.
- P41-4 Optimal positioning of closed drains in posterior lumbar spinal fusion .....560  
**Y. Takeda, et al.**, Dept. of Orthop. Surg., Sonoda Third Hosp.
- P41-5 Longitudinal changes in Hounsfield Unit values of non-fused vertebrae after posterior lumbar fusion .....560  
**S. Takamiya, et al.**, Dept. of Orthop. Surg., Juntendo Univ. Nerima Hosp.
- P41-6 Relationship Between Cage Position and Bone Fusion in PLIF/TLIF: A Simple Evaluation Using the "Pedicule Line" .....561  
**F. Numano, et al.**, Dept. of Orthop. Surg., Saitama Saiseikai Kawaguchi General Hosp.
- P41-7 Bone Health Optimization for High-Risk Transforaminal Lumbar Interbody Fusion: A Propensity Score-Matched Study .....561  
**K. Nagashima, et al.**, Mito Kyodo General Hosp.
- P41-8 A new radiographic index for evaluating stabilization - fine vs sclerotic trabecular bone remodeling - .....562  
**Y. Nagatani, et al.**, Dept. of Orthop./Rheumatology, Musculoskeletal and Cutaneous Surg., Program in Integrated Medicine, Graduate School of Medicine, Nagoya Univ.

## Poster 42

15 : 10 ~ 15 : 50

Moderator : **T. Nagai**

### Lumbar Fusion 2

- P42-1 Mid-term results of MIS-TLIF with correction using PPS for lumbar spondylolisthesis .....562  
**T. Hori, et al.**, Dept. of Orthop. Surg., Kurobe City Hosp.
- P42-2 Evaluation of fusion rate in lateral lumbar interbody fusion using an expandable cage .....563  
**H. Shitogishi, et al.**, Dept. of Orthop. Surg., Iwate Medical Univ.
- P42-3 Mechanical Evaluation of a Posterior Dynamic Stabilization System Using a Polyethylene Articulating Mechanism .....563  
**K. Matsumoto, et al.**, Dept. of Orthop. Surg., Nihon Univ.
- P42-4 Predictive Factors for Bony Fusion Following Posterior Lumbar Interbody Fusion with an Expandable Cage .....564  
**T. Takahashi, et al.**, Dept. of Orthop. Surg., Saiseikai Kawaguchi General Hosp.

- P42-5 Clinical Outcomes of Posterior Lumbar Interbody Fusion with Silver-Containing Hydroxyapatite (Ag-HA) Coated Cages: A Multicenter Study .....564  
**M. Tsukamoto, et al.**, Dept. of Orthop. Surg., Saga Univ.
- P42-6 Clinical Outcomes of Lumbar Posterior Interbody Fusion Using Silver-Containing Hydroxyapatite (Ag-HA) Coated Interbody Cages .....565  
**S. Iemura, et al.**, Dept. of Orthop. Surg., Kindai Univ. Faculty of Medicine
- P42-7 Comparison of Outcomes and Reoperations Between Three-Level Posterior Lumbar Fusion and Two-Level Fusion With Adjacent Decompression .....565  
**S. Tamura, et al.**, Dept. of Orthop. and Spinal Surg., Graduate School of Medical and Dental Sciences, Institute of Science Tokyo
- P42-8 Comparison between Boomerang Expandable Cage and Static Cage in MIS-TLIF .....566  
**A. Yoshioka, et al.**, Hachiya Orthop Hosp

## Poster 43

16 : 00~16 : 40

Moderator : **H. Iizuka**

### Posterior Cervical Surgery

- P43-1 Evaluation of laminar expansion angle as a predictor of hinge union in open door cervical laminoplasty using cervical plate .....566  
**T. Uchiyama, et al.**, Dept. of Orthop. Surg., Tomidahama Hosp.
- P43-2 One-year postoperative outcomes of exoscopic minimally invasive cervical laminoplasty .....567  
**K. Yamane, et al.**, Dept. of Orthop. Surg., Okayama Medical Center
- P43-3 Evaluation of Work Productivity in Full-Endoscopic Cervical Foraminotomy .....567  
**R. Tominaga, et al.**, Dept. of Orthop. Surg., Iwai Orthop Hosp.
- P43-4 Comparison of Anterior Cervical Decompression and Fusion and Foraminotomy for Proximal Cervical Spondylotic Amyotrophy .....568  
**K. Nakaniwa, et al.**, Osaka Rosai Hosp., Dept. of Orthop. Surg.
- P43-5 Introduction of 3-cm Minimally Invasive Cervical Laminoplasty and Evaluation of Its Effect on Postoperative Pain Relief .....568  
**S. Kawaguchi, et al.**, Omuro Orthop. Clinic
- P43-6 Risk Factors and Clinical Outcomes of Perioperative Complications Following Cervical Spine Surgery .....569  
**N. Nagoshi, et al.**, Dept. of Orthop. Surg., Keio Univ.
- P43-7 Transvertebral hemoctomy for cervical disc herniation. Technical tips and secret: complete resection may not be necessary .....569  
**M. Shibayama, et al.**, Aichi spine Hosp.

- P43-8 Regional Epidemiology and Perioperative Outcomes of Cervical Fusion: Nationwide Database from the Japanese Spinal Instrumentation Society .....570  
*S. Katsumi, et al.*, Database Committee of the Japanese Spinal Instrumentation Society

## Poster Room 5

### Poster 44

8 : 30~9 : 00

Moderator : **M. Hoshino**

#### Physician Workstyle & Workflow Reform

- P44-1 How should we intervene to increase the number of female spine surgeons? .....570  
*S. Soeda, et al.*, Orthop. Dept., Tokushima Univ.
- P44-2 Withdrawn
- P44-3 The future of Endoscopic spine surgery from a perspective young spine surgeon: comparing aF-ESS and MED .....571  
*K. Yonei, et al.*, Dept. of Orthop. Surg., Siroyama Hosp.
- P44-4 Practical Approaches to Minimize Occupational Radiation Exposure in Spine Surgery: A Personal Experience with Radiation-Induced Skin Injury .....572  
*H. Ataka, et al.*, Spine Center, Matsudo Orthop. Hosp.
- P44-5 Survey on Occupational Radiation Awareness among Orthopedic Surgeons: Findings from On-site Examinations at Academic Meetings .....572  
*K. Yamashita, et al.*, Dept of Orthop, Takamatsu Municipal Hosp.

### Poster 45

9 : 10~9 : 40

Moderator : **T. Manako**

#### Spine Surgery in the Elderly

- P45-1 Clinical outcomes of TLIF in patients aged 75 years and older: Risk factors for cage subsidence and reoperation .....573  
*H. Kumagai, et al.*, Ichihara Hosp.
- P45-2 Risk factors for proximal or distal junctional kyphosis and revision rates in corrective thoracolumbar surgery .....573  
*Y. Ishikawa, et al.*, Dept. of Orthop. Surg., Akita Kousei Medical Center
- P45-3 Prevalence and Characteristics of Postoperative Delirium in Geriatric Spinal Surgery (POD-GSS) in a single institute .....574  
*J. Inoue, et al.*, Akita Rosai Hosp.

- P45-4 Should patients aged 85 over with spinal conditions undergo surgery? - The 20-year study from 2005 to 2024 - .....574  
**K. Muramatsu, et al.**, Nihonkai General Hosp, Orthop. Surg.
- P45-5 Incidence and Risk Factors of Postoperative Delirium in Spinal Surgery for Patients Aged 85 Years and Older .....575  
**T. Terai, et al.**, Dept. of Orthop. Surg., Matsuyama Shimin Hosp.
- P45-6 Frailty as an independent predictor of non-home discharge after adult spinal deformity surgery using lateral interbody fusion in the elderly .....575  
**S. Tsutsui, et al.**, Dept. of Orthop. Surg., Wakayama Medical Univ.

## Poster 46

9 : 50~10 : 30

Moderator : **K. Yamashita**

### Robot-Assisted Surgery

- P46-1 Accuracy and efficacy of robot assisted pedicle screw insertion .....576  
**H. Ikuma, et al.**, KPC Hosp.
- P46-2 The usefulness of robot-assisted surgery for posterior cervical spine fusion .....576  
**Y. Nonaka, et al.**, Dept. Spinal Surg., ISEIKAI International General Hosp.
- P46-3 Lumbar Interbody Fusion with Robot Assisted Spine Surgery: A Comparative Study of Two Surgical Techniques Performed by the Same Surgeon .....577  
**S. Takao, et al.**, Dept. of Orthop. Surg., Okayama Medical Center
- P46-4 Does the use of a robotic arm in hybrid operation room contribute to postoperative infection? .....577  
**T. Fukuzawa, et al.**, Dept. of Orthop. Surg., Shinshu Univ.
- P46-5 Clinical of RAS Surgery During the Initial Introduction Phase: A Comparative Analysis with intraoperative Navigation in Single-Position LLIF .....578  
**A. Hiyama, et al.**, Dept. of Orthop. Surg., Surgical Science, Tokai Univ.
- P46-6 Evaluation of Early Challenges and Accuracy in the Initial 13 Cases Using Mazor X .....578  
**R. Aoyama, et al.**, TDC Ichikawa General Hosp.
- P46-7 Bone Fusion in Robot-Assisted Surgery for Cervical Kyphosis .....579  
**K. Kawashima, et al.**, Dept. of Orthop. Surg., Kansai Medical Univ.
- P46-8 Initial Experience with Robot-Assisted MIS-TLIF Using PPS Insertion and Its Effect on Radiation Exposure Reduction .....579  
**K. Taniguchi, et al.**, Inanami Spine and Joint Hosp.

## Poster 47

10 : 40~11 : 20

Moderator : **N. Isogai**

### Spinal and Vascular Morphology

- P47-1 Lumbar Disorders Associated with Lumbosacral Transitional Vertebra and Spina Bifida Occulta .....580  
*M. Morimoto, et al.*, Dept. of Orthop., Institute of Biomedical Sciences, Tokushima Univ. Graduate School
- P47-2 Three-Dimensional Evaluation of Facet Joint Tropism and Comparison With Conventional Methods .....580  
*K. Kato, et al.*, Dept. of Orthop. Surg., Div. of Disease Control, Research field of Medical Sciences, Graduate School of Medicine, Gifu Univ.
- P47-3 The Lumbosacral Transitional Vertebra: Is it Truly L5? Insights from Abdominal Great Vessel Anatomy. ....581  
*Y. Tataru, et al.*, Spine Center, Yokohama Minami Kyosai
- P47-4 Early Screening for Superior Mesenteric Artery Syndrome and Celiac Artery Compression Syndrome after Spinal Fusion Surgery .....581  
*Y. Ishimoto, et al.*, Dept. of Orthop. Surg., Wakayama Medical Univ.
- P47-5 Surgical criteria for OLIF51 using a new vascular assessment: Significance of the CIV vascular window and vessel ellipticity. ....582  
*M. Ishihara, et al.*, Dept. of Orthop. Surg., Kansai Medical Univ.
- P47-6 Comparison of non-calcified and calcified abdominal aorta after kyphosis correction in elderly patients using Agatston's procedure. ....582  
*Y. Takeda, et al.*, Dept. of Orthop. Surg., Sonoda Third Hosp.
- P47-7 Relationship Between Lumbar Vertebral Rotation and the Position of the Inferior Vena Cava...583  
*K. Inomata, et al.*, Dept. of Orthop. Surg., Tkahagi Kyodo Hosp.

## Poster 48

14 : 20~15 : 00

Moderator : **S. Suzuki**

### Spinal Deformity 1

- P48-1 The prevalence of trisomy 18 associated with scoliosis survived over 12 months .....583  
*M. Machida, et al.*, Dept. of Orthop. Surg., Saitama Children's Medical Center
- P48-2 Three dimensional MRI analysis of postoperative lumbar disc volume increase in patients with Lenke type 1BC .....584  
*S. Seki, et al.*, Dept of Orthop. surg, Univ. of Toyama

- P48-3 Low Back Pain Prevalence and Spinal Alignment Associations in School-Age Children: KID Locomo Study .....584  
**M. Teraguchi, et al.**, Dept. of Orthop. Surg., Wakayama Medical Univ.
- P48-4 Sagittal Alignment, LL Distribution, and Inflection Point After ASF for AIS Lenke 5C: Single-Center Retrospective Study (n=87) .....585  
**S. Takada, et al.**, Dokkyo Medical Univ.
- P48-5 Postoperative Spontaneous Correction of the Unfused Proximal Thoracic Curve in AIS: Development of a Predictive Formula .....585  
**M. Iwamae, et al.**, Dept. of Orthop. Surg., Osaka Metropolitan Univ. Graduate School of Medicine
- P48-6 Impact of overcorrection of main thoracic curve on postoperative coronal balance after selective thoracic fusion for idiopathic scoliosis .....586  
**M. Ishikawa, et al.**, MGH
- P48-7 Hounsfield unit: pediatric patients with Marfan syndrome vs. AIS .....586  
**K. Nagata, et al.**, Orthop. Surg., Sensory and Motor System Medicine, Surgical Sciences, Graduate School of Medicine, The Univ. of Tokyo
- P48-8 Translation-only correction of double curve scoliosis corrects vertebral rotation primarily through application of a second rod .....587  
**S. Kaneko, et al.**, Dept. of Spine and Spinal Cord Surg., Fujita Health Univ.

## Poster 49

15 : 10~15 : 50

Moderator : **M. Miyazaki**

### Spinal Deformity 2

- P49-1 Forty Years after Surgery for Adolescent Idiopathic Scoliosis: Long-Term Links between Physical Function, Spinal Alignment, and QOL .....587  
**T. Katogi, et al.**, Dept. of PT, SEIREI SAKURA CITIZEN Hosp.
- P49-2 Analysis of Hounsfield unit in lumbar spine CT scans of pediatric patients with Marfan syndrome .....588  
**K. Nagata, et al.**, Dept. of Orthop. Surg., The Univ. of Tokyo Hosp., The Univ. of Tokyo
- P49-3 Evaluation of a Low-Dose and Simplified TOCI Assessment in Scoliosis Using Hand Stabilization with an Acrylic Plate .....588  
**A. Shimura, et al.**, Dept. of Orthop., Juntendo Univ.
- P49-4 Limitations of floating fusion for scoliosis in cerebral palsy: focusing on the relationship between LIV and the pelvis .....589  
**S. Sato, et al.**, Dept. of Spine Surg., JCHO Tokyo Shinjuku Medical Center
- P49-5 Reconsideration of Preoperative Autologous Blood Donation in Idiopathic Scoliosis Surgery .....589  
**S. Fujiwara, et al.**, Dept. of Orthop. Surg., Tottori Univ.

P49-6	Risk Factors for Allogeneic Red Blood Cell Transfusion in Pediatric Spinal Deformity Surgery .....590
	<i>Y. Iijima, et al.</i> , Dept. of Orthop. Surg., Seirei Sakura Citizen Hosp.
P49-7	Flexibility Assessments for Patients in Flaccid type of Neuromuscular Scoliosis .....590
	<i>Y. Mimura, et al.</i> , Dept. of Orthop. Surg., Kitasato Univ.

## Poster 50

16 : 00~16 : 40

Moderator : **T. Tsuji**

### Spinal Deformity 3

P50-1	Optimal LIV in Selective Thoracic Fusion for AIS: Comparison Between EV and EV+1 .....591
	<i>K. Ohki, et al.</i> , Scoliosis Center, Osaka City General Hosp.
P50-2	Risk Factors for Persistent Cervical Kyphosis More Than Five Years After Surgery in Lenke Type 1 and 2 AIS .....591
	<i>T. Furuichi, et al.</i> , Osaka Rousai Hosp.
P50-3	Two-Type Classification of Waistline Asymmetry and Associated Factors in Patients with Adolescent Idiopathic Scoliosis.....592
	<i>T. Banno, et al.</i> , Dept. of Orthop. Surg., Hamamatsu Univ. School of Medicine
P50-4	The influence of adolescent idiopathic scoliosis on hip joint development: A two-year longitudinal evaluation of the hip center-edge angle .....592
	<i>T. Matsumoto, et al.</i> , Div. of Orthop. Surg., Dept. of Medicine of Sensory and Motor Organs, Faculty of Medicine, Univ. of Miyazaki
P50-5	A retrospective study focused on perioperative complications and collaboration with other departments in neuromuscular scoliosis surgery. ....593
	<i>K. Wada, et al.</i> , Depart. of Orthop. Surg., Hirosaki Univ.
P50-6	Postoperative Changes and Associated Factors of Parasol Rib Deformity in Neuromuscular Scoliosis. ....593
	<i>A. Miyajima, et al.</i> , Dept. of Orthop. Surg., Kobe Univ. Graduate School of Medicine
P50-7	Radiographic and clinical outcomes after selective thoracic fusion for Lenke 1C idiopathic scoliosis-minimum 5 years follow-up- .....594
	<i>M. Ishikawa, et al.</i> , MGH
P50-8	Association of low back pain with surgical outcomes of posterior spinal fusion for residual adolescent idiopathic scoliosis .....594
	<i>D. Kuroguchi, et al.</i> , Dept. of Orthop. Surg., Shinshu Univ.

## The Third Day—April 18 (Saturday)

### Room 1

### Symposium 6

8 : 10~9 : 40

Moderators : **T. Tomita**

**N. Kamei**

#### Practical Tips for Minimally Invasive Surgery

- 3-1-S6-1 Challenges and prospects of utilizing an exoscope and XR technology in cervical laminoplasty .....596  
*K. Yamane, et al.*, Dept. of Orthop. Surg., Okayama Medical Center
- 3-1-S6-2 PETLIF (Perctaneous Endoxcopic Transforaminal Lumbar Interbody Fusion) .....596  
*K. Nagahama, et al.*, Sapporo Endoscopic Spine Surg. Clinic
- 3-1-S6-3 Mini-open PLIF via three-fingerbreadth incision using chisels and freehand screws for ample interbody graft and short operative time .....597  
*H. Aono*, Osaka Global Orthop. Hosp.
- 3-1-S6-4 Endo-Tech TSCP: A Next-Generation Endoscopic Approach Transforming Epidural Adhesiolysis .....597  
*K. Yokosuka, et al.*, Dept. of Orthop. Surg., Kurume Univ.
- 3-1-S6-5 Strategic Approach Selection for UBE Lumbar Discectomy: Achieving Both Facet Preservation and Effective Decompression .....598  
*T. Yoshimizu, et al.*, Dept. of Orthop. Surg., Hamamatsu General Hosp.

### Symposium 7

10 : 00~11 : 30

Moderators : **Y. Matsuyama**

**K. Nakanishi**

#### Long-Term Results of Spinal Deformity Surgery: Pros and Cons

- 3-1-S7-1 Long-term results of posterior spinal fusion with hybrid method for adolescent idiopathic scoliosis .....598  
*S. Inami, et al.*, Dept. of Orthop. Surg., Dokkyo Medical Univ.
- 3-1-S7-2 Treatment Strategies for Adult Spinal Deformity from the Perspective of Long-Term Outcomes .....599  
*Y. Yamato, et al.*, Dept. of Orthop. Surg., Hamamatsu Univ. School of Medicine
- 3-1-S7-3 Satisfaction of Adult Spinal Deformity Surgery .....599  
*G. Inoue, et al.*, Dept. of Orthop. Surg., Kitasato Univ.

- 3-1-S7-4 Celiac Artery Morphological Changes After Adult Spinal Deformity Surgery and Risk of Acute Celiac Artery Compression Syndrome .....600  
**M. Miyazaki, et al.**, Dept. of Orthop. Surg., Oita Univ.
- 3-1-S7-5 Long-term Outcomes of Anterior Longitudinal Ligament rupture in Adult Spinal Deformity Surgery Using Lateral Lumbar Interbody Fusion .....600  
**K. Maruo, et al.**, Dept. of Orthop. Surg., Hyogo Medical Univ.

## Room 2

### Morning Seminar 4

7 : 00~8 : 00

Moderator : **A. Minamide**

- 3-2-MS4-1 Microendoscopic discectomy (MED) procedures, from its basic to advanced techniques .....601  
**M. Okada, et al.**, Dept. of Orthop. Surg. Sumiya Orthop. Hosp.

### Educational Lecture 8

8 : 10~9 : 10

Moderator : **N. Miyakoshi**

- 3-2-EL8-1 Update on the treatment of osteoporotic vertebral fractures from a spine surgeon's perspective .....601  
**H. Terai**, Dept. of Orthop. Surg., Osaka Metropolitan Univ. Graduate School of Medicine

### Invited Lecture 7

9 : 20~10 : 20

Moderator : **Y. Kawaguchi**

- 3-2-IL7-1 Clinical Decision Making in Severe but Silent Degenerative Cervical Stenosis .....602  
**J. -B. Park**, The Catholic Univ. of Korea College of Medicine, Korea
- 3-2-IL7-2 Treatment of OPLL -Recent evidences- .....602  
**T. Yoshii**, Dept. of Orthop. and Spinal Surg., Graduate School of Medical and Dental Sciences, Institute of Science Tokyo

## Main Theme 12

10 : 30~11 : 30

Moderator : **M. Doita**

### Medical-Engineering Collaboration

- 3-2-M12-1 A Prospective Comparison Using EMG Synchronized 3D Gait Analysis: Changes of Posture and Muscle Activity in ASD and L-SCS Patients .....603  
**T. Sunami, et al.**, Dept. of Orthop. Surg., Univ. of Tsukuba
- 3-2-M12-2 Bioactive Titanium Cage Enhances Upper Instrumented Vertebral Bone Structure in PLIF: Role of Sex and Postoperative vertebral HU Values .....603  
**M. Chazono, et al.**, Dept. of Orthop. Surg., NHO Utsunomiya Hosp.
- 3-2-M12-3 Can Fatty Degeneration of Lumbar Paraspinal Muscles Predict Dynamic Sagittal Imbalance During Gait in Adult Spinal Deformity? .....604  
**K. Miura, et al.**, Dept. of Orthop. Surge., Univ. of Tsukuba
- 3-2-M12-4 Automated Laminectomy Using Collaborative Robot: Concept Verification .....604  
**K. Kishimoto, et al.**, Dept. of Orthop. Surg., Graduate School of Medicine, Osaka Univ.
- 3-2-M12-5 Gait Impairment in Degenerative Lumbar Disorders: An Analysis Using a Shoe-Type Wearable Sensor .....605  
**A. Iida, et al.**, Dept. of Orthop. Surg., Graduate School of Medicine, Chiba Univ.
- 3-2-M12-6 Basic development of a markerless real-time 3D reconstruction navigation system using a monocular endoscope for OLIF51 surgery .....605  
**S. Orita, et al.**, Center for Frontier Medical Engineering, Chiba Univ.

## Room 3

### Overseas Invited Lecture 5

8 : 10~9 : 10

Moderator : **M. Yagi**

- 3-3-OIL5-1 Contiguous vs Non-Contiguous Cervical Spine Injuries in Non-Ankylosed Spine .....606  
**T. Bunmaprasert**, Chiang Mai Univ., Thailand
- 3-3-OIL5-2 Diamond Concept Application on Regeneration of Spinal Cord Injury .....606  
**Y. M. Sakti, et al.**, Orthop. and Traumatology Division, Dept. of Surg., Univ. Gadjah Mada, Sleman, Daerah Istimewa Yogyakarta, Indonesia

## Free Papers 45

9 : 20 ~ 10 : 20

Moderator : **K. Watanabe**

### English Session 1

- 3-3-F45-1 The effect of face fusion in single-level fixation for cervical degenerative spondylolisthesis .....607  
**Y. Dodo, et al.**, Dept. of Spine and Orthop. Surg., Japanese Red Cross Medical Center
- 3-3-F45-2 Withdrawn
- 3-3-F45-3 Surgical Outcomes of Intraoperative O-arm versus C-arm Fluoroscopy in Occipitocervical Fixation: A Retrospective Analysis .....608  
**K. Wada, et al.**, The Dept. of Orthop., Spine Center, Tomei Atsugi Hosp., Kanagawa, Japan
- 3-3-F45-4 Withdrawn
- 3-3-F45-5 Biomechanical Consequences of Implant Footprint Mismatch and Positioning in Cervical Disc Replacement .....609  
**M. -K. Hsieh, et al.**, Dept. of Orthop. Surg., Spine Section, Bone and Joint Research Center, Chang Gung Memorial Hosp. and Chang Gung Univ. College of Medicine, Taoyuan, Taiwan
- 3-3-F45-6 Minimally Invasive Prone Lateral Retropleural Corpectomy vs Decubitus Lateral Transpleural Corpectomy: a Comparative Analysis .....609  
**H. -L. Yang, et al.**, Dept. of Orthop. Surg., Spine Section, Bone and Joint Research Center, Chang Gung Memorial Hosp.
- 3-3-F45-7 A Novel Dual-Trajectory Pedicle Screw System: Biomechanical Assessment Using Experimental Testing and Finite Element Analysis .....610  
**Y. -D. Li, et al.**, Dept. of Orthop. Surg., New Taipei Municipal TuCheng Hosp. (Built and Operated by Chang Gung Medical Foundation), New Taipei City, Taiwan

## Free Papers 61

10 : 30 ~ 11 : 30

Moderator : **H. Shigematsu**

### English Session 2

- 3-3-F61-1 Prognostic Factors Predicting Instrumentation in Initially Stable Tuberculous Spondylodiscitis: A Retrospective Cohort Study .....610  
**P. Ruangdetch, et al.**, Orthop. Surg., Maharat Nakhon Ratchasima Hosp., Nakhon Ratchasima
- 3-3-F61-2 Missed Hips, Missed Opportunities: Specialty-Driven Differences in Evaluating Hip-Spine Syndrome .....611  
**C. -C. Chang, et al.**, Dept. of Orthop. Surg., Kaohsiung Chang Gung Memorial Hosp., Chang Gung Univ., College of Medicine, Kaohsiung, Taiwan

- 3-3-F61-3 Association of Sleep Patterns with the Development of Idiopathic Scoliosis: A Nationwide Pediatric Cohort Study .....611  
**W. Cho, et al.**, Dept. of Orthop. Surg., International St. Mary's Hosp., Catholic Kwandong Univ., Incheon, Republic of Korea
- 3-3-F61-4 Spinal Ligament Ossification and Arterial Calcification: A CT-Based Study on Metabolic Correlates .....612  
**N. T. Linh, et al.**, Dept. of Orthop. Surg., Faculty of Medicine, Univ. of Toyama
- 3-3-F61-5 Impact of Physical activity on quality of life in individuals with Traumatic spinal cord injury in western Nepal. ....612  
**A. K. C., et al.**, Dept. of Orthop., Green Pastures Hosp., Pokhara Nepal
- 3-3-F61-6 Sustained Release of Lovastatin-loaded Nanoparticles in a Thermosensitive Chitosan Hydrogel for Treating Intervertebral Disc Degeneration .....613  
**C. -W. Chen, et al.**, Dept. of Biomedical Engineering, National Taiwan Univ., Taipei, Taiwan
- 3-3-F61-7 An Innovative 3D-360 degree Scanning Camera Radiation-Free Device for Assessing the Trend of Adolescent Idiopathic Scoliosis Curve .....613  
**P. H. Hsiao, et al.**, Dept. of Orthop. Surg., Taichung Municipal Geriatric Rehabilitation General Hosp., Taichung, Taiwan

## Room 4

### Free Papers 46

8 : 10~9 : 10

Moderator : **Y. Kotani**

#### Lumbosacral Spine

- 3-4-F46-1 Segmental Lordosis Restoration at L5/S1 and Reciprocal Change in Short-Segment Fusion Using OLIF51 .....614  
**K. Ono, et al.**, Dept. of Orthop. Surg., Graduate School of Medicine, Kyoto Univ.
- 3-4-F46-2 The Efficacy of a 20-Degree Lordotic Boomerang Cage in L5/S1 Interbody Fusion .....614  
**T. Nakamura, et al.**, Dept. of Orthop. Surg., Kumamoto Univ. Hosp.
- 3-4-F46-3 Prediction of Nerve Root Anomalies Based on Lumbosacral Transitional Vertebrae: A New Perspective on Preoperative Assessment .....615  
**H. Tawaratsumida, et al.**, Dept. of Orthop. Surg., Graduate School of Medical and Dental Sciences, Kagoshima Univ.
- 3-4-F46-4 Does L5/S1 PLIF maneuver affect pelvic alignment? .....615  
**T. Nagai, et al.**, Dept. of Orthop. Surg., Tokai Univ., Hachioji Hosp.
- 3-4-F46-5 Results and Limitations of Lumbosacral Fusion with S1 as the Most Caudal End: Analysis Using Propensity Score Matching .....616  
**K. Wada, et al.**, The Dept. of Orthop., Spine Center, Tomei Atsugi Hosp.

- 3-4-F46-6 Evaluation of the Effectiveness of L5/S ALIF in LIF-Based Reconstruction for Adult Spinal Deformity: A Comparative Study with L5/S PLIF .....616  
**M. Tsushima, et al.**, Dept. of Orthop. Surg., Konan Kosei Hosp.
- 3-4-F46-7 The impact of cage size and positioning on sagittal and coronal alignment during oblique lateral L5-S1 interbody fusion .....617  
**T. Shimizu, et al.**, Dept. of Orthop. Surg., Graduate School of Medicine, Kyoto Univ.

## Free Papers 47

9 : 20~10 : 20

Moderator : **T. Furuya**

### Lumbar Spondylolisthesis

- 3-4-F47-1 Characteristics of cervical subluxation that are often overlooked after cervical spine injuries ...617  
**Y. Miyairi, et al.**, Dept. of Orthop. Surg., Toyohashi Municipal Hosp.
- 3-4-F47-2 Comparison of clinical outcomes between elderly and younger patients with surgically treated lower cervical fracture dislocation .....618  
**H. Iwai, et al.**, Saiseikai Shiga Hosp.
- 3-4-F47-3 Risk factors of respiratory complications in patients with cervical spinal cord injury without bone injury .....618  
**S. Hagihara, et al.**, Spinal injuries center
- 3-4-F47-4 Clinical Prediction of Sensory Recovery in AIS A Cervical Spinal Cord Injury .....619  
**K. Murotani, et al.**, Spinal Injuries Center
- 3-4-F47-5 A Study on the Accuracy of Cervical Pedicle Screw Insertion During Scheduled and Unscheduled Surgery .....619  
**M. Uehara, et al.**, Dept. of Orthop. Surg., Shinshu Univ.
- 3-4-F47-6 Incidence and risk factors of vertebral artery injury associated with cervical spinal cord and cervical spine injury .....620  
**Y. Togo, et al.**, HEMC
- 3-4-F47-7 The changes in the demographics of traumatic cervical spinal cord injuries .....620  
**T. Inoue, et al.**, Dept. of Spine Surg., Toyohashi Municipal Hosp.

## Free Papers 48

10 : 30~11 : 30

Moderator : **Y. Murata**

### Cervical Spine Injury

- 3-4-F48-1 Factors Affecting Clinical Outcomes of Decompression Surgery for CARDS Type C Degenerative Lumbar Spondylolisthesis .....621  
**K. Tarukado, et al.**, Dept. of Orthop. Surg, Kyushu Univ. Hosp.

- 3-4-F48-2 Complete Decompression of the Articular Segment in MEL for L4 Spondylolisthesis: Clinical Significance and Impact on Low Back Pain .....621  
**Y. Yamamoto, et al.**, Dept. of Orthop. Surg., Wakayama Medical Univ.
- 3-4-F48-3 Posterior Vertebral Translation on Functional Views: Extension vs Supine and Determinants in Lumbar Degenerative Spondylolisthesis .....622  
**F. Tajima, et al.**, Dept. of Orthop. Surg., Sapporo Medical Univ.
- 3-4-F48-4 Observational Study of Psoas Shape and Lumbar Lordosis Distribution in Tandem Degenerative Spondylolisthesis .....622  
**Y. Kawano, et al.**, Dept. of Orthop. Surg., Kyorin Univ.,
- 3-4-F48-5 Degenerative spondylolisthesis at L4 without stenosis on MRI .....623  
**R. Ozaki, et al.**, Dept. of Orthop. Surg., Nihon Itabashi.
- 3-4-F48-6 Impact of L4 Spondylolisthesis on Spinopelvic Alignment and Health-Related Quality of Life .....623  
**Y. Murakami, et al.**, Dept. of Orthop. Surg., Hamamatsu Univ. School of Medicine
- 3-4-F48-7 The laminae in Lumbar degenerative spondylolisthesis are displaced caudally. - Anatomical Features from the Perspective of Laminotomy - .....624  
**T. Nakagawa, et al.**, Dept. of Orthop. Surg., Sendai Orthop. Hosp.

## Room 5

### Morning Seminar 5

7 : 00~8 : 00

Moderator : **T. Aizawa**

#### Post-operative SSI Prevention and Ideal Wound Management

- 3-5-MS5-1 SSI (Surgical Site Infection) prevention update and ICM (International Consensus Meeting) 2025 .....624  
**K. Yamada, et al.**, Mizonokuchi Ortho
- 3-5-MS5-2 Theory and Best Practices of Wound Management - Preventing SSI (Surgical Site Infection) and Hypertrophic Scars - .....625  
**R. Ogawa**, Plastic Recon. Aeth. Surg., Nippon Medical School

### Free Papers 49

8 : 10~9 : 10

Moderator : **T. Nikaïdo**

#### Lumbar Spine Surgery 1

- 3-5-F49-1 Ten-Year Clinical Outcomes After Decompression Surgery for Lumbar Spinal Stenosis: The Impact of Preoperative Modic Changes .....625  
**K. Watanabe, et al.**, Dept. of Orthop. Surg., Keio Univ.

- 3-5-F49-2 Minimized paraspinous muscle damage after the modified lumbar spinous process-splitting laminoplasty .....626  
**Y. Watanabe, et al.**, Spine Center, Nagoya Kyoritsu Hosp.
- 3-5-F49-3 Interim 2-year cost-utility analysis of decompression versus decompression with interbody fusion for grade 1 degenerative spondylolisthesis .....626  
**M. Ozaki, et al.**, Dept. of Orthop. Surg., Keio Univ.
- 3-5-F49-4 FESS vs LIF for lumbar foraminal stenosis: Superior buttock pain relief with FESS despite wedging risk vs adjacent segment disease with LIF .....627  
**S. Kanayama, et al.**, JCHO Osaka Hosp.
- 3-5-F49-5 Minimally invasive decompression preserving spinal processes and facet joints for lumbar spinal stenosis with degenerative spondylolisthesis .....627  
**A. Miyauchi, et al.**, Dept. of Orthop. Surg., Saka-midorii Hosp.
- 3-5-F49-6 Does Decompression Alone Induce Instability in Degenerative Lumbar Spondylolisthesis? .....628  
**S. Mitamura, et al.**, Sendai Orthop. Hosp.
- 3-5-F49-7 10-Year Outcomes of Microendoscopic Decompression (MEL) for L4 Degenerative Spondylolisthesis: Comparison with Posterior Interbody Fusion .....628  
**Y. Ishihara, et al.**, Asap General Hosp. Spine Center

## Free Papers 50

9 : 20 ~ 10 : 20

Moderator : **M. Tanaka**

### Lumbar Spine Surgery 2

- 3-5-F50-1 Impact of Drop Foot Recovery on Patient-Reported Outcomes Following Surgery for Lumbar Degenerative Disease .....629  
**T. Yamamoto, et al.**, Spine center, Japanese Red-cross Shizuoka Hosp.
- 3-5-F50-2 Different risk factors for early-onset adjacent segment diseases at L3-4 and L5-S1 segments after isolated L4-5 lumbar fusion surgery .....629  
**T. Kitaori, et al.**, Kitano Hosp.
- 3-5-F50-3 Is Autologous Bone Grafting Necessary in Lateral Lumbar Interbody Fusion? .....630  
**Y. Kobayashi, et al.**, Dept. of Orthop. Surg., Osaka Metropolitan Univ. Graduate School of Medicine
- 3-5-F50-4 Clinical Effectiveness and Long-Term Durability of Repositioned Laminoplasty for Lumbar Spinal Stenosis .....630  
**K. Masuda, et al.**, Tama Medical Center
- 3-5-F50-5 The Efficacy of Microendoscopic Discectomy in Obese Patients: A Comparative Study with Open Discectomy .....631  
**T. Tanaka, et al.**, Dept. of Orthop. Surg., Saiseikai Kawaguchi General Hosp.

- 3-5-F50-6 Clinical Significance of the Facet Resection Angle in MEL: What Is the Optimal Angle for Facet Preservation? .....631  
**Y. Kono, et al.**, Chiba Central Medical Center
- 3-5-F50-7 The Significance of Postoperative Drain-Free Status with the FED Method .....632  
**T. Izumi, et al.**, Dept. of Orthop. Surg., Kyushu Central Hosp.

## Free Papers 51

10 : 30~11 : 20

Moderator : **K. Katsumi**

### Spinal Cord and Spine Tumors

- 3-5-F51-1 Differential diagnosis between schwannoma and meningioma by cine MRI .....632  
**K. Handa, et al.**, Dept. of Orthop. Surg., Tohoku Medical and Pharmaceutical Univ.
- 3-5-F51-2 Evolution of MRI images before and after first chemotherapy for multiple myeloma .....633  
**R. Tsutsumi, et al.**, Dept. of Orthop. Surg., Osaka red cross Hosp.
- 3-5-F51-3 Long-term outcomes of total spondylectomy for giant cell tumor of the mobile spine .....633  
**M. Kawai, et al.**, Dept. of Orthop. Surg., Graduate School of Medical Sciences, Kanazawa Univ.
- 3-5-F51-4 Mid-to Long-Term Outcomes More Than 5 Years After Surgical Resection of Spinal Schwannomas .....634  
**A. Matsumoto, et al.**, Dept. of Orthop. Surg., Asa Citizens Hosp.
- 3-5-F51-5 Impact of Tumor Location on Neurological Recovery in Thoracic Spinal Meningiomas: Comparative Analysis of Ventral and Dorsal/Lateral Lesions .....634  
**Y. Suematsu, et al.**, Dept. of Orthop. Surg., Keio Univ.
- 3-5-F51-6 Clinical outcomes of tumor resection for lumbosacral nerve sheath tumors .....635  
**A. Suzuki, et al.**, Dept. of Orthop. Surg., Osaka Metropolitan Univ. Graduate School of Medicine

## Room 6

### Free Papers 52

8 : 10~9 : 20

Moderator : **N. Tanaka**

### Outcomes in Cervical Myelopathy and Amyotrophy

- 3-6-F52-1 Smoking Accelerates Surgical Intervention in Cervical Spondylotic Myelopathy: Evidence from a Multicenter Prospective Study .....635  
**Y. Kobayashi, et al.**, Dept. of Orthop. Surg., Osaka Metropolitan Univ. Graduate School of Medicine
- 3-6-F52-2 Clinical features of polypharmacy in older patients with degenerative cervical myelopathy .....636  
**H. Takeda, et al.**, Dept. of Spine and Spinal Cord Surg., FujitaHealth Univ.

3-6-F52-3	Prediction of Postoperative Neurological Outcomes in DCM Using Resting-State fMRI Metrics .....636
	<i>Y. Ichihara, et al.</i> , Dept. of Orthop. Surg., Yamaguchi Univ. Graduate School of Medicine
3-6-F52-4	Brain and Muscle Factors Associated with the Severity of Cervical Compressive Myelopathy .....637
	<i>K. Fujimoto, et al.</i> , Dept. of Orthop. Surg., Yamaguchi Univ. Graduate School of Medicine
3-6-F52-5	Validity of a novel and simple indicator on lateral cervical X-ray for predicting spinal cord compression in young adults .....637
	<i>K. Suzuki, et al.</i> , Dept. of Orthop. Surg., National Defense Medical College
3-6-F52-6	Characteristics of cervical compressive myelopathy based on sternocleidomastoid muscle volume .....638
	<i>R. Sotomaru, et al.</i> , Dept. Orthop. Surg., SYGH, Yamaguchi
3-6-F52-7	The Mechanism of Progression of Cervical Myelopathy Due to Fatty Degeneration of the Cervical Extensor Muscles .....638
	<i>Y. Morita, et al.</i> , Dept. of Orthop. Surg., Nagato General Hosp.
3-6-F52-8	Is relative height of the laminar upper edge to the rostral endplate of cervical spine associated with spinal cord compression in extension? .....639
	<i>D. Kakegami, et al.</i> , Dept. of Orthop. Surg., National Defense Medical College

## Free Papers 53

9 : 30~10 : 20

Moderator : **K. Wada**

### Surgical Site Infections

3-6-F53-1	Deep Surgical Site Infection after spinal fusion for adolescent idiopathic scoliosis: treatment, and impact on radiological outcomes. ....639
	<i>K. Noma, et al.</i> , NHO Kobe Medical Center
3-6-F53-2	Pathogens and Onset Timing in Reoperations for Postoperative Infections After Cervical and Lumbar Decompression .....640
	<i>T. Ogimoto, et al.</i> , Asa Citizens Hosp.
3-6-F53-3	Association between propofol use and surgical site infections in spinal surgery .....640
	<i>K. Takakura, et al.</i> , Dept. of Orthop. Surg., Gunma Univ. Graduate School of Medicine
3-6-F53-4	A 10-year review of risk factors for surgical site infection after spine surgery and the impact of infection control .....641
	<i>N. Kumagai, et al.</i> , Dept. of Orthop. Surg., Kobe Univ. Graduate School of Medicine
3-6-F53-5	Trends in postoperative infections and pathogens after spinal surgery: analysis of 10,432 cases over 15 years .....641
	<i>T. Iga, et al.</i> , Dept. of Orthop. Surg., Keio Univ.

- 3-6-F53-6 The Effect of Silver-Containing Hydroxyapatite-Coated Cages on Surgical Site Infection Rates After Posterior Lumbar Interbody Fusion (PLIF) .....642  
**M. Tsukamoto, et al.**, Dept. of Orthop. Surg., Saga Univ.

## Free Papers 54

10 : 30~11 : 30

Moderator : **S. Maki**

### AI

- 3-6-F54-1 Development and Validation of a Multi-Modal Ensemble Model for Predicting Progression in Idiopathic Scoliosis .....642  
**H. Arima, et al.**, Dept. of Orthop. Surg., Hamamatsu Univ. School of Medicine
- 3-6-F54-2 Development of a High-Sensitivity Screening Tool for Neuropathic Pain Integrating PainDETECT and BS-POP Using Machine Learning .....643  
**T. Furuya, et al.**, Dept. of Orthop. Surg., Nihon Univ.
- 3-6-F54-3 Prediction of Postoperative Alignment in Adult Spinal Deformity Patients Using Spinal Alignment Information from Whole-Spine Lateral .....643  
**R. Nakanishi, et al.**, Dept. of Orthop. Surg., Wakayama Medical Univ.
- 3-6-F54-4 AI-based Kinematic Analysis of Putting on Socks after Adult Spinal Deformity Surgery: Association with the Oswestry Disability Index .....644  
**K. Onitsuka, et al.**, Dept. of Phys. Ther., Tohto Univ
- 3-6-F54-5 Can a Student-Developed AI Outperform Spine Surgeons in Clinical Prediction? .....644  
**H. Kotoura, et al.**, Dept. of Orthop. Surg., Osaka Metropolitan Univ. Graduate School of Medicine
- 3-6-F54-6 CNN-Based Diagnosis of Fresh Osteoporotic Vertebral Fractures: Validation of a Sitting-Supine Trained Model Using Flexion-Extension Views .....645  
**T. Morita, et al.**, Dept. of Orthop. Surg., Sapporo Medical Univ.
- 3-6-F54-7 An algorithm for generating synthetic lumbar 3D MRI/CT fusion images from only plain CT images using Generative Adversarial Networks .....645  
**T. Kokabu, et al.**, Dept. of Orthop. Surg., Eniwa Hosp.

## Room 7

## Free Papers 55

8 : 10~9 : 20

Moderator : **N. Nagoshi**

### Basics and Clinical Aspects of Spinal Cord Injury

- 3-7-F55-1 Changes in microglia number and gene expression in a spinal cord injured mouse and a novel method for behavioral analysis .....646  
**K. Toriumi, et al.**, Dept. of Orthop. Surg., Kindai Univ. Faculty of Medicine

3-7-F55-2	Development of novel treatments for spinal cord injury through analysis of neonatal spinal cord .....646	<b>K. Kobayakawa, et al.</b> , Dept. of Orthop. Surg., Clinical Medicine, Graduate School of Medical Sciences, Kyushu Univ.
3-7-F55-3	Neuroprotective Effect of Spinal Stabilization in a Rat Model of Chronic Cervical Myelopathy with Spinal Instability .....647	<b>T. Kitamura, et al.</b> , Dept. of Orthop. Surg., Graduate School of Medicine, Chiba Univ.
3-7-F55-4	Astrocyte-Specific APOE4 Deletion Attenuates Acute Hyperexcitability and Improves Recovery After Spinal Cord Injury .....647	<b>T. Mimura, et al.</b> , Dept. of Orthop. Surg., Shinshu Univ.
3-7-F55-5	Recovery of paralysis in patients with cervical spinal cord injury who can kneel on one injury Based on our database .....648	<b>K. Hata, et al.</b> , SIC
3-7-F55-6	Impact of Early Versus Delayed Surgery on 30-Day Outcomes in Traumatic Cervical Spinal Cord Injury .....648	<b>T. Hayashi, et al.</b> , Dept. of Orthop. Surg., Wakayama Medical Univ.
3-7-F55-7	Neurological assessment of patients with traumatic cervical spinal cord injury using diffusion MRI: DTI and NODDI .....649	<b>T. Makino, et al.</b> , Dept. of Orthop. Surg., Uonuma Kikan Hosp.
3-7-F55-8	Impact of Glycemic Status on Neurological Recovery in Severe Spinal Cord Injury: Efficacy of an Acute-Phase Glucose Management Protocol .....649	<b>H. Saiwai, et al.</b> , Spinal Injuries Center

## Free Papers 56

9 : 30~10 : 20

Moderator : **K. Nakanishi**

### Thoracolumbar Trauma

3-7-F56-1	Evaluation using AOSpine TLICS is important when determining treatment options for thoracic and lumbar fractures .....650	<b>A. Nakamura, et al.</b> , OCMC
3-7-F56-2	Investigation of inhibiting factors for repair in thoracolumbar burst fracture .....650	<b>Y. Yahiro, et al.</b> , Dept. of Orthop. Surg., Kagoshima City Hosp.
3-7-F56-3	Risk Factors Associated with Correction Loss after Posterior Fixation for Traumatic Thoracolumbar Spine Injuries .....651	<b>M. Inomoto, et al.</b> , Dept. of Orthop. Surg., Tsukuba Medical Center Hosp.

3-7-F56-4	Thoracolumbar Burst and Fracture-Dislocation: Higher Perioperative Complication Rates in AIS A,B Patients .....651 <b>K. Hayakawa, et al.</b> , Kobe Red Cross Hosp.
3-7-F56-5	Early Surgery Reduces Perioperative Complications in Older Adults with Thoracolumbar Fractures: A Propensity Score-Matched Analysis .....652 <b>T. Shimizu, et al.</b> , Dept. of Orthop. Surg., Tsukuba Medical Center Hosp.
3-7-F56-6	Management of Sternovertebral fractures in the Elderly -Considering the Sternum as the Fourth column of the thorax cage- .....652 <b>A. Okuda, et al.</b> , Dept. of Emergency and Critical Care Medicine, Nara Medical Univ. Hosp.

## Free Papers 57

10 : 30~11 : 30

Moderator : **Y. Yukawa**

### Tips and Techniques for Screw Insertion 2

3-7-F57-1	Accuracy of cervical pedicle screw placement using patient-specific template in multicenter study .....653 <b>H. Makino, et al.</b> , Dept. of Orthop. Surg., Faculty of Medicine, Univ. of Toyama
3-7-F57-2	Efficiency of Long Lateral Mass Screw .....653 <b>S. Watanabe, et al.</b> , Dept. of Orthop. Surg., Kawasaki Medical School
3-7-F57-3	Safety of Cervical Pedicle Screw Placement Using a Patient-Specific Guide .....654 <b>M. Sagara, et al.</b> , Dept. of Orthop. Surg., Nagasaki Univ. Graduate School of Biomedical Sciences
3-7-F57-4	Comparison between patient-specific template guide system and freehand technique in accuracy of middle cervical pedicle screw placement .....654 <b>A. Fukushima, et al.</b> , Hokkaido Orthop. Memorial Hosp.
3-7-F57-5	Navigation-Guided Minimally invasive pedicle screw fixation (MICEPS): Analysis of screw insertion angles and deviation rates .....655 <b>T. Komatsubara, et al.</b> , Dept. of Orthop. Surg., Okayama Rousai Hosp.
3-7-F57-6	Mechanical stress of the pedicle screws in the cervicothoracic junction after multilevel posterior cervical fusion: finite element analysis .....655 <b>T. Inoue, et al.</b> , Dept. of Orthop. Surg., Tokyo Women's Medical Univ.

## Room 8

### Free Papers 58

8 : 10~9 : 10

Moderator : **M. Funaba**

#### Cervical Ossification of the Posterior Longitudinal Ligament

- 3-8-F58-1 Anterior Fixation without Ossification Resection Plus Laminoplasty versus Laminoplasty Alone for Cervical OPLL: A Multi-center Study .....656  
**Y. Nagamoto, et al.**, Dept. of Orthop. Surg., Osaka General Medical Center
- 3-8-F58-2 Natural History of Mild Cervical OPLL Treated Conservatively: Interim Results from a Nationwide Prospective Registry of 32 Institution .....656  
**Y. Matsukura, et al.**, Dept. of Orthop. and Spinal Surg., Graduate School of Medical and Dental Sciences, Institute of Science Tokyo
- 3-8-F58-3 Grip-and-Release Test as an Objective Functional Measure in Cervical OPLL Surgery: Evidence from a Multicenter Database .....657  
**T. Suzuki, et al.**, Dept. of Orthop. Surg., OGMC
- 3-8-F58-4 Surgical trends of cervical OPLL : Analysis from the JOANR database .....657  
**H. Takahashi, et al.**, Dept. of Orthop. Surg., Univ. of Tsukuba
- 3-8-F58-5 Incidence and Risk Factors of Postoperative Upper Limb Paralysis in Cervical OPLL: Analysis from the OSSG Database .....658  
**M. Ikuta, et al.**, Dept. of Orthop. Surg., Osaka General Medical Center
- 3-8-F58-6 Incidence and Risk Factors of Postoperative Grip Strength Decline After Cervical OPLL Surgery: Analysis from Osaka Spine Group Database .....658  
**Y. Nagamoto, et al.**, Dept of Orthop. Surg., Osaka General Medical Center
- 3-8-F58-7 Satisfaction with returning to work after cervical OPLL surgery: JOSL study .....659  
**K. Mori, et al.**, Dept. of Spine and Joint Reconstruction, Shiga Univ. of Medical Science

### Free Papers 59

9 : 20~10 : 20

Moderator : **H. Ushirozako**

#### Upper Cervical Spine

- 3-8-F59-1 A study of surgical outcomes and methods for axis fractures .....659  
**Y. Kajiki, et al.**, Dept. of Orthop. Surg., Kobe Red Cross Hosp
- 3-8-F59-2 Assessment of anterior-posterior translation of the craniovertebral junction using sella turcica fore/aft angle .....660  
**M. Miyata**, Dept. of Orthop. Surg., Kyoto Medical Center

- 3-8-F59-3 Profile and presentation of atlantoaxial rotatory fixation associated with Kawasaki disease in children .....660  
**Y. Oshita, et al.**, Dept. of Orthop. Surg., Showa Medical Univ. Northern Yokohama Hosp.
- 3-8-F59-4 Radiographic factors associated with development of retro-odontoid pseudotumor .....661  
**T. Tamaoka, et al.**, Kobe Rosai Hosp.
- 3-8-F59-5 The Role of Occipital Bone-Atlas Fusion in the Development of Retro-Odontoid Pseudotumors .....661  
**T. Itsuji, et al.**, Dept. of Orthop., Graduate School of Medical Science, Kyoto Prefectural Univ. of Medicine
- 3-8-F59-6 Predictive Factors of Long-term Prognosis in Patients with Upper Cervical Spine Injuries .....662  
**K. Kotoura, et al.**, Hyogo Pref. Kakogawa Med. Ctr.
- 3-8-F59-7 Investigation of risk factors for type II odontoid fractures in elderly patients .....662  
**M. Okumura, et al.**, Dept. of Orthop. Surg., Faculty of Medicine and Graduate School of Medicine, Hokkaido Univ.

## Free Papers 60

10 : 30~11 : 30

Moderator : **H. Ataka**

### Nutritional Evaluation

- 3-8-F60-1 Survey on the Nutritional Status and Eating Habits of Elderly Preoperative Patients .....663  
**M. Iwabuchi, et al.**, Dept. of Nutritional Management, Tokyo Women's Medical Univ., Yachiyo Medical Center
- 3-8-F60-2 Relationship between hypozincemia and length of hospital stay in patients treated with BKP for osteoporotic vertebral fractures .....663  
**T. Hasegawa, et al.**, Dept. of Orthop. Surg., Iga City General Hosp.
- 3-8-F60-3 Association between the Severity of the CONUT Score and Systemic Complications after Spinal Fusion Surgery in Elderly Patient .....664  
**Y. Ode, et al.**, Dept. of Orthop./Rheumatology, Musculoskeletal and Cutaneous Surg., Program in Integrated Medicine, Graduate School of Medicine, Nagoya Univ.
- 3-8-F60-4 Association Between Malnutrition and Early Postoperative Pneumonia Following Cervical Spinal Cord Injury .....664  
**Y. Takeuchi, et al.**, Hokkaido Spinal Cord Injury Center
- 3-8-F60-5 Comparison of Nutritional Status, Muscle Mass, and Bone Mineral Density in Elderly Patients with Spinal Disorders .....665  
**T. Ito, et al.**, Kugawa Hosp. for Orthop. Surg.

3-8-F60-6	Muscle mass-related proteome and lifestyle (app-based health logs, FFQ): UK Biobank and the Yamanashi multi-omics cohort (YMoC) .....665 <b>G. Goto, et al.</b> , Dept. of Orthop. Surg., Graduate School of Medical Science, Univ. of Yamanashi
3-8-F60-7	Preoperative Nutritional Status Predicts Postoperative QOL in Elderly Spinal Surgery Patients: A Propensity Score analysis .....666 <b>Y. Kinoshita, et al.</b> , Dept. of Orthop. Surg., Osaka Metropolitan Univ. Graduate School of Medicine

## Room 9

### Main Theme 13

8 : 10 ~ 9 : 10

Moderator : **T. Kaito**

#### AI in Spine Disorders

3-9-M13-1	Match rate between AI-based interviews and doctor's diagnoses for lower back pain .....666 <b>T. Yasuda, et al.</b> , Dept. of Orthop. Surg., Kurobe City Hosp.
3-9-M13-2	A Pilot Study on Automated Extraction of JSSR-DB Registry Items from Clinical Records - Accuracy Comparison Between GPT-5 and GPT-4o - .....667 <b>K. Yamada, et al.</b> , Dept. of Orthop. and Spinal Surg., Graduate School of Medical and Dental Sciences, Institute of Science Tokyo
3-9-M13-3	Development and Validation of Deep Learning Models to Predict Curve Progression in Adolescent Idiopathic Scoliosis .....667 <b>S. Takahashi, et al.</b> , Dept. of Orthop. Surg., Osaka Metropolitan Univ. Graduate School of Medicine
3-9-M13-4	Predicting Medical Costs for Lumbar Spinal Stenosis Surgery Patients Using Real-World Data: Analysis Using Deep Learning Models .....668 <b>S. Ito, et al.</b> , Dept. of Orthop./Rheumatology, Musculoskeletal and Cutaneous Surg., Program in Integrated Medicine, Graduate School of Medicine, Nagoya Univ.
3-9-M13-5	Multimodal artificial intelligence to estimate sarcopenia from blood tests and chest X-rays .....668 <b>T. Fujimori, et al.</b> , Dept. of Orthop. Surg., Graduate School of Medicine, Osaka Univ.
3-9-M13-6	Development of a Local Large Language Model for Automated Structured Data Extraction from Spine Surgery Operative Reports.....669 <b>T. Mori, et al.</b> , Dept. of Orthop. Surg., Graduate School of Medicine, Chiba Univ.

## Main Theme 14

9 : 20~10 : 10

Moderator : **A. Minamide**

### Managing Medical Radiation Exposure

- 3-9-M14-1 Accuracy of Pedicle Screw Placement Using Intraoperative 3D Imaging Combined With an Augmented Reality Navigation Platform .....669  
**A. Kojima, et al.**, Funabashi Orthop. Hosp., Spine and Spinal Cord Center
- 3-9-M14-2 Description of Scatter Radiation Exposure to the Eye Lenses and Direct Exposure to the Hands in Orthopedic and Spinal Procedures .....670  
**Y. Hijikata, et al.**, Dept. of Community Med., Kyoto Univ.
- 3-9-M14-3 Comparative Study of Radiation Exposure Time in MIS-TLIF and LIF .....670  
**K. Yoshioka, et al.**, NHO Kanazawa Medical Center
- 3-9-M14-4 Radiation exposure due to CT navigated technique in adolescent idiopathic scoliosis .....671  
**K. Yamashita, et al.**, Dept of Orthop, Takamatsu Municipal Hosp.
- 3-9-M14-5 Operator radiation exposure during Lumbar selective nerve root block: effect of X-ray tube direction in the same patients .....671  
**E. Morikawa, et al.**, Dept. of Orthop. Shikoku Medical Center for Children and Adults

## Main Theme 15

10 : 20~11 : 30

Moderator : **K. Ishii**

### Updates in Minimally Invasive Spine Treatment

- 3-9-M15-1 Longitudinal Outcomes of Trans-Sacral Canal Plasty (TSCP): A Comparative Study with Conventional Lumbar Surgery .....672  
**T. Inoue, et al.**, Dept. of Orthop. Surg., The Jikei Univ. Katsushika Medical Center
- 3-9-M15-2 Time-Saving Effect of Epinephrine Irrigation in FEL: A Regression Discontinuity Study .....672  
**S. Takenaka, et al.**, JCHO Osaka Hosp.
- 3-9-M15-3 Risk Factors for Adjacent Segment Disease after Short Fusion .....673  
**K. Kawashima, et al.**, Dept. of Orthop. Surg., Kansai Medical Univ.
- 3-9-M15-4 Comparison of Postoperative Wound Pain Between UBE and MEL .....673  
**S. Hirai, et al.**, National Sagamihara Hosp.
- 3-9-M15-5 AFESS vs MEL: Operative Time, Laterality, and Learning Curve in Lumbar .....674  
**S. Ishiwata, et al.**, East Maebashi Orthop. Hosp.
- 3-9-M15-6 Prognostic prediction of intravertebral disc injection of condoliase focusing on the transition of T2 high intensity area in the herniation .....674  
**F. Tominaga, et al.**, Fukuoka Orthop. Hosp., Dept. of Orthop.

- 3-9-M15-7 Disc degeneration after treatment comparison of condoliase and Minimally Invasive Surgery in young patients under 20 years old .....675  
**A. Yoshioka, et al.**, Hachiya Orthop Hosp
- 3-9-M15-8 Update on extra foraminal lumbar interbody fusion using a unilateral biportal endoscope .....675  
**K. Ito**, Aichi Spine Hosp.

## Room 10

### Hands-on Seminar 6

#### Fundamentals and Clinical Applications of Intraoperative Spinal Cord Monitoring -Improved Safety and the Latest Findings-

9 : 00~10 : 00

Moderator : **M. Ando**

Speakers : **G. Yoshida**

**S. Kawabata**

## Poster Room 1

### Poster 51

8 : 40~9 : 20

Moderator : **K. Uotani**

#### AI

- P51-1 The impact of preoperative radiotherapy on surgery for metastatic spinal tumors .....676  
**Y. Kido, et al.**, Dept. of Orthop. Surg., Graduate School of Biomedical and Health Sciences, Hiroshima Univ.
- P51-2 Predicting Postoperative Improvement in JOACMEQ Scores for Cervical Spine Surgery Patients Using Machine Learning .....676  
**K. Hosozawa, et al.**, Dept. of Orthop. Surg., Graduate School of Medicine, Osaka Univ.
- P51-3 Development of a machine-learning model for patient satisfaction prediction in lumbar spinal stenosis surgery .....677  
**S. Kawabata, et al.**, Dept. of Orthop. Surg., Fujita Health Univ.
- P51-4 A New Classification of Intervertebral Disc Degeneration Using Artificial Intelligence .....677  
**H. Suzuki, et al.**, Dept. of Orthop. Surg., Kushiro City General Hosp.
- P51-5 Acoustic Feature-Based Detection of Chisel Penetration: Development of a Surgeon-Assist Physical AI (SPAI) .....678  
**H. Fujiwara, et al.**, JCHO Hoshigaoka Medical Center

P51-6	Evaluation of the screening accuracy for osteoporosis using dental panoramic radiograph analysis AI assessed by the DXA .....678 <b>T. Miyashita, et al.</b> , Spine Center, Matsudo City General Hosp.
P51-7	Preoperative Chest X-ray-Based Bone Density Estimation for Low Bone Mass and Short-Term Outcomes in Spinal Decompression .....679 <b>Y. Kumanomido, et al.</b> , Dept. of Orthop. Surg., The Univ. of Tokyo Hosp., The Univ. of Tokyo
P51-8	Evaluation of obstructive factors in full-endoscopic transforaminal approach at L5/S1 using 3D-MRI/CT simulation -comparative 208 cases- .....679 <b>T. Sato, et al.</b> , Dept. of Orthop. Surg., Faculty of Medicine and Graduate School of Medicine, Hokkaido Univ.

## Poster 52

9 : 30 ~ 10 : 10

Moderator : **H. Tashi**

### Systemic Factors and Spinal Disorders

P52-1	Longitudinal study of phase angle and low back painrelated quality of life in female osteoporosis patients with dynapenia .....680 <b>Y. Yokozeki, et al.</b> , Dept. of Orthop. Surg., Kitasato Univ.
P52-2	Perioperative Changes in Nutritional Parameters Following Single-Level Decompression for Lumbar Spinal Canal Stenosis .....680 <b>Y. Otake, et al.</b> , Dept. of Orthop. Surg., Graduate School of Medicine, Chiba Univ.
P52-3	Correlation between nutritional status assessed by MNA-SF and spinal alignment in adult spinal deformity surgery .....681 <b>K. Oda, et al.</b> , Dept. of Orthop. Surg., Graduate School of Medical Science, Univ. of Yamanashi
P52-4	Correlation between Geriatric Nutritional Risk Index and Psoas Muscle Index in Patients Undergoing Spine Surgery .....681 <b>T. Hideshima, et al.</b> , Dept. of Orthop. Surg., St. Marianna Univ. School of Medicine, Yokohama City Seibu Hosp.
P52-5	Diagnostic utility of OSTA for osteoporosis in spinal surgery patients .....682 <b>H. Hirata, et al.</b> , Dept. of Orthop. Surg., Saga Univ.
P52-6	Periodontitis may cause multiple osteoporotic vertebral fracture .....682 <b>R. Ikeda, et al.</b> , Aiseikai Yamashina Hosp.
P52-7	Association between the number of remaining teeth and fat infiltration in the lumbar multifidus muscle .....683 <b>K. Ura, et al.</b> , Dept. of Orthop. Surg., Otaru general hosp.

- P52-8 Changes in Psoas Muscle Mass After Surgery for Osteoporotic Vertebral Fracture: Association With Nutritional Status .....683  
**T. Sadamatsu, et al.**, Dept. of Orthop. Surg., Nagasaki Rosai Hosp.

## Poster 53

10 : 20~11 : 00

Moderator : **T. Imamura**

### Spine Disorders, Psychological & Sleep Disorders & Others

- P53-1 The Relationship Between Psychological Distress and Activities of Daily Living Disability Across Clinical Phases in Lumbar Disorders .....684  
**Y. Matsuda, et al.**, Dept. of Rehabilitation
- P53-2 Influence of preoperative mental health on surgical outcomes in degenerative cervical myelopathy: A multicenter prospective cohort study .....684  
**T. Okubo, et al.**, Dept. of Orthop. Surg., Keio Univ.
- P53-3 Spinal surgeries for lumbar spinal stenosis improved mental health: Analysis of related factors in a multicenter study: First report .....685  
**N. Takegami, et al.**, Dept. of Musculoskeletal Surg., Dept. of Multimodality Therapy for Cancer, Mie Univ. Graduate School of Medicine
- P53-4 Difference in preoperative patient expectations for adult spinal deformity surgery between Japan and the United States .....685  
**T. Fujii, et al.**, Dept. of Orthop. Surg., Keio Univ.
- P53-5 What does neutral treatment satisfaction mean after lumbar surgery?.....686  
**M. Suzuki, et al.**, Dept. of Orthop. Surg., Osaka Metropolitan Univ. Graduate School of Medicine
- P53-6 Sleep Architecture and Functional Impairments in Cervical Spondylotic Myelopathy: A Multidimensional JOACMEQ Analysis .....686  
**G. Kumagai, et al.**, Dept. of Orthop. Surg., Hirosaki Univ. Graduate School of Medicine
- P53-7 Association between thoracic kyphosis and sleep efficiency in patients with lumbar spinal stenosis .....687  
**M. Inoue, et al.**, Dept. of Orthop. Surg., Graduate School of Medicine, Chiba Univ.
- P53-8 Spinal surgeries for lumbar spinal stenosis improved mental health: Analysis of related factors in a multicenter study: Second report .....687  
**N. Takegami, et al.**, Dept. of Musculoskeletal Surg., Dept. of Multimodality Therapy for Cancer, Mie Univ. Graduate School of Medicine

## Poster Room 2

### Poster 54

8 : 40~9 : 20

Moderator : **J. Katayanagi**

#### Spinal Deformity 4

- P54-1 Relationship between postoperative shoulder balance and disc angle below lower instrumented vertebra in adolescent idiopathic scoliosis .....688  
**K. Yamada, et al.**, Dept. of Regional Medicine and Musculoskeletal Science, Gifu Univ.
- P54-2 Long-term effects of selective thoracic fusion for adolescent idiopathic scoliosis on lumbar disc degeneration and clinical symptoms .....688  
**S. Suzuki, et al.**, Dept. of Orthop. Surg., Keio Univ.
- P54-3 Postoperative Waistline Asymmetry in Adolescent Idiopathic Scoliosis: A Type-Based Analysis of Residual Factors .....689  
**T. Banno, et al.**, Dept. of Orthop. Surg., Hamamatsu Univ. School of Medicine
- P54-4 Current Status and Challenges of School Screening for Adolescent Idiopathic Scoliosis by Inspection and Palpation .....689  
**S. Nunotani, et al.**, Dept. of Orthop. Surg., Graduate School of Medical Sciences, Kanazawa Univ.
- P54-5 Investigation of brace weaning timing using the Proximal Femur Maturity Index in Adolescent Idiopathic Scoliosis .....690  
**T. Sada, et al.**, Dept. of Orthop. Surg., Nara Medical Univ.
- P54-6 Curve changes after brace treatment in Lenke type1,2 A/B .....690  
**M. Tomori, et al.**, Dept. of Orthop. Surg., Saiseikai Kawaguchi General Hosp.
- P54-7 Changes in the thoracic curve after selective short anterior fusion for the thoracolumbar/lumbar curve in Lenke type5C AIS .....691  
**D. Kitamura, et al.**, Dept. of Orthop. Surg., Dokkyo Medical Univ.
- P54-8 Can the 3D vertebral morphology ratio (mCL/aCL) predict thoracic kyphosis and flexibility in AIS? .....691  
**K. Nanpo, et al.**, Dept. of Orthop. Surg., Graduate School of Medical Sciences, Kanazawa Univ.

### Poster 55

9 : 30~10 : 10

Moderator : **T. Yayama**

#### Spinal Balance Evaluation

- P55-1 Coronal Imbalance After Adult Spinal Deformity Surgery Is Associated with the Postoperative-Preoperative UIV Tilt Ratio .....692  
**Y. Kanie, et al.**, Dept. of Orthop. Surg., Graduate School of Medicine, Osaka Univ.

- P55-2 Predicting Postoperative Pelvic Tilt in Adult Spinal Deformity: A Novel Model Using Fulcrum Backward Bending Pelvic Femoral Angle .....692  
**S. Takenaka, et al.**, JCHO Osaka Hosp.
- P55-3 Postural balance impairment in adult spinal deformity and its treatment effects .....693  
**K. Watanabe, et al.**, Niigata Spine Surg. Center
- P55-4 Pelvic Incidence Significantly Correlates With Facet Joint Orientation; A Pilot Three-Dimensional Analysis Using VINCENT and Python .....693  
**K. Kato, et al.**, Dept. of Orthop. Surg., Div. of Disease Control, Research field of Medical Sciences, Graduate School of Medicine, Gifu Univ.
- P55-5 Reliability of Pelvic Obliquity Measurement in Postoperative Non-Ambulatory Scoliosis: A Comparison of the Maloney and Osebold Methods .....694  
**D. Urayama, et al.**, Dept. of Orthop. Surg., The Univ. of Tokyo Hosp., The Univ. of Tokyo
- P55-6 Static and dynamic assessment of local spinal kyphosis as risk factors for new vertebral fractures: a 10-year longitudinal study .....694  
**K. Ide, et al.**, Dept. of Orthop. Surg., Hamamatsu Univ. School of Medicine

## Poster 56

10 : 20~11 : 00

Moderator : **M. Iwabuchi**

### Lumbar Spine Surgical Alignment

- P56-1 Usefulness of a Novel Surgical Technique Allowing Intraoperative Adjustment of Lumbar Lordosis with minimum 1 year follow-up .....695  
**B. Otsuki, et al.**, Dept. of Orthop. Surg., Graduate School of Medicine, Kyoto Univ.
- P56-2 Effect of mono-segment posterior lumbar interbody fusion on global sagittal alignment .....695  
**Y. Takahashi, et al.**, Saiseikai Yokohamashi Tobu Hosp.
- P56-3 Effect of lumbar distribution index on clinical outcomes in lower lumbar interbody fusion .....696  
**Y. Shimamura, et al.**, Spine Center, Hakodate Central General Hosp.
- P56-4 Impact of Preoperative Sagittal Malalignment on Surgical Outcomes of Posterior Lumbar Interbody Fusion .....696  
**T. Takahashi, et al.**, Dept. of Orthop. Surg., Saiseikai Kawaguchi General Hosp.
- P56-5 Change of spinal alignment and patient satisfaction after short fusions for degenerative lumbar scoliosis .....697  
**S. Fukase, et al.**, Dept. of Orthop. Surg., Hakodate central Hosp.
- P56-6 Can the difference between lumbar lordosis in the supine and standing positions predict radiological adjacent segment disease? .....697  
**Y. Akiyama, et al.**, Eastern Chiba Medical Center

- P56-7 Analysis of LIF Entry Side in Relation to Coronal Plane Local Correction Angle and Endplate Injury in Degenerative Scoliosis Patients .....698  
**R. Asai, et al.**, Dept. of Orthop. Surg. and Sports Medicine, Tsukuba Univ. Hosp. Mito Clinical Education and Training Center, Mito Kyodo General Hosp.
- P56-8 The outcomes of short fusion surgery in patients with degenerative kyphoscoliosis .....698  
**T. Yamada, et al.**, Dept. of Ortho. Surg., Hamamatsu Univ. School of Medicine.

## Poster Room 3

### Poster 57

8 : 40~9 : 20

Moderator : **K. Sasaki**

#### Endoscopic Spine 3 (UBE)

- P57-1 Lumbar laminoplasty by UBE using navigation system .....699  
**T. Tokioka, et al.**, Dept. of Orthop. Surg., Okayama Kyokuto Hosp.
- P57-2 A Study on the Relationship Between Dural Injury Incidence and Surgeon Experience in UBE and MEDL Procedures .....699  
**S. Hirai, et al.**, National Sagamihara Hosp.
- P57-3 Comparison of postoperative outcomes between UBE and MED (MEL) in our institution .....700  
**M. Kitagawa, et al.**, Omi medical center
- P57-4 Automated Surgical Phase Recognition in Unilateral Biportal Endoscopy Using Deep Learning .....700  
**T. Kitagawa, et al.**, Dept. of Orthop. Surg., NHO Murayama medical center
- P57-5 Intraoperative Complications in UBE Surgery for Lumbar Degenerative Disease .....701  
**K. Tsuda, et al.**, Dept. of Orthop. Surg., Fukuoka Spine Clinic
- P57-6 Factors affecting operative time in unilateral biportal endoscopic decompression .....701  
**K. Matsukawa, et al.**, Murayama Medical Center
- P57-7 Incidence of unintended dural tear and relevant complications in unilateral biportal endoscopic laminectomy: A retrospective cohort study .....702  
**N. Okamoto, et al.**, Inanami Spine and Joint Hosp.
- P57-8 Evaluating the Minimally Invasive Nature of UBE vs ME: Multivariable Analysis of NRS and WBC/CRP/CPK .....702  
**H. Iwai, et al.**, Dept. of Orthop. Surg., Iwai Orthop. Hosp.

## Poster 58

9 : 30~10 : 10

Moderator : **T. Ohba**

### Infections

- P58-1      Posterior Lumbar Subcutaneous Edema (PLSE): An early predictive marker for postoperative spinal infection. ....703  
**R. Yamamura, et al.**, Dept. of Orthop. Surg., Showa Medical Univ.
- P58-2      Analysis of discriminative factors between SSI and UTI after spinal instrumentation surgery for lumbar degenerative disease .....703  
**K. Konishi, et al.**, Dept. of Orthop. Surg., Kyorin Univ.
- P58-3      Blood culture testing in the spine disease ward: results of 1345 consecutive bottles and comparison with the joint disease ward .....704  
**M. Kono, et al.**, Dept. of Orthop. Surg., Hakodate Central General Hosp.
- P58-4      Usefulness of NPWT for Prevention of Postoperative SSI in Thoracic OPLL .....704  
**S. Uezono, et al.**, Dept. of Orthop. Surg., Graduate School of Medical and Dental Sciences, Kagoshima Univ.
- P58-5      Preoperative White Blood Cell Count and Cefazolin Resistance in Spinal Surgical Site Infections .....705  
**H. Katayama, et al.**, Musculoskeletal Science, Yokohama City Univ. Graduate School of Medicine
- P58-6      Risk Factors Associated with Early Revision Surgery after Spinal Fusion: Focusing on Fracture- and Infection-related Causes .....705  
**H. Mizokami, et al.**, Dept. of Orthop. Surg., Kariya Toyota Gen. Hosp.
- P58-7      Clinical results of minimally invasive anterolateral fusion for spondylodiscitis and pseudoarthrosis at L5/S1 .....706  
**Y. Kotani, et al.**, Wakakusa Daiichi Hosp.
- P58-8      MRI Features Suggesting Implant Removal in Surgical Site Infection after Lumbar Interbody Fusion .....706  
**Y. Hasegawa, et al.**, Dept. of Orthop. Surg., Kushiro City General Hosp.

## Poster 59

10 : 20~11 : 00

Moderator : **H. Nakajima**

### Lumbar Spinal Stenosis & Prognostic Evaluation

- P59-1      Comparison of quality of life between obese and non-obese patients with lumbar spinal canal stenosis using the JOABPEQ .....707  
**A. Hayashi, et al.**, Dept. of Orthop. Surg., Tohoku Medicaland Pharmaceutical Univ. Hosp.

P59-2	Impact of lumbar spinal stenosis on accelerated biological aging .....707 <b>N. Isogai, et al.</b> , Dept. of Orthop. Surg., International Univ. of Health and Welfare
P59-3	Association between Preoperative Radiographic Parameters and Patient-Reported Outcomes in L2/3 Single-Level Interbody Fusion Cases .....708 <b>T. Shirokoshi, et al.</b> , Dept. of Orthop. Surg., The Univ. of Tokyo Hosp., The Univ. of Tokyo
P59-4	Clinical outcomes of additional PLIF for adjacent segment disease after PLIF assessed with the Zurich Claudication Questionnaire .....708 <b>H. Sakaura, et al.</b> , Dept. of Orthop. Surg., Suita Municipal Hosp.
P59-5	Preoperative lumbar spine movement time during forward bending and postoperative falls in patients with lumbar spinal stenosis .....709 <b>T. Wada, et al.</b> , Rehabilitation Div., Tottori Univ. Hosp.
P59-6	Age-related MCID in 6-Minute Walk Distance and Spinopelvic Alignment after Lumbar Spinal Stenosis Surgery .....709 <b>T. Shimokawa, et al.</b> , Ogaki Tokushukai Hosp.
P59-7	Analysis of Factors Associated with Poor Improvement in the two-step test After Surgery for Lumbar Spinal Canal Stenosis. ....710 <b>A. Saho, et al.</b> , Dept. of Orthop. Surg., School of Medicine, Univ. of Occupational and Environmental Health
P59-8	Early acquisition of basic mobility after LSS surgery was associated with better 6-month back pain-related ADL outcomes .....710 <b>D. Takemori, et al.</b> , Rehabilitation Div., Tottori Univ. Hosp.

## Poster Room 4

### Poster 60

8 : 40~9 : 20

Moderator : **K. Yamada**

#### Spinal Tumors

P60-1	Predictors of postoperative gain in ambulatory function after laminectomy for metastatic spinal cord compression .....711 <b>H. Kinoshita, et al.</b> , Dept. of Orthop. Surg., Chiba Cancer Center
P60-2	Patient-Reported Outcome Measures After Lumbar Spine Surgery in Cancer Patients Are Comparable to Those in Non-Cancer Patients .....711 <b>J. Teramoto, et al.</b> , Dept. of Orthop., Juntendo Univ.
P60-3	Successful total en bloc spondylectomy for an L3 paravertebral giant cell tumor after preoperative denosumab therapy .....712 <b>H. Kinoshita, et al.</b> , Dept. of Orthop. Surg., Chiba Cancer Center

P60-4	The usefulness of the Spinal Metastasis Cancer Board aimed at registering all cases within the hospital .....712 <b>S. Obata, et al.</b> , Dept. of Orthop. Surg., The Jikei Univ. School of Medicine
P60-5	Neuroprotective Effect of Epidural Separation During Vertebral Cryoablation: An In Vivo Canine Study Supported by In Vitro Thermal Modeling .....713 <b>T. Uto, et al.</b> , Dept. of Orthop. Surg., Graduate School of Medical Sciences, Kanazawa Univ.
P60-6	Nutritional assessment and prognosis in surgical cases of spinal metastases from lung cancer...713 <b>C. Takeda, et al.</b> , Dept. of Orthop. Surg., Tottori Univ.
P60-7	Outcomes in non-ambulatory patients with spinal metastasis from untreated prostate cancer: Surgery versus hormonal therapy w/wo radiotherapy .....714 <b>H. Shoji, et al.</b> , Dept. of Orthop. Surg., Niigata City General Hosp.

## Poster 61

9 : 30~10 : 10

Moderator : **M. Nakano**

### Surgical Tips and Techniques

P61-1	Usefulness of Navigation Drill Guide for Pedicle Screw Insertion in the Lateral Position during Simultaneous Anterior Posterior Fusion .....714 <b>R. Ugawa, et al.</b> , Dept. of Orthop. Surg., Kochi Health Sciences Cent.
P61-2	Advantages of Using Navigation System in the Early Phase of UBE: Focusing on Facet Joint Preservation.....715 <b>S. Takao, et al.</b> , Dept. of Orthop., Okayama Medical Center
P61-3	Microscopic unilateral laminectomy for bilateral decompression under modified oval tubular retractor is useful and less invasive .....715 <b>T. Ishikawa, et al.</b> , Orthop. Surg., Sanmu Medical Center
P61-4	Lumbar spine surgery using spinal anesthesia .....716 <b>E. Kinjo, et al.</b> , TOHOKU CENTRAL Hosp.
P61-5	Clinical outcomes of lateral fenestration using an AR microscope for lumbar foraminal stenosis .....716 <b>Y. Tsuchikawa, et al.</b> , Dept. of Orthop., Asa Citizens Hosp.
P61-6	Efficacy of oversized pedicle screws for narrow pedicles -a cadaveric biomechanical study-.....717 <b>H. Manabe, et al.</b> , Dept. of Orthop., Institute of Biomedical Sciences, Tokushima Univ. Graduate School
P61-7	Minimization of radiation exposure achieved by robot assisted Extraforaminal lumbar interbody fusion .....717 <b>S. Takao, et al.</b> , Dept. of Orthop. Surg., Okayama Medical Center

## Poster 62

10 : 20~11 : 00

Moderator : **Y. Imajo**

### Outcomes in Cervical Myelopathy and Amyotrophy

- P62-1 Distinct Postoperative Quality of Life Trajectories for Degenerative Cervical Myelopathy: A Multicenter Prospective Cohort Study .....718  
**T. Kitagawa, et al.**, Dept. of Orthop. Surg., NHO, Murayama Medical Center
- P62-2 Clinical Significance of MRI Signal Intensity Changes in Patients with Cervical Spondylotic Myelopathy .....718  
**Y. Horiuchi, et al.**, Dept. of Orthop. Surg., Saiseikai Utsunomiya Hosp.
- P62-3 Radiographic characteristics of C3/4 and C4/5 level degenerative cervical myelopathy .....719  
**N. Tadokoro, et al.**, Dept. of Orthop. Surg., Kochi Medical School, Kochi Univ.
- P62-4 Investigation of Clinical Factors Associated with Axial T2-Weighted Imaging and Postoperative Outcomes in Cervical Spondylotic Myelopathy .....719  
**Y. Noguchi, et al.**, Dept. of Orthop. Surg., Graduate School of Medicine, Chiba Univ.
- P62-5 Comparison of Perioperative Complications and Reoperation Rates Between ASF and PCF for CSR .....720  
**H. Ishiguro, et al.**, Osaka National Hosp.
- P62-6 Sympathetic Overactivity in Degenerative Cervical Myelopathy and Its Improvement After Decompression Surgery .....720  
**T. Shimizu, et al.**, Dept. of Orthop. Surg., Graduate School of Medical Sciences, Kanazawa Univ.
- P62-7 Comparison of Symptomatic and Asymptomatic Cervical Stenosis Detected by Whole-Spine CT Myelography in Lumbar Surgery Patients .....721  
**S. Amano, et al.**, Div. of Orthop. Surg., Dept. of Medicine of Sensory and Motor Organs, Faculty of Medicine, Univ. of Miyazaki
- P62-8 Clinical Outcomes of Extensive Cervical Spine Anterior-Posterior Combined Surgery Performed According to Standardized Protocols .....721  
**K. Masamoto, et al.**, Dept. of Orthop. Surg., Shiga General Hosp.

## Poster Room 5

## Poster 63

8 : 40~9 : 20

Moderator : **M. Okada**

### Outcomes in Cervical Myelopathy and Amyotrophy

- P63-1 Evaluation of the minimal invasiveness based on different approaches to the intervertebral disc of FESS transforaminal approach .....722  
**K. Yoshikane, et al.**, KMMC

- P63-2 Is preoperative time prediction a skilled intuition or overconfidence? - Estimation in microendoscopic laminoplasty for lumbar stenosis - .....722  
**K. Nomura, et al.**, Sumiya Orthop. Hosp.
- P63-3 Comparative study on decompression vs. fusion using a tube retractor for L5 radiculopathy due to L5/S1 intracanal and foraminal stenosis .....723  
**T. Oki, et al.**, Dept. of Orthop. Surg., Yuki Hosp.
- P63-4 Transforaminal Full-endoscopic Lumbar Foraminotomy (TF-FELF) for Lumbar Foraminal Stenosis with Degenerative Scoliosis: Avoiding Fusion .....723  
**Y. Nagao, et al.**, Dept. of Orthop., Institute of Biomedical Sciences, Tokushima Univ. Graduate School
- P63-5 Full endoscopic and microendoscopic foraminoplasty for lumbar foraminal stenosis with surgery performed by the same spine surgeon .....724  
**M. Yamada**, Dept. of Orthop. Surg., Asakusa Hosp.
- P63-6 Clinical results of microendoscopic posterior decompression for lumbosacral foraminal stenosis .....724  
**Y. Ueda, et al.**, Dept. of Orthop. Surg., Fukui Prefectural Hosp.
- P63-7 Endoscopic Surgery for Lumbar Isthmic Spondylolisthesis: The Crisscross Decompression in Practice .....725  
**N. Ono, et al.**, Dept. of Orthop. Surg., Kansai Medical Univ.
- P63-8 Influence of Dorsal Root Ganglion Position on Outcomes of Microendoscopic Lumbar Foraminoplasty at L5/S1 .....725  
**S. Takahashi, et al.**, Asao General Hosp. Spine Center

## Poster 64

9 : 30 ~ 10 : 10

Moderator : **T. Fujishiro**

### Diagnosis and Treatment of Cervical Radiculopathy and Myelopathy

- P64-1 Clinical effectiveness of Glisson traction for cervical radiculopathy: Comparison between cervical disc herniation and foraminal stenosis .....726  
**S. Matsushima, et al.**, Hakodate Central Hosp.
- P64-2 Imaging Evaluation of Glisson Traction-Resistant Cases of Cervical Radiculopathy Based on Post-Myelography CT Finding in the Cervical Spine .....726  
**T. Sato, et al.**, Dept. of Orthop. Surg., Faculty of Medicine and Graduate School of Medicine, Hokkaido Univ.
- P64-3 Correlation Study of Gait and Joint Findings in Myelopathy Patients .....727  
**A. Yoshimura, et al.**, Dept. of Orthop. Surg., Fukuoka Univ.

P64-4	Evaluation of writing ability using AI in patients with Cervical spondylotic myelopathy .....727 <b>A. Sakaguchi, et al.</b> , Nagaoka Central General Hosp., Orthop. Surgeon
P64-5	Intrathecal baclofen (ITB) therapy for severe spasticity .....728 <b>Y. Takagi, et al.</b> , Dept. of Orthop. Surg., Tonami General Hosp.
P64-6	Comparison between Patients with Symptomatic Scoliosis due to Cerebral Palsy With and Without Intrathecal Baclofen Therapy (ITB therapy) .....728 <b>Y. Miyahira, et al.</b> , Orthop. Surg., Univ. of the Ryukyus Hosp.
P64-7	Effects of a Natural Rubber Walking Orthosis on Gait Improvement in Patients with Cervical Spondylotic Myelopathy.....729 <b>S. Arita, et al.</b> , Wakayama Medicine, Univ. Orthop.