# PROGRAM

## Main Hall

### Thursday August 24th

**Opening Remarks**  
7:55~8:00  
Manabu Ito (President of the 51st JSS)

<table>
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<tr>
<th>Session</th>
<th>Title</th>
<th>Speaker and Institution</th>
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| O-1-A-1 | Sagittal plane configuration of the sacrum in idiopathic scoliosis patients | Kenyu Ito  
Department of Orthopaedic Surgery, Nagoya University Hospital, Graduate School of Medicine |
| O-1-A-2 | Reciprocal relationship between thoracic kyphosis and lumbo-sacro-pelvic sagittal alignment in adolescent idiopathic scoliosis second report | Takuya Iimura  
Dokkyo Medical University, Department of Orthopaedic Surgery |
| O-1-A-3 | Facet orientation in scoliosis analyzed using three-dimensional volume viewer | Toshiaki Kotani  
Department of Orthopedic Surgery, Seirei Sakura Citizen Hospital |
| O-1-A-4 | Wedging of vertebral body in persistent adolescent idiopathic scoliosis (AIS) : using three-dimensional image work station | Keita Nakayama  
Seirei Sakura Citizen Hospital |
| O-1-A-5 | An analysis of bone metabolism for adolescent idiopathic scoliosis patients | Miho Zaimoku  
Department of Orthopaedic Surgery, Kurobe city hospital, Toyama, Japan |
| O-1-A-6 | Identification of environmental factors affecting progression of adolescent idiopathic scoliosis | Kota Watanabe  
Department of Orthopedic Surgery, Keio University School of Medicine |
O-1-A-7 Mean 23 years follow-up study on the effects of lumbar muscular condition on curve progression in adolescent idiopathic scoliosis
Kei Watanabe
Department of Orthopaedic Surgery, Niigata University School of Medicine

O-1-A-8 A comparative analysis of ligamentum flavum between concave and convex curvature of main thoracic spine for adolescent idiopathic scoliosis patients
Shoji Seki
Department Orthopaedic Sugery, Faculty of Medicine, University of Toyama

O-1-A-9 Influence of lifestyle activities on development of curve type in patients with adolescent idiopathic scoliosis
Norihiro Isogai
Spine and Spinal Cord Center, International University of Health and Welfare, Mita Hospital

Discussion

**Surgical Treatment-Idiopathic Scoliosis (1) 8:50~9:35**
Moderator: Takahiro Iida (Department of Orthopaedic Surgery, Dokkyo Medical University Koshigaya Hospital)

O-1-B-1 Distal adding-on improves residual lumbar curve in Lenke type 1B and 1C curves
Takeshi Fujii
Department of Orthopaedic Surgery, Keio University School of Medicine

O-1-B-2 Factors influencing lowest instrumented vertebra tilt in Lenke type 1, 2 idiopathic scoliosis after selective thoracic fusion
Takaki Shimizu
Department of Orthopaedic Surgery, Kanazawa University Hospital

O-1-B-3 Factors influencing postoperative disc angle below the lowest instrumented vertebra in Lenke type 5C adolescent idiopathic scoliosis
Satoru Demura
Department of Orthopedic Surgery, Kanazawa University

O-1-B-4 Postoperative translation of the upper instrumented vertebra in thoracic adolescent idiopathic scoliosis
Katsuhsa Yamada
Department of Orthopaedic Surgery, Hokkaido University Hospital
O-1-B-5  Evaluation of the factors influencing curve progression after anterior corrective surgery for Lenke 5 type adolescent idiopathic scoliosis
H. Misawa
Dept. of Orthop. Surg., Okayama University Hospital

O-1-B-6  A Clinical Study of Postoperative Coronal Imbalance in Patients with Adolescent Idiopathic Scoliosis
Ryo Sugawara
Department of Orthopedics Surgery, Haga Red Cross Hospital

O-1-B-7  Postoperative Shoulder Imbalance in Lenke Type 2 Adolescent Idiopathic Scoliosis and Related Factors
Tatsuya Sato
Department of Orthopedic surgery, Juntendo University School of Medicine

O-1-B-8  Neck tilt following corrective fusion surgery in patients with adolescent idiopathic scoliosis
Yu Yamato
Department of Orthopaedic Surgery, Hamamatsu University School of Medicine

Discussion

Surgical Treatment-Idiopathic Scoliosis (2)  9:45～10:30
Moderator: Kota Watanabe (Department of Orthopedic Surgery, Keio University School of Medicine)

O-1-C-1  Skipping the pedicle screw in the posterior spinal fusion for adolescent idiopathic scoliosis does not affect the mechanical state
Michihiko Koseki
Faculty of Textile Science and Technology, Shinshu University

O-1-C-2  Differential rod contouring is essential for improving vertebral rotation in patients with adolescent idiopathic scoliosis
Shoji Seki
Department Orthopaedic Sugery, Faculty of Medicine, University of Toyama
O-1-C-3 Non-coordinated motion between derotated vertebra and attaching rib -Three dimensional analysis of posterior corrective surgery for adolescent idiopathic scoliosis -
Yusuke Sakai
Department of Orthopaedic Surgery, Graduate School of Medicine, Osaka University

O-1-C-4 Posterior-only spinal fusion for the treatment of severe (> 80 degrees) scoliosis
Takashi Namikawa
Department of Orthopaedic Surgery, Osaka City General Hospital

O-1-C-5 Posterior instrumentation using reduction device for adolescent idiopathic scoliosis
Yoshiki Takeoka
Department of Orthopaedic Surgery, Kobe University Graduate School of Medicine

O-1-C-6 Midterm surgical outcome of short fusion strategy for adolescent idiopathic scoliosis with Lenke 5C curve
Yoji Ogura
Department of Orthopaedic Surgery, Keio University School of Medicine

O-1-C-7 Clinical outcome for adolescent idiopathic scoliosis with restrictive ventilatory impairment
Nobuyuki Fujita
The Department of Orthopaedic Surgery, Keio University School of Medicine

O-1-C-8 Surgery for adolescent idiopathic scoliosis improves not only restrictive but also obstructive pulmonary dysfunction
Toru Hirano
Division of Orthopedic Surgery, Niigata University Graduate School of Medical and Dental Sciences

Discussion

Surgical Treatment-Idiopathic Scoliosis (3) 10:30~11:10
Moderator: Toshiaki Kotani (Department of Orthopedic Surgery, Seirei Sakura Citizen Hospital)

O-1-D-1 Cervical sagittal alignment following posterior spinal fusion for adolescent idiopathic scoliosis
Akihikko Hiyama
Department of Orthopaedic Surgery, Tokai University School of Medicine
O-1-D-2 Why does Disc Degeneration Most Commonly Occur at L5/S1 postoperative 10 years? Examining the Effect of Sagittal Alignment Ayato Nohara Department of Spine Surgery, Tokyo Shinjuku Medical Center

O-1-D-3 Prospective investigation of perioperative complications after correction surgeries for idiopathic scoliosis Yohei Takahashi Department of Orthopaedic Surgery, Fujita Health University

O-1-D-4 A clinical survey of the axial pain following posterior corrective surgery for the patients with adolescent idiopathic scoliosis Akira Matsumura Department of Orthopaedic Surgery, Osaka City General Hospital

O-1-D-5 The course of trunk strength in adolescent idiopathic scoliosis patients after posterior surgery Taro Okumura Department of Physical Therapy Seirei Sakura Citizen Hospital

O-1-D-6 Efficacy of epidural analgesia as a postoperative pain management in pediatric scoliosis surgery Naoki Takahashi Department of Orthopaedic Surgery, Kanazawa University Hospital.

O-1-D-7 Safety and effect on mental distress of wake up test by total intravenous anesthesia In scoliosis surgery Shigeru Soshi Department of Orthopaedic Surgery, The Jikei University School of Medicine

Discussion

Members Business Meeting of JSS Annual Meeting 11:10~11:40

Lunch-on Seminar 1 11:50~12:50
Moderator: Hideki Sudo (Department of Orthopaedic Surgery, Hokkaido University Hospital)

The future of standing 3D imaging in Spine Surgery: How can we use this new tool to better treat our patients? Stefan Parent Assistant Professor, CHU Sainte-Justine, Université de Montréal
cosponsored by EOS imaging (supported by Medtronic)
Symposium 1: Adolescent Idiopathic Scoliosis
13:05~14:20

Moderator: Morio Matsumoto (Department of Orthopedic Surgery, Keio University School of Medicine)
Hiroshi Taneichi (Department of Orthopedic Surgery, Dokkyo Medical University)

S-1-1 The prediction of curve progression in patients with adolescent idiopathic scoliosis: Past, present, and future
Masaaki Chazono
Department of Orthopaedic Surgery, Utsunomiya National Hospital

S-1-2 Correlation analysis between change in thoracic kyphosis and multilevel facetectomy/ screw density in main thoracic adolescent idiopathic scoliosis surgery
Hideki Sudo
Department of Orthopaedic Surgery, Hokkaido University Hospital

S-1-3 How does the post-operative thoracic kyphosis affect sagittal parameters in Lenke 1 and 2 patients
Teppei Suzuki
Department of Orthopaedic Surgery, National Hospital Organization Kobe Medical Center

S-1-4 Long-term follow-up of thoracolumbar/lumbar curve with lumbar modifier C in non-operated patients with adolescent idiopathic scoliosis
Masayuki Ohashi
Department of Orthopaedic Surgery, Niigata University Medical and Dental General Hospital

S-1-5 Modic changes and disc degeneration of non-fused segments 27 years or more after Harrington instrumentation for adolescent idiopathic scoliosis
Tsutomu Akazawa
Department of Orthopaedic Surgery, St. Marianna University School of Medicine

S-1-6 Impact of coronal and sagittal spinal deformity on lumbar intervertebral disc degeneration in patients with adult idiopathic scoliosis
Satoshi Suzuki
Department of Orthopedic Surgery, Tokyo Dental College, Ichikawa General Hospital
Evaluation Methods 14:30~15:00
Moderator: Toru Hirano (Division of Ortop. Surg., Niigata Univ. Graduate School of Medical and Dental Sciences)

O-1-E-1 Reproducibility of a new computed radiography processing technique for whole spine radiography utilizing using heavy metal filters
Satoru Demura
The Department of Orthopaedic Surgery, University of Kanazawa

O-1-E-2 Additional Radiographs Do Not Alter Surgical Strategies for Adolescent Idiopathic Scoliosis Lenke Type 1 Curves.
Hideyuki Arima
Department of Orthopedic Surgery, Hamamatsu University School of Medicine

O-1-E-3 A new bone maturity assessment with acromial apophysis in idiopathic scoliosis
Hiroyuki Nakarai
Department of pediatric orthopedics, Shizuoka Children’s Hospital

O-1-E-4 The analysis of intermediate vertebrae maximum kyphosis and maximum lordosis in standing sagittal plane
Masashi Okamoto
Niigata Spine Surgery Center

O-1-E-5 Critical analyses for postoperative correction rate in idiopathic scoliosis -Do Cobb end vertebrae change after surgery?-
Masayuki Ishikawa
Spine and Spinal Cord Center, International University of Health and Welfare (IUHW), Mita Hospital

Discussion

Scoliosis Screening 15:00~15:30
Moderator: Yasuhisa Arai (Tokyo Metropolitan Rehabilitation Hospital)

O-1-F-1 Development of innovative scoliosis screening system based on 3D asymmetrical analysis
Hideki Sudo
Department of Orthopaedic Surgery, Hokkaido University Hospital
O-1-F-2  Scoliosis screening in musculoskeletal survey -Significance of participation of orthopedic specialists in reduction of medical expenses-
Toru Hirano
Division of Orthopedic Surgery, Niigata University Graduate School of Medical and Dental Sciences

O-1-F-3  School scoliosis screening by Moire topography - overview for 33 years in the Miyazaki prefecture -
Hiroshi Kuroki
Department of Orthopaedic Surgery, NHO Miyazaki Higashi Hospital

O-1-F-4  How to improve scoliosis screening by using iScolioroller? Associated with measurements of the sum of right-left trunk inclination angles.
Shizuo Jimbo
Department of Orthopaedic Surgery, Asahikawa Medical University

O-1-F-5  Accuracy and usefulness of the new screening system enabling early detection of scoliosis: Using hump measurement system with 3D camera
Tatsuya Sato
Department of Orthopedic surgery, Juntendo University School of Medicine

Discussion

**Syndromic Scoliosis**  15:30〜16:10
**Moderator : Teppei Suzuki (Department of Orthopedic Surgery, Kobe Medical Center)**

O-1-G-1  Lesion sites affect recovery of vertebral remodeling in pediatric Langerhans cell histiocytosis
Naoyuki Nakamura
Department of Pediatric Orthopedics Surgery, Kanagawa Children’s Medical Center

O-1-G-2  Surgical results of scoliosis surgery for patients with Fontan circulation or cavopulmonary shunt
Toru Yamaguchi
The Department of Orthopaedic and Spine surgery, Fukuoka children’s hospital
O-1-G-3  Spinal manifestations of patients with a new type of Ehlers-Danlos syndrome caused by deficiency of CHST14/D4ST1  
Masashi Uehara  
Department of Orthopaedic surgery, Shinshu University, School of Medicine

O-1-G-4  Surgical outcomes for scoliosis associated with Turner’s syndrome - More than 5 years postoperative course-  
Kazutaka Ozone  
Department of Orthopaedic Surgery, Dokkyo Medical University

O-1-G-5  Scoliosis in Loey-Dietz syndrome  
Yuki Taniguchi  
Department of Orthopaedic Surgery, the University of Tokyo Hospital

O-1-G-6  Anterior Strut Bone Grafting by Concave Side Approach for Dystrophic Spinal Deformities in Neurofibromatosis Type-1 Patients: A Case Series  
Takuto Kurakawa  
Department of Orthopaedic Surgery, National Hospital Organization Kobe Medical Center

O-1-G-7  Are There Relationship between Hyper Thoracic Kyphosis and Occipital-Cervical Junctional Fused Joint in Patients with Ankylosing Spondylitis?  
Nodoka Manabe  
Gunma Spine Center (Harunaso Hospital)

Discussion

Yamada-Inoue Memorial Lecture:  
Pathology and Surgical Treatment for Cervical Spine Deformity  
16:20~17:20

Moderator: Takachika Simizu (Gunma Spine Center (Harunaso Hospital))

Pathology and surgical strategy for cervical spine deformity  
Christopher P. Ames  
UCSF Spine Center

Correction of severe cervical kyphotic deformity using cervical pedicle screws  
Kuniyoshi Abumi  
Sapporo Orthopaedic Hospital-Centre
Evening Seminar 1: Properties of Metallic Biomaterials Should be Known by Spine Surgeons and Biology of Spine 17:30~18:30
Moderator: Hiroshi Taneichi (Department of Orthopaedic Surgery, Dokkyo Medical University)

Properties of metallic biomaterials should be known by spine surgeons
Takao Hanawa
Department of Metallic Biomaterials, Institute of Biomaterials and Bioengineering, Tokyo Medical and Dental University

Biology of vertebra based on relationship between implant morphology and bone anisotropic microstructure
Takayoshi Nakano
Division of Materials & Manufacturing Science, Graduate School of Engineering, Osaka University
Room 2

Lunch-on Seminar 2: Modern Information Technology for Spinal Deformity Surgery  
11:50~12:50
Moderator: Seiji Ohtori (Department of Orthopedics Surgery, Graduate School of Medicine, Chiba University)

Application of image software in spinal deformity
Toshiaki Kotani

Novel Technique for Spine Surgery Using Computer vision and simulation.
Yuichiro Abe
Eniwa Hospital

Evening Seminar 2  
17:30~18:30
Moderator: Tokumi Kanemura (Konan Kosei Hospital)

Minimally invasive surgery for adult spinal deformity: correction of lumbar degenerative kypho-scoliosis using lateral interbody fusion and percutaneous pedicle screw
Hideki Murakami
Iwate Medical University
### Workshop

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<thead>
<tr>
<th>Workshop 1</th>
<th>10:30~11:00</th>
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| **Anterior instrumentation for thoracolumbar and lumbar curves in adolescent idiopathic scoliosis**  
Takahiro Iida  
Department of Orthopaedic Surgery, Dokkyo Medical University Koshigaya Hospital |

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<tr>
<th>Workshop 2</th>
<th>14:30~15:00</th>
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| **Selection of fusion levels and correction techniques for adolescent idiopathic scoliosis**  
Jun Takahashi  
Department of Orthopaedic Surgery, Shinshu University, School of Medicine |
### Morning Seminar:
**Effective Use of Osteoporosis Medications in Adult Spinal Deformity Surgery**  
8:00～9:00  
Moderator: Hiroaki Nakamura (Department of Orthopaedic Surgery, Osaka City University Graduate School of Medicine)

- How to prevent and how to treat the Adult spinal deformity combined with osteoporosis  
  Yukihiro Matsuyama  
  Department of Orthopaedic Surgery, Hamamatsu University School of Medicine

- Role of Osteoporosis Medication for Adult Spinal Deformity  
  Morio Matsumoto  
  Department of Orthopaedic Surgery, Keio University

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### Symposium 2:  
**Surgical Treatment for Early-onset Scoliosis**  
9:10～10:25

Moderator: Koki Uno (National Hospital Organization Kobe Medical Center)  
Haruhisa Yanagida (Fukuoka children’s hospital)

| S-2-1 | Clinical outcome of growing rod treatment (GR) for early onset scoliosis  
Yoh Fujimoto  
Department of Orthopedic and Spine surgery, Fukuoka Children s Hospital |
|-------|--------------------------------------------------------------------------|
| S-2-2 | Surgical treatment for Early-onset Scoliosis with Vertical Expandable Prosthetic Titanium Rib (VEPTR)  
Takeshi Fujii  
Department of Orthopaedic Surgery, Keio University School of Medicine |
| S-2-3 | Comparison of Early Spinal Fusion and Rib-based Growth Sparing Surgery for Congenital Scoliosis with Rib Anomalies  
Toshiki Saito  
Dept of Orthopedic and Spine Surgery, Meijo Hospital |
S-2-4 Surgical results of kyphectomy for myelomeningocele kyphosis
Toru Yamaguchi
The Department of Orthopaedic and Spine surgery

S-2-5 Spinal Fusion Surgery before the age of 10. Minimum 5 Year Follow up
Haruki Ueda
Department of Orthopaedic Surgery, Dokkyo Medical University

S-2-6 When is the time for corrective fusion in patients with congenital scoliosis?
Noriaki Kawakami
Orthopedics & Spine Surgery Meijo Hospital

Discussion

Brace Treatment 10:30~11:05
Moderator: Taicni Tsuji (Toyota Kosei Hospital)

O-2-H-1 Clinical Impact of Corrective Cast Treatment for Early Onset Scoliosis
Noriaki Kawakami
Department of Orthopedics & Spine Surgery Meijo Hospital

O-2-H-2 Outcomes of brace treatment for adolescent idiopathic scoliosis
Toru Maruyama
Saitama Prefectural Rehabilitation Center

O-2-H-3 Attempts of the upper thoracic curve correction in Semoto Nagano night-time brace
Kenta Fujiwara
Department of Orthopedic surgery, Osaka Medical college

O-2-H-4 The psychological influence on children with scoliosis having brace treatment and their guardians.
Minako Oosaki
Department of Nursing SEIREI SAKURA CITIZEN HOSPITAL

O-2-H-5 Preoperative Bracing Therapy for Surgical Patients with Adolescent Idiopathic Scoliosis
Ken Yamazaki
Iwate Spine and Scoliosis Center
O-2-H-6 Development of a novel spinal brace for the treatment of adolescent idiopathic scoliosis; Introduction of AMEC brace and short-term results
Kai Hirata
Nippon Sigmax Co., Ltd.

Discussion

Congenital & Neuromuscular Scoliosis 11:05~11:35
Moderator: Noriaki Kawakami (Department of Orthopaedic Surgery and Spine Center, Meijo Hospital)

O-2-I-1 The phenotype-genotype relationship in *TBX6*-associated congenital scoliosis
Kazuki Takeda
Department of Orthopaedic Surgery, Keio University School of Medicine

O-2-I-2 MicroRNA expression involved in the development of congenital kyphoscoliosis
Sho Ishiwata
Department of Orthopaedic Surgery, Graduate School of Medicine, Gunma University

O-2-I-3 Radiological results of spinal fusion to L5 in flaccid type neuromuscular scoliosis
Wataru Saito
Department of Orthopedics, Kitasato University, School of Medicine

O-2-I-4 Attempt of survey on health-related QOL in patients with severe cerebral palsy
Yoshiaki Oda
Department of Orthopaedic Surgery, Okayama University

O-2-I-5 Clinical course of early onset scoliosis complicated with Chiari type1 malformation and syringomyelia.
Yoh Fujimoto
Department of Orthopedic and Spine surgery, Fukuoka Children s Hospital

Discussion
Surgical site infection prevention update 2017
Koji Yamada
Kanto Rosai Hospital

The Seattle Approach
Rajiv K. Sethi
Virginia Mason Medical Center and the University of Washington, Seattle, WA, USA

Pathology-Adult Spinal Deformity (1)  12:55～13:35
Moderator: Yukihiro Matsuyama (Department of Orthopaedic Surgery, Hamamatsu University School of Medicine)

O-2-J-1 Influence of changes in pelvic tilt on sagittal spinal misalignment in elderly women
Ryosuke Tokida
Rehabilitation Center, Shinshu University Hospital

O-2-J-2 Gender differences in primary sites of age-related spinal alignment deterioration
Hikaru Nishimura
Rehabilitation Center, Shinshu University Hospital

O-2-J-3 Impact of knee osteoarthritis on deterioration of spinopelvic sagittal alignment in elderly volunteers
Tatsuya Yasuda
Department of Orthopedic Surgery, Hamamatsu Medical Center

O-2-J-4 Evaluation of sagittal spine-pelvis-leg alignment in elderly women with pelvic retroversion in standing and walking using a three-dimensional musculoskeletal model
Jumpei Iida
Akita University Orthopedic Surgery

O-2-J-5 Analysis of pelvic retroversion in adult spinal deformity
Masatake Ino
Department of Orthopaedic Surgery, Gunma Spine Center (Harunaso Hospital)
Gait analysis to evaluate global compensatory mechanisms including spine, pelvis, and lower extremities in patients with fixed sagittal imbalance
Yo Shiba
The Department of Orthopaedics Surgery, Dokkyo University School of Medicine

A consideration of thoracic compensation and evaluation of T5PA as a sagittal parameter for global spinal balance
Masatsune Sato
The Department of Orthopaedics, Yokohama Medical Center

Discussion

Pathology-Adult Spinal Deformity (2)  13:35~14:10
Moderator: Yuichiro Abe (Department of Orthopaedic Surgery, Eniwa Hospital)

Evaluation of whole body alignment and standing balance before and after spinal surgery
Shun Hatsushikano
Niigata Spine Surgery Center

The change of coronal alignment after limb lengthening procedure in patients with severe pelvic inclination
Norihiro Oku
Department of Orthopaedic Surgery, Kanazawa University

Radiographic evaluation of reciprocal change in cervical spine alignment following adult spinal deformity surgery
Akira Matsumura
Department of Orthopaedic Surgery, Osaka City General Hospital

Lumbar MRI and HRQOL in non-operated middle-aged patients with adolescent idiopathic scoliosis: relationship between residual deformity and degenerative changes
Tsuotomu Akazawa
Department of Orthopaedic Surgery, St. Marianna University School of Medicine

Increased bone metabolism and lower limb muscle volume can associate with lumbar degenerative scoliosis.
Sumihisa Orita
Dept. of Orthopaedic Surgery, Graduate School of Medicine, Chiba University
O-2-K-6  Elevated serum pentosidine levels are associated with dropped head syndrome in older women
Masaki Norimoto
Department of Orthopedic, Chiba University

Discussion

Surgical Treatment-Adult Spinal Deformity (1)  14:15~15:00
Moderator : Takachika Shimizu (Gunma Spine Center)

O-2-L-1  Clinical and radiographic parameteres associated with best versus worst clinical outcomes in adult spinal deformity - Postoperative 2-year follow-up
Daisuke Togawa
Division of Geriatric Musculoskeletal Health, Hamamatsu University School of Medicine

O-2-L-2  Sacropelvic fixation using S2 alar-iliac (S2Al) screws with minimum 2-year follow-up
Hiroaki Nakashima
Department of Orthopedic Surgery and Spine Center, Konan Kosei Hospital

O-2-L-3  The outcome of adult spinal deformity surgery by single surgeon with five years follow up
Hiromichi Aoki
Dept. of Orthopaedics, Dokkyo Medical University

O-2-L-4  Does the morphology of lumbar lordosis in postoperative adult spinal deformity patients affect spino-pelvic sagittal alignment?
Takuya Imura
Department of Orthopaedic Surgery, Dokkyo Medical University

O-2-L-5  Validation of the target lumbar lordosis for adult spinal deformity
Satoshi Inami
Department of Orthopaedic Surgery, Dokkyo Medical University

O-2-L-6  Assessment of bone union after the application of lateral interbody fusion cage for adult spinal deformity.
Hiroshi Moridaira
Department of Orthopedic Surgery, Dokkyo Medical University School of Medicine
O-2-L-7 Radiographic and clinical evaluation of anterior-posterior spinal fusion with LLIF for adult spinal deformity, minimum 2-year follow up
Tsuyoshi Sakuma
Department of Orthopaedic Surgery, Seirei Sakura Citizen Hospital

O-2-L-8 Factors affecting segmental lordosis of lumbar spine after LLIF
Yoshitaka Suzuki
Department of Orthopaedic and Spine Surgery, Nagoya Daini Red Cross Hospital

Discussion

Surgical Treatment-Adult Spinal Deformity (2)  15:00～15:40
Moderator: Masato Tanaka (Okayama Rosai Hospital)

O-2-M-1 What is an appropriate rehabilitation program for the symptomatic patients with adult spinal deformity before and after surgery
Tatsuya Endo
Aizu Medical Center Department of Rehabilitation/ Orthopedic & Spinal Surgery, Fukushima Medical University

O-2-M-2 Comparative study of S2-alar-iliac screw and posterior iliac screw pathways between male and female using three-dimensional computed tomography
Haruki Funao
Department of Orthopaedic Surgery, School of Medicine, International University of Health and Welfare

O-2-M-3 Pathomechanics of PJK -The Whole Human Finite Element Model Analysis-
Mitsuru Yagi
Department of Orthopedic Surgery, Keio University School of Medicine

O-2-M-4 Vertebral Fractures at Proximal Junction after Lower thoracic-pelvic Fusion -Risk Analysis based on Sagittal Spinal Parameters-
Haruki Ueda
The department of Orthopaedic Surgery, Dokkyo Medical University
O-2-M-5  Rod breakage after deformity correction surgery for elderly patients with adult spinal deformity: a retrospective case-series
Akihito Wada
Department of Orthopedic Surgery, Toho University School of Medicine

O-2-M-6  How to treat post-operative rod fracture for adult spinal deformity?
Taichi Tsuji
Department of Orthopaedic surgery, Toyota Kosei Hospital

Yasushi Inomata
Department of Orthopedics, Jichi Medical University

Discussion

International Symposium: Adult Spinal Deformity
15:50～17:05
Moderator: Manabu Ito (Hokkaido Medical Center)
Yukihiro Matsuyama (Department of Orthopaedic Surgery Hamamatsu University School of Medicine)

IS-2-1  Association of degenerative lumbar scoliosis with the genetic factors in adolescent idiopathic scoliosis and disc degeneration
Kazuki Takeda
Department of Orthopaedic Surgery, Keio University School of Medicine

IS-2-2  Prevention of perioperative complications in adult spinal deformity surgery -development a new sliding scale-
Go Yoshida
Dept. of Orthopedic Surgery, Hamamatsu University School of Medicine

IS-2-3  Differences in Surgical Strategy for Adult Spinal Deformity among Spinal Surgeons from Different Countries
Naobumi Hosogane
Department of Orthopedic Surgery, National Defense Medical College

IS-2-4  Future directions in sagittal plane realignment targets
Christopher P. Ames
USCF Spine Center

IS-2-5  Indications and pitfalls of ACR for adult spine deformity
Rajiv K. Sethi
Virginia Mason Medical Center and the University of Washington, Seattle, WA, USA
IS-2–6  Preventions of PJK/PJF in spinal surgery in elderly
Benny Dahl
Texas Children’s Hospital and Baylor College of Medicine

Closing Ceremony  17:05~17:25
Room 2

International Morning Seminar:  
International Expectations to Japanese Spine Surgeons  
8:00～9:00
Moderator: Manabu Ito (National Hospital Organization, Hokkaido Medical Center)

The view of Scoliosis Research Society  
Rajiv K. Sethi  
Virginia Mason Medical Center and the University of Washington, Seattle, WA, USA

The view of European Spine Society  
Benny Dahl  
Professor of Orthopaedic and Scoliosis Surgery Texas Children’s Hospital and Baylor College of Medicine Houston, Texas

Lunch-on Seminar 4:  
Anatomy and Surgical Tips for Safe Anterior or Lateral Thoracolumbar Surgery  
11:45～12:45
Moderator: Morio Matsumoto (Department of Orthopaedic Surgery, Keio University School of Medicine)

Anatomy and risk management for Lateral Lumbar Interbody Fusion  
Katsumi Harimaya  
Kyushu University Beppu Hospital

LLIF (Lateral Lumbar Interbody Fusion) procedure to Adult Spinal Deformity: Applications and Pitfalls  
Takahiro Iida  
Dokkyo Medical University Koshigaya Hospital
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<tr>
<td>S2 Alar-Iliac screw technique, tips and pitfalls</td>
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<td>Practical usage of radioscopy to the patient specific template</td>
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<td>Yuichiro Abe</td>
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<td>Eniwa Hospital</td>
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<th>Workshop 4</th>
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<td>Surgical technique of scoliosis correction with the translation force by using reduction device</td>
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<td>Koki Uno</td>
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<td>Department of Orthopaedic Surgery, National Hospital Organization Kobe Medical Center</td>
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EXP-1. Analysis of hook dislocation in growing rod method
Kazuyuki Matsumoto
Dept. of Orthop. Surg., Dokkyo Univ. School of Medicine, Koshigaya Hospital

EXP-2. Growing rod for early onset scoliosis with osteogenesis imperfecta: A case report
Yuichi Ono
Department of Orthopedic Surgery, Akita University Graduate School of Medicine

Adolescent Idiopathic Scoliosis—Pathology/Evaluations/Screening

EXP-3. Scoliosis screening with Scoliometer in Sendai City
Kenichiro Yahata
Sendai Nishitaga National Hospital

EXP-4. The outcomes of school screening for scoliosis using Moire topography in Iwate
Hirooki Endo
Department of Orthopaedic Surgery, School of Medicine, Iwate Medical University

Adolescent Idiopathic Scoliosis—Surgical Treatment

EXP-5. Continuous low bone mineral density associates with severity in patient with adolescent idiopathic scoliosis. -Longitudinal study-
Mitsuhiro Nishida
Department of Orthopaedic Surgery, School of Medicine, Keio University

EXP-6. Assessment of intraoperative blood Loss at different surgical stages during posterior spinal fusion surgery in the treatment of pediatric scoliosis.
Eiki Shirasawa
Department of Orthopaedic Surgery, Kitasato University School of Medicine

Takuto Kurakawa
Department of Orthopaedic Surgery, National Hospital Organization Kobe Medical Center
Adult Spinal Deformity—Pathology/Evaluations

EXP-8. Clinical result of adult spinal deformities posterior fixation with LLIF using patient-based outcomes
Tadashi Nukaga
Department of Orthopaedic Surgery, Tokai University School of Medicine

EXP-9. The effect of Lumbar fusion with instrumentation in severely osteoporotic patients using teriparatide
Yutaka Nakamura
Higashi Saitama general hospital

EXP-10. Correlations among Stabilometry, sagittal spinopelvic alignment, and thoracolumbar range of motion in adult spinal deformity.
Makoto Yazawa
Rehabilitation Center, Dokkyo Medical University Koshigaya Hospital, Koshigaya, Japan

Surgical Treatment—Adult Spinal Deformity

EXP-11. Efficacy of tranexamic acid for blood loss in posterior spinal fusion of adult spinal deformity
Katsuhito Kiyasu
Department of Orthopaedics Surgery, Kochi Medical School, Spine center

Congenital/Neuromuscular/Syndromic Scoliosis

EXP-12. The efficacy of the serial cast correction for the secondary curve of congenital scoliosis
Shimei Tanida
Department of Orthopaedic Surgery, Graduate School of Medicine, Kyoto University, Kyoto, Japan

Atsushi Numata
Department of Clinical Engineering, National Hospital Organization Kobe Medical Center

EXP-14. Two stage Surgical treatment for a Severe Congenital Lumbosacral Kyphoscoliosis
Ola Gilbert
Dept of Orthopedic and Spine surgery, Meijo Hospital
Others

EXP-15. The approach to clarify the pathophysiological mechanism of orthopedic diseases by analyzing the spinal excurbed Medaka, wy.
Toshiyuki Nishimaki
Department of Anatomy, Kitasato University School of Medicine, Kanagawa

EOS

P-1. Morphological change of vertebral body in the patients with growing rod technique
Takafumi Chiba
The Department of Orthopedic Surgery, Dokkyo University, school of Medicine

Adolescent Idiopathic Scoliosis-Pathology/Evaluations/Screening

P-2. Risk factors of cervical kyphosis post surgical intervention for adolescent idiopathic scoliosis
Shingo Onda
Department of Orthopedics Surgery, Juntendo Medical University, Tokyo, Japan

P-3. Urinalysis is a useful marker to screen urinary tract obstruction in preoperative idiopathic scoliosis patients
Shigeru Suzuki
Department of Pediatrics, Seirei Sakura Citizen Hospital

P-4. Body composition using bioelectrical impedance in adolescent idiopathic scoliosis patients. Can lean mass predict scoliosis?
Masayuki Miyagi
Department of Orthopedic Surgery, School of Medicine, Kitasato University.

P-5. The characteristics of right convex thoracolumbar and lumbar curve in idiopathic scoliosis
Takahiro Iida
Department of Orthopaedic Surgery, Dokkyo Medical University Koshigaya Hospital

P-6. Evaluation of vertebral rotation in standing position in adolescent idiopathic scoliosis using EOS system
Ichiro Kawamura
Department of Orthopaedic Surgery, Kagoshima University
P-7. Evaluation of vertebral rotation in adolescent idiopathic scoliosis by using traction EOS system
Masayoshi Machida
Yokohama Brain and Spine Center

P-8. Curve progression in idiopathic scoliosis after skeletal maturity
Muneyoshi Fukuoka
Department of Orthopedic Surgery, Graduate School of Medical Sciences, Nagoya City University

P-9. Inclination of dropout patients with adolescent idiopathic scoliosis and their parents
Kazuyuki Yasuhara
St. Marianna University School of Medicine Yokohama City Seibu Hospital

P-10. Skeletal maturity and anatomical characteristics of neurocentral synchondrosis in adolescent idiopathic scoliosis
Masaaki Chazono
Department of Orthopaedic Surgery, Utsunomiya National Hospital

P-11. Comparative Study of Nucleus pulposus Tissue in Patients with Adolescent Idiopathic Scoliosis and Lumbar Disc Herniation in the Young
Nobuho Sagawa
Department of Orthopedic Surgery, University of Tokai

P-12. Comparison of musculoskeletal school screening with Moire method for scoliosis screening
Akiko Misawa
Department of Orthopaedic Surgery, Akita Prefectural Center on Development and Disability

P-13. Changes in the range of motion of the shoulder joint and pain postoperatively in patients with adolescent idiopathic scoliosis
Manabu Harazono
Seirei Sakura Citizen Hospital Department of Rehabilitation

P-14. The clinical utility of the image processing technology of computed radiography for evaluations of various measurements in patients with AIS
Takeshi Sasagawa
Department of Orthopedics Surgery, Toyama Prefectural Central Hospital

P-15. The spinal deformity found in a rigid body requires evaluation of lumbar kyphosis
Yasuhiro Izumi
Izumi Orthopedic Clinic
P-16. The effect of therapeutic exercise on physical performance and cobb angle in Adolescent idiopathic scoliosis
Kenta Hosono
Hikari Municipal Hikari General Hospital All Rights Reserved

P-17. Evaluation of flexibility around the apical vertebra in adolescent idiopathic scoliosis
Masahiro Inoue
Dept. of Orthop. Surg., Graduate School of Medicine, Chiba Univ.

P-18. Sports activity does not associate with magnitude of Cobb angle in adolescent idiopathic scoliosis
Yoichiro Takata
The Department of Orthopedic Surgery, Tokushima University

Adolescent Idiopathic Scoliosis-Surgical Treatment

P-19. Evaluation of the precision of pedicle screw placement by fluoroscopy, 3D model, local electrical conductivity measurement device and CT navigation.
Hitoshi Kudo
The Department of Orthopaedic Surgery, Hirosaki University Graduate School of Medicine

P-20. Incidence of PJK in scoliosis patients less than 30 years of age treated by posterior instrumentation.
Masatoshi Inoue
Department of Spine Surgery

P-21. Predictive factors for a distal adjacent disorder with L3 as the lowest instrumented vertebra in Lenke 5C patients
Kei Ando
Department of Orthopedic Surgery, Nagoya University Graduate School of Medicine

P-22. Factors related to the formation of postoperative thoracic kyphosis in Lenke type 1 and 2 curves of adolescent idiopathic scoliosis
Shinji Šasao
Department of Orthopaedic Surgery, Shinshu University

P-23. Relationship between Sports Experience and Ability of patients with Adolescent Idiopathic Scoliosis Long Term Follow up after Surgery
Takehide Katogi
Department of Physical Therapy, SEIREI SAKURA CITIZEN HOSPITAL
P-24. Axial neck pain after posterior correction and fusion for adolescent idiopathic scoliosis: Evaluation by the JOACMEQ  
Kei Watanabe  
Department of Orthopaedic Surgery, Niigata University School of Medicine

P-25. Mid-term clinical outcome of short fusion strategy for Lenke type 1A adolescent idiopathic scoliosis  
Soya Kawabata  
Dept Orthopaedic Surgery, Keiyu Hospital

Hiroki Oba  
Department of Orthopaedic Surgery, Shinshu University School of Medicine

P-27. Comparison of rotational correction of segmental pedicle screw fixation or Hybrid fixation for adolescent idiopathic scoliosis (Lenke type1, 2)  
Fumihiro Arizumi  
Hyogo College of Medicine

P-28. Pedicle screw insertion for concave side of upper thoracic curve in idiopathic scoliosis  
Michio Hongo  
Department of Orthopedic Surgery, Akita University Graduate School of Medicine

P-29. Pedicle screw loosening after posterior spinal fusion for adolescent idiopathic scoliosis in upper and lower instrumented vertebrae having major perforation  
Masashi Uehara  
Department of Orthopaedic surgery, Shinshu University, School of Medicine

P-30. Association between concave pedicle screw and aorta on computed tomography after posterior spinal fusion in adolescent idiopathic scoliosis patients  
Kanichiro Wada  
Dept of Orthopaedic Surgery, Hirosaki University Graduate School of medicine

P-31. Surgical Results of Using Nesplon Tape of the Concave Side of the Main Thoracic Curve for Adolescent Idiopathic Scoliosis  
Jun Takahashi  
Department of Orthopaedic Surgery, Shinshu University, School of Medicine
P-32. Our Thoracoplasty Technique for Patients with Adolescent Idiopathic Scoliosis; A New Clinical Investigation of Rib-Hump Using a Full-length Sagittal Radiograph
Nodoka Manabe
Gunma Spine Center (Harunasa Hospital)

P-33. Radiographical outcomes of coplanar alignment technique for Lenke type 1 adolescent idiopathic scoliosis.
Kota Watanabe
Department of Orthopedic Surgery, Keio University School of Medicine

P-34. Examination of Radiation Exposure in O-arm by Adolescent Idiopathic Scoliosis Surgery
Kazuyoshi Kobayashi
Department of Orthopaedic Surgery, Nagoya University Graduate School of Medicine

P-35. Timing of intraoperative CT in AIS surgery -An experience of a case with the plow of the pedicle screw-
Yoshiharu Nakaya
Department of Orthopedic Surgery, Osaka Medical College

P-36. Assessment of interobserver reliability of EV, NV, and SV for lenke type 5C adolescent idiopathic scoliosis
Keisuke Masuda
Dept. of Orthop. Surg., Nara Medical University

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**Adult Spinal Deformity-Pathology/Evaluations**

P-37. Age Group Comparison of Physical Function and Health-related QoL in Adult Spinal Deformity
Takashi Tobinaga
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P-38. Influence of skeletal muscle mass and spinal alignment on surgical outcomes for lumbar spinal canal stenosis
Tomotaka Umimura
Dept. of Orthop. Surg., Graduate School of Medicine, Chiba Univ.

P-39. A ten-year change of lumbar spine in general population
Kenyu Ito
Department of Orthopaedic Surgery, Nagoya University Hospital, Graduate School of medicine
P-40. The influence of sarcopenia on adult spinal deformity
Tomotaka Umimura
Dept. of Orthop. Surg., Graduate School of Medicine, Chiba Univ.

P-41. The role of lumbar retrolisthesis in whole spinopelvic alignment and HRQOL- TOEI study
Yuki Mihara
The Department of Orthopedic surgery, Hamamatsu University of Medicine

P-42. Thoracolumbar sagittal balance changed after cervical laminoplasty: two case report
Toshiya Tachibana
Department of Orthopaedic Surgery, Hyogo College of Medicine

P-43. The influence of spinal sagittal alignment for mirror placement during taking whole spine radiographs
Shin Oe
Division of Geriatric Musculoskeletal Health, Hamamatsu University School of Medicine

P-44. Efficacy of drug for low back pain with kyphosis.
Seiji Ohtori
Department of Orthopaedic Surgery, Graduate School of Medicine, Chiba Univ. Chiba

P-45. Pentosidine concentration is associated with degenerative lumbar scoliosis in older women
Yawara Eguchi
Department of Orthopedic, Shimoshizu National Hospital

P-46. A study on correlation between low back pain and bone density and muscle mass in patients with lumbar spine disease
Kazuhide Inage
Dept. of Orthop. Surg., Graduate School of Medicine, Chiba Univ.

P-47. A study on correlation between sagittal alignment and muscle mass in patients with lumbar spine disease
Hideyuki Kinoshita
Department of Orthopedic Surgery, Chiba University Graduate School of Medicine
Surgical Treatment-Adult Spinal Deformity

P-48. Year-on-year shifts in SRS-22 scores after spinal fusion for adult spinal deformity
Hiroki Konuma
University of Dokkyo Koshigaya

P-49. Factors related to the baseline and postoperative health-related QOL in surgically treated adult spinal deformity patient
Mitsuru Yagi
Department of Orthopedic Surgery, Keio University School of Medicine

P-50. What is important factor to obtain optimal lumbosacral angle with corrective surgery for adult spinal deformity?
Kentaro Fukuda
Department of Orthopaedic Surgery, Saiseikai Yokohamashi Tobu Hospital

P-51. Withdrawn

P-52. How should be the lumbar sagittal curve corrected in the ASD surgery? for the prevention early rod failure
Hironari Fukuda
AIZU Medical Center Department of Orthopaedic and Surgery Fukushima Medical University

Eijiro Okada
The Department of Orthopaedic Surgery, Keio University

P-54. Evaluation of SAI screw loosening in adult spinal deformities.
Ryo Ugawa
Department of Orthopaedic Surgery, Okayama University Hospital

P-55. Analysis for positional change of intervertebral cage in two-staged correction surgery using LLIF for adult spinal deformity
Shinjiro Kaneko
Department of Orthopaedic Surgery, National Hospital Organization Murayama Medical Center
P-56. Prevention of proximal junctional failure with fixation using cortical bone trajectory for adult spinal deformity
Naobumi Hosogane
Department of Orthopedic Surgery, National Defense Medical College

P-57. Analysis of surgical treatment for kyphotic deformity due to post osteoporotic vertebral fracture using preoperative evaluation by fulcrum backward bending
Masashi Miyazaki
Department of Orthopaedic Surgery, Faculty of Medicine, Oita University

P-58. Lumbar curve behavior after posterior thoracic fusion for adult idiopathic thoracic scoliosis
Norihiro Isogai
Spine and Spinal Cord Center, Mita Hospital, International University of Health and Welfare, Tokyo, Japan

P-59. Risk factors for rod fracture after correction surgery of adult spinal deformity
Tetsuro Ohba
Yamanashi University

P-60. Age related difference of the surgical outcome of corrective fusion surgery in adult spinal deformity patients
Yu Yamato
Department of Orthopaedic Surgery, Hamamatsu University School of Medicine

P-61. Radiographic evaluation of intraoperative endplate fracture, cage subsidence, bone union in lateral lumbar interbody fusion (LIF) ~ Comparison between spinal deformity and spondylolisthesis ~
Kazuyoshi Yanagisawa
Aiseikai Yamashina Hospital

P-62. Surgical treatment for adult spinal deformity with big pelvic incidence
Yusuke Nakao
Orthopedic surgery, Spine center, Sanraku hospital

P-63. Comparison of Posterior Single Operation with Multiple PLIF and Two-stage Anterior/Posterior Surgery Using OLIF for Adult Spinal Deformity
Shugo Kuraishi
Department of Orthopaedic Surgery, Shinshu University
**P-64.** The relationship between postoperative sagittal alignment and mechanical failure in patients with adult spinal deformity
Takuto Kurakawa
Department of Orthopaedic Surgery, National Hospital Organization Kobe Medical Center

**P-65.** Validation of two-staged correction surgery for adult spinal deformity in the aspect of prevention of surgical site infection
Shinjiro Kaneko
Department of Orthopaedic Surgery, National Hospital Organization Murayama Medical Center

**P-66.** Efficacy of short fusion using Oblique Lateral Interbody Fusion (OLIF) for adult spinal deformity
Masahito Takahashi
Department of Orthopaedic Surgery, Kyorin University School of Medicine

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**Congenital/Neuromuscular/Syndromic Scoliosis**

**P-67.** Surgical outcomes of corrective fusion surgery for dystrophic type scoliosis associated with type1 neurofibromatosis
Kei Watanabe
Department of Orthopaedic Surgery, Niigata University School of Medicine

**P-68.** Corrective Surgery for severe kyphoscoliosis in Neurofibromatosis Type 1: Operative Challenges during revision surgery
Jonas Fernandez

**P-69.** Surgical Treatment of Thoracic Lordoscoliosis in Freeman-Sheldon Syndrome: A Case Report
Kazuaki Morishita
Dept. of Orthopaedic and Spine Surgery, Meijo Hospital

**P-70.** Survey of Nurses’ Understanding of Neuromuscular Scoliosis Treatment and the Effect of an Educational Lecture in Increasing Understanding
Wataru Saito
Department of Orthopedics, Kitasato University, School of Medicine

**P-71.** Sacral agenesis and lumbar scoliosis associated with lipomyelomeningocele and tethered cord syndrome
Daisuke Kudo
Department of Orthopedic Surgery, Akita University Graduate School of Medicine
P-72. Two cases of dystrophic spinal deformity due to neurofibromatosis-I
Kazuki Fujimoto
Department of Orthopaedic Surgery, Chibaken Saiseikai Narashino Hospital

Others

P-73. Spinopelvic Sagittal Imbalance as a Risk Factor for Adjacent Segment Disease after Single-segment Posterior lumbar interbody fusion
Tomiya Matsumoto
Dept. of Orthopaedics, Osaka Rosai Hosp.

P-74. Disastrous Rare Complication of Transforaminal Lumbar Interbody Fusion (TLIF) - Iatrogenic Lumbar Pseudomeningocele
KAI HEAN TEH