

Time Table November 5 (Friday)

Exhibition and Event Hall			
	Room 1	Room 2	Hands-on Seminar Exhibition
8:00	Exhibition Hall No.2 Block	Exhibition Hall No.3 Block	Exhibition Hall No.1 Block
	8:25-8:30 Opening Remarks		
8:30-9:00	8:30-9:50 Symposium 1 "Shoulder balance -From Assessment to Surgery-" Mitsuru Yagi/Mun Keong Kwan/ Tomohiro Banno/Tsutomu Akazawa/ Kei Watanabe Moderator: Toshiaki Kotani	8:30-9:20 Oral 1-1 Spinal Deformity Basics O1-1-1~O1-1-7 Moderator: Gen Inoue	8:30-17:30 Exhibition
9:00			
		9:30-10:20 Oral 1-2 Spino-Pelvic Alignment O1-2-1~O1-2-7 Moderator: Hiroshi Yamada	
10:00	10:00-11:20 Symposium 2 (Video Session) "AIS Lenke type 1 and 2 -My Surgical Technique and Special Points-" Jun Takahashi/Chris Chan Yin Wei/ Hiroshi Moridaira/Hideki Sudo/ Bangping Qian Moderator: Motoki Iwasaki	10:30-11:20 Oral 1-3 Adult Spinal Deformity O1-3-1~O1-3-7 Moderator: Shiro Imagama	
11:00			
	11:30-12:30 Luncheon Seminar 1 Noriaki Kawakami Moderator: Manabu Ito	11:30-12:30 Luncheon Seminar 2 Tomohiko Hasegawa Moderator: Naobumi Hosogane	
12:00			
	12:40-13:10 Members Business Meeting of JSS Annual Meeting		
13:00			
	13:20-14:20 Yamada & Inoue Memorial Lecture Koki Uno/Takachika Shimizu Moderator: Yukihiro Matsuyama		
14:00			14:00-15:30
	14:30-15:30 Sweets Seminar 1 Hidetomi Terai Moderator: Morio Matsumoto	14:30-15:30 Sweets Seminar 2 Peter O.Newton Moderator: Koki Uno	Hands-on Seminar 1
15:00			
	15:40-17:00 Symposium 3 "Indication and Limitation of treatment for EOS -Casting to Surgery-" Taichi Tsuji/Teppey Suzuki/ Ryo Sugawara/Masayuki Miyagi/ Kota Watanabe Moderator: Haruhisa Yanagida	15:40-16:30 Oral 1-4 AIS Assessment O1-4-1~O1-4-7 Moderator: Tomoaki Toyone	
16:00			
17:00			
	17:10-18:10 Evening Seminar 1 Jun Takahashi Moderator: Hirotaka Haro	17:10-18:10 Evening Seminar 2 Daisuke Sakai Moderator: Katsumi Harimaya	
18:00			

Time Table November 6 (Saturday)

Exhibition and Event Hall					
Room 1		Room 2		Hands-on Seminar	Exhibition
Exhibition Hall No.2 Block		Exhibition Hall No.3 Block		Exhibition Hall No.1 Block	
8:00-9:00	Morning Seminar 1 Hiroaki Nakashima / Yu Yamato Moderator: Kentaro Fukuda	8:00-9:00	Morning Seminar 2 Ayato Nohara Moderator: Katsushi Takeshita		
"International Case Discussion 1 - AIS-" Shinji Takahashi / Cheung, Jason Pui Yin / Chee Kidd Chiu / Takashi Kaito / Hideki Shigematsu Moderator: Daisuke Sakai					
9:10-9:40	International Case Discussion1	9:10-9:55	Oral 2-1 AIS Lumbar Curve O2-1-1~O2-1-6 Moderator: Hideki Murakami		
9:40-10:10	International Case Discussion 2	10:00-10:45	Oral 2-2 Adult Adolescent idiopathic Scoliosis and Others O2-2-1~O2-2-6 Moderator: Norio Kawahara	10:00-11:30	
10:20-11:40	Special Symposium "Future of School Screening in Scoliosis" Hanako Jimi / Hiroshi Kuroki / Sadao Arai / Tadakazu Miki Moderator: Manabu Ito / Kota Watanabe	10:50-11:40	Oral 2-3 EOS (Congenital, Nuromuscular and Syndromic) O2-3-1~O2-3-7 Moderator: Masashi Takaso	Hands-on Seminar 2	
"International Case Discussion 2 - ASD-" Akira Matsumura / Hiroaki Nakashima / Hey Hweng Dennis / C.C.Wong / Naobumi Hosogane Moderator: Tokumi Kanemura					
12:00-13:00	Luncheon Seminar 3 Bungo Otsuki Moderator: Takeshi Maeda	12:00-13:00	Luncheon Seminar 4 Kota Watanabe Moderator: Kazuhiro Hasegawa		
13:15-14:15	Sweets Seminar 3 Hideki Shigematsu / Toshiaki Kotani Moderator: Masashi Takaso	13:15-14:15	Sweets Seminar 4 Hideki Sudo Moderator: Haruhisa Yanaida		
14:25-15:15	Oral 2-4 Surgical Complication O2-4-1~O2-4-7 Moderator:Hideki Nagashima	14:25-15:15	Oral 2-5 Screening, Conservative Treatment O2-5-1~O2-5-7 Moderator: Hiroshi Ozawa		
15:20-16:50	Symposium 4 (Video Session) "The Challenge of Elderly Spinal Defomity -My Surgical Technique and Special Points-" Ibrahim Obeid / Kentaro Fukuda / Takashi Kobayashi / Tomohisa Harada / Kazuyuki Otani Moderator:Kazuhiro Hasegawa	15:20-16:10	Oral 2-6 AIS Thoracic Curve O2-6-1~O2-6-7 Moderator: Hiroshi Taneichi		
16:50-16:55 Closing Remarks					

PROGRAM

Room1

1st day - Friday, November 5th

Symposium 1 Shoulder balance -From Assessment to Surgery- 8:30 ~ 9:50

Moderator : Toshiaki Kotani (Department of Orthopedic Surgery, Seirei Sakura Citizen Hospital)

SY1-1 Clavicle Chest Cage Angle Difference-Predictor of postoperative shoulder imbalance- ▶ page109

○Mitsuru Yagi, Satoshi Nori, Satoshi Suzuki, Yohei Takahashi, Osahiko Tsuji, Narihito Nagoshi, Masaya Nakamura, Morio Matsumoto, Kota Watanabe
Department of Orthopedic Surgery, Keio University School of Medicine

SY1-2 Prevention of Post-operative Medial Shoulder Imbalance and Neck Tilt in Adolescent Idiopathic Scoliosis (AIS) Surgery: Preoperative Evaluation and Surgical Strategies. ▶ page110

○Mun Keong Kwan
Department of Orthopaedic Surgery (NOCERAL), University of Malaya, Kuala Lumpur, Malaysia.

SY1-3 The effect of pelvic obliquity on shoulder balance in patients with adolescent idiopathic scoliosis ▶ page111

○Tomohiro Banno, Yu Yamato, Tomohiko Hasegawa, Go Yoshida, Hideyuki Arima, Shin Oe, Yuki Mihara, Koichiro Ide, Yuh Watanabe, Kenta Kurosu, Keiichi Nakai, Yukihiro Matsuyama
Department of Orthopaedic Surgery, Hamamatsu University School of Medicine

SY1-4 Impact of anchor type at UIV on postoperative shoulder balance ▶ page112

○Tsutomu Akazawa^{1,2}, Toshiaki Kotani³, Tsuyoshi Sakuma³, Yasushi Iijima³, Shingo Kuroya¹, Masahiro Iiunuma^{1,2}, Yoshiaki Torii^{1,2}, Jun Ueno^{1,2}, Atsuhito Yoshida^{1,2}, Seiji Ohtori⁴, Hisateru Niki¹

¹Department of Orthopaedic Surgery, St. Marianna University School of Medicine,

²Spine Center, St. Marianna University School of Medicine,

³Department of Orthopedic Surgery, Seirei Sakura Citizen Hospital,

⁴Department of Orthopaedic Surgery, Graduate School of Medicine, Chiba University

SY1-5 Shoulder balance after posterior corrective fusion using pedicle screw construct for Lenke type1 adolescent idiopathic scoliosis

► page113

○Kei Watanabe¹, Masayuki Ohashi¹, Hideki Tashi¹, Yohei Shibuya¹,
Tatsuo Makino¹, Hiroyuki Kawashima¹, Kazuhiro Hasegawa³, Toru Hirano²

¹Department of Orthopaedic Surgery, Niigata University School of Medicine,

²Department of Orthopaedic Surgery, Uonuma Kikan Hospital,

³Niigata Spine Center

Symposium 2 (Video Session) AIS Lenke type 1 and 2

-My Surgical Technique and Special Points-

10:00 ~ 11:20

Moderator : Motoki Iwasaki (Osaka Rosai Hospital)

SY2-1 Skip Pedicle Screw Fixation for AIS Lenke type 1, 2 Curves: Good trunk and shoulder balance and thoracic kyphosis formation

► page114

○Jun Takahashi¹, Hiroki Oba¹, Masashi Uehara¹, Ryo Munakata¹,
Terue Hatakenaka¹, Tetsuhiko Mimura¹, Shota Ikegami¹, Takashi Takizawa¹,
Takayuki Kamanaka¹, Yoshinari Miyaoka¹, Daisuke Kurokouchi¹,
Takuma Fukuzawa¹, Michihiko Koseki²

¹The Department of Orthopaedic Surgery, Shinshu University, School of Medicine,

²Faculty of Textile Science and Technology, Shinshu University

SY2-2 Tips and tricks to achieve good medial shoulder and neck balance in Lenke 2 curves: a video demonstration

► page115

○Chris Chan Yin Wei

Department of Orthopaedic Surgery, Faculty of Medicine, University of Malaya

SY2-3 Vertebral coplanar alignment for thoracic adolescent idiopathic scoliosis

► page116

○Hiroshi Moridaira, Satoshi Inami, Daisaku Takeuchi, Haruki Ueda,
Hiromichi Aoki, Takuya Iimura, Hidekazu Arai, Nobuki Tanaka,
Satoshi Takada, Hiroshi Taneichi

Department of Orthopedic Surgery, Dokkyo Medical University

SY2-4 Four-dimensional anatomical correction

► page117

○Hideki Sudo¹, Yuichiro Abe², Terufumi Kokabu¹, Katsuhisa Yamada¹,
Akira Iwata¹, Hiroyuki Tachi^{1,2}

¹Department of Orthopaedic Surgery, Hokkaido University Hospital,

²Eniwa Hospital

**SY2-5 3-Column Osteotomy for Young Adult Idiopathic Scoliosis
-is it worth it ?** ▶ page118

○Bangping Qian

Department of Spine Surgery, Nanjing Drum Tower Hospital, Nanjing University

Luncheon Seminar 1 **11:30 ~ 12:30**

Moderator : Manabu Ito (Hokkaido Medical Center)

LS1 Shilla Growth Guidance Technique for Early Onset Scoliosis ▶ page131

○Noriaki Kawakami

Orthopedics Surgery, Ichinomiyaniishi Hospital

Yamada & Inoue Memorial Lecture **13:20 ~ 14:20**

Moderator : Yukihiro Matsuyama (Department of Orthopaedic Surgery, Hamamatsu University School of Medicine)

**ML1 Pediatric Spinal Deformity: The evaluation of challenging cases and
the surgical strategy** ▶ page103

○Koki Uno

The Department of Orthopedic Surgery National Hospital Organization Kobe Medical Center

ML2 What is spinal deformity for spine surgeon? ▶ page104

○Takachika Shimizu

Department of Orthopaedic Surgery, Gunma Spine Center, Harunaso Hospital

Sweets Seminar 1 **14:30 ~ 15:30**

Moderator : Morio Matsumoto (Department of Orthopaedic Surgery, Keio University)

**SS1 Surgical techniques of Convex-side Rod Rotation Maneuver (RRM)
for scoliosis and its clinical outcome** ▶ page140

○Hidetomi Terai

Department of Orthopaedic Surgery, Osaka City University Graduate School of Medicine, Osaka, Japan

Symposium 3 Indication and Limitation of treatment for EOS**-Casting to Surgery-****15:40 ~ 17:00**

Moderator : Haruhisa Yanagida (Department of Orthopaedics & Spine Surgery,
Fukuoka Children's Hospital)

SY3-1 A framework for early onset scoliosis treatment - casting ~growth friendly surgery - ▶ page119

○Taichi Tsuji

The Department of Orthopaedic & Spine surgery, Toyota Kosei Hospital

SY3-2 Accurate prediction of T1-12 height after growth friendly surgeries in early onset scoliosis using logistic regression models ▶ page120

○Teppei Suzuki, Koki Uno, Kohei Kawakita, Masaaki Ito

Department of Orthopaedic Surgery, National Hospital Organization Kobe
Medical Center**SY3-3 Clinical results of corrective cast and brace treatment for early onset scoliosis** ▶ page121○Ryo Sugawara¹, Ichiro Kikkawa², Hideaki Watanabe², Naoya Taki²,
Hiroko Tomisawa², Katsushi Takeshita¹¹Department of Orthopedic Surgery, Jichi Medical University,²Department of Pediatric Orthopedics, Jichi Children's Medical Center Tochigi**SY3-4 Surgical treatment for neuromuscular scoliosis** ▶ page122

○Masayuki Miyagi, Wataru Saito, Yusuke Mimura, Gen Inoue,

Toshiyuki Nakazawa, Takayuki Imura, Eiki Shirasawa, Shinsuke Ikeda,
Masashi Takaso

Department of Orthopaedic Surgery, Kitasato University, School of Medicine

SY3-5 Indications and Limitations of the VEPTR System for Early Onset Scoliosis ▶ page123

○Kota Watanabe

Department of Orthopedic Surgery, Keio University School of Medicine

Evening Seminar 1**17:10 ~ 18:10**

Moderator : Hiroataka Haro (Department of Orthopaedic Surgery, University of Yamanashi)

ES1 New approaches to spine deformity surgery ▶ page135

○Jun Takahashi

Department of Orthopaedic Surgery, Shinshu University, School of Medicine

Room2

1st day - Friday, November 5th

Oral1-1 Spinal Deformity Basics

8:30 ~ 9:20

Moderator : Gen Inoue (Department of Orthopaedic Surgery Kitasato University School of Medicine)

01-1-1 Impact of pathogenic *FBN1* variant types on the progression of scoliosis in patients with Marfan syndrome ▶ page147

○Yuki Taniguchi¹, Norifumi Takeda³, Ryo Inuzuka⁴, Yoshitaka Matsubayashi¹, So Kato¹, Toru Doi^{1,2}, Yasushi Oshima¹, Sakae Tanaka¹

¹Department of Orthopedics, The University of Tokyo Hospital,

²Department of Next Generation Locomotive Imaging System, The University of Tokyo,

³Department of Cardiovascular Medicine, The University of Tokyo Hospital,

⁴Department of Pediatrics, The University of Tokyo Hospital

01-1-2 The increasing expression of *UNCX* gene driven by a risk variant determined from adolescent idiopathic scoliosis GWAS ▶ page148

○Yoshiro Yonezawa^{1,2,3}, Nao Otomo⁵, Kazuki Takeda⁴, Masaya Nakamura², Morio Matsumoto², Shiro Ikegawa³, Kota Watanabe²

¹The department of Orthopaedics, Tama Zenshoen,

²The department of Orthopaedics, Keio University Hospital,

³Laboratory for Bone and Joint Diseases, RIKEN Center for Integrative Medical Sciences,

⁴Shizuoka Red Cross Hospital,

⁵International University of Health and Welfare Mita Hospital

01-1-3 The usefulness of *LAT1*-inactivated mice as a novel model of scoliosis ▶ page149

○Makoto Handa¹, Satoru Demura¹, Noriaki Yokogawa¹, Satoshi Kato¹, Kazuya Shinmura¹, Ryohei Annen¹, Motoya Kobayashi¹, Yohei Yamada¹, Satoshi Nagatani¹, Eiichi Hinoi², Manami Hiraiwa², Hiroyuki Tsuchiya¹

¹Department. of Orthopaedic Surgery, University of Kanazawa,

²Department. of Pharmacology, University of Gifu Pharmaceutical

01-1-4 Evaluation of AI Algorithm for Cobb Angle Measurement

▶ page150

○Yoshihiro Maeda, Takeo Nagura, Satoshi Suzuki, Mitsuru Yagi, Morio Matsumoto, Masaya Nakamura, Kota Watanabe

Department of Orthopaedic Surgery, Keio University School of Medicine

01-1-5 Comparison of biomechanical stresses in finite element spinopelvic models under different conditions of spinal fixation ▶ page151

○Norihiko Oku^{1,2}, Satoru Demura¹, Daisuke Tawara³, Satoshi Kato¹, Kazuya Shinmura¹, Noriaki Yokogawa¹, Hiroyuki Tsuchiya¹

¹Department of Orthopaedic Surgery, Graduate School of Medical Sciences, Kanazawa University,

²Department of Orthopaedic Surgery, Asanogawa General Hospital,

³Department of Mechanical and Systems Engineering, Faculty of Science and Technology, Ryukoku University

01-1-6 Biomechanical study of rod stress in lumbopelvic fixation using lateral interbody fusion: an in-vitro experimental study using synthetic bone models ▶ page152

○Shunji Tsutsui, Takuhei Kozaki, Hiroshi Yamada

Department of Orthopedic Surgery, Wakayama medical University

01-1-7 Cobalt concentrations in the blood after scoliosis surgery and related factors: comparison of cobalt chrome rods and titanium rods ▶ page153

○Tatsuya Sato¹, Hidetoshi Nojiri¹, Takehisa Matsukawa², Takatoshi Okuda¹, Kei Miyagawa¹, Ryosuke Takahashi¹, Arihisa Shimura¹, Yasuhiro Homma¹, Seiya Ishii¹, Kazuhito Yokoyama³, Muneaki Ishijima¹

¹Department of Orthopaedic Surgery, Juntendo University School of Medicine,

²Department of Epidemiology and Environmental Health, Juntendo University School of Medicine,

³Department of Epidemiology and Environmental Health, International University of Health and Welfare

Oral1-2 Spino-Pelvic Alignment

9:30 ~ 10:20

Moderator : Hiroshi Yamada (Wakayama Medical University)

01-2-1 Factors affected spinal sagittal malalignment in patients with spinal diseases ▶ page154

○Yuji Yokozeke¹, Masayuki Miyagi¹, Masatoshi Hoshino², Kazuhide Inage³, Kosuke Murata¹, Tomohisa Koyama¹, Ayumu Kawakubo¹, Yusuke Hori², Sumihisa Orita³, Gen Inoue¹, Seiji Ohtori³, Hiroaki Nakamura², Masashi Takaso¹

¹Department of Orthopaedic Surgery, Kitasato University School of Medicine,

²Dept of Orthopedic Surgery Osaka City University Graduate School of Medicine,

³Dept of Orthopedic Surgery Chiba University Graduate School of Medicine

01-2-2 Trunk function and its relationship with sagittal spinopelvic alignment in a 6-year prospective community-based female cohort

► page155

○Hisashi Chiba¹, Tetsuya Kobayashi², Shizuo Jimbo², Mitsuru Imai²

¹Department of Rehabilitation, Furano Geriatric Health Services Facility,

²Department of Orthopaedic Surgery, Asahikawa Medical University

01-2-3 Whole-body alignment in patients who underwent cervical laminoplasty.

► page156

○Yoshinori Morita¹, Kenyu Ito¹, Hiroaki Nakashima², Shiro Imagama², Tokumi Kanemura¹

¹Department of Orthopedic Surgery, Konan Kosei Hospital,

²Department of Orthopedic Surgery, Nagoya University School of Medicine

01-2-4 Morphological features and the impact of single level PLIF on global sagittal alignment in the patients with severe dysplastic spondylolisthesis

► page157

○Kazuki Takeda^{1,2}, Satoshi Suzuki², Yohei Takahashi², Satoshi Nori², Osahiko Tsuji², Narihito Nagoshi², Mitsuru Yagi², Nobuyuki Fujita³, Masaya Nakamura², Morio Matsumoto², Kota Watanabe²

¹Department of Orthopaedic Surgery, Japan Red Cross Shizuoka Hospital,

²Department of Orthopaedic Surgery, Keio University School of Medicine,

³Department of Orthopaedic Surgery, Fujita Health University

01-2-5 Sagittal malalignment was risk factors of pain-related disorders, gait disturbance, activities of daily living deficit due to LBP in osteoporosis

► page158

○Eiki Shirasawa¹, Masayuki Miyagi¹, Kousuke Murata¹, Tomohisa Koyama¹, Yuuji Yokozeki¹, Toshiyuki Nakazawa¹, Takayuki Imura¹, Wataru Saito¹, Shinsuke Ikeda¹, Akiyoshi Kuroda¹, Yusuke Mimura¹, Kazuhide Inage², Seiji Ohtori², Gen Inoue¹, Masashi Takaso¹

¹Department of Orthopaedic Surgery Kitasato University School of Medicine,

²Department of Orthopaedic Surgery Graduate School of Medicine Chiba University.

01-2-6 Pelvic ring ratio as a new parameter of pelvic tilt

► page159

○Hiroaki Nakashima¹, Noriaki Kawakami^{2,3}, Tetsuya Ohara³, Toshiki Saito^{2,3}, Ryoji Tauchi³, Shiro Imagama¹

¹Orthopedic Department, Nagoya University Graduate School of Medicine,

²Department of Orthopedics and Spine Surgery, Ichinomiyanishi Hospital,

³Meijo Hospital Orthopedics and Spine Center

01-2-7 Sex differences between the relationship of trunk muscle mass and whole body sagittal plane alignment in older adults. ▶ page160

○Koichiro Ide¹, Yu Yamato^{1,2}, Tomohiko Hasegawa¹, Go Yoshida¹,
Tomohiro Banno¹, Hideyuki Arima¹, Shin Oe^{1,2}, Yuki Mihara¹,
Yuh Watanabe¹, Keiichi Nakai¹, Kenta Kurosu¹, Yukihiro Matsuyama¹

¹Department of Orthopaedic Surgery Hamamatsu University School of Medicine,

²Department of Orthopedic Surgery and Division of Geriatric Musculoskeletal
Health, Hamamatsu University School of Medicine, Hamamatsu

Oral1-3 Adult Spinal Deformity

10:30 ~ 11:20

Moderator : Shiro Imagama (Department of Orthopedic Surgery, Nagoya University School of Medicine)

01-3-1 Analysis of hepatobiliary enzyme elevation after surgery of adult spinal deformity ▶ page161

○Kotaro Sakashita^{1,2}, Toshiaki Kotani², Tsuyoshi Sakuma², Keita Nakayama¹,
Yasushi Iijima², Takahiro Sunami¹, Tsutomu Akazawa³, Shohei Minami²,
Seiji Ohtori⁴, Masashi Yamazaki¹

¹Deptment of Orthopedic Surgery, University of Tsukuba,

²Department of Orthopedic Surgery, Seirei Sakura Citizen Hospital,

³Department of Orthopedic Sugery, St.Marianna University School of Medicine,

⁴Department of Orthopedic Surgery, University of Chiba

01-3-2 Effect of teriparatide on HU values at upper instrumented vertebra after adult spinal deformity surgery ▶ page162

○Keishi Maruo, Fumihiro Arizumi, Kazuya Kishima, Norichika Yoshie,
Tomoyuki Kusukawa, Toshiya Tachibana
Department of Orthopaedic Surgery, Hyogo College of Medicine

01-3-3 Comparison of outcome for spinal deformity associated with Parkinson's disease and adult spinal severe deformity -Analysis using propensity score matching- ▶ page163

○Masaaki Ito, Teppei Suzuki, Kohei Kawakita, Koki Uno
Department of Orthopaedic Surgery, National Hospital Organization Kobe
Medical Center

01-3-4 The impact of early ADL after surgery for adult spinal deformity on health-related QOL 2 years after surgery ▶ page164

○Takashi Terao¹, Yoshinobu Yamanouchi¹, Takuto Kurakawa², Masaaki Ito³,
Teppei Suzuki³, Kohei Kawakita³, Koki Uno³

¹Department of Rehabilitation, National Hospital Organization Kobe Medical
Center,

²Kurakawa Orthopedic clinic otorhinolaryngology,

³Department of Orthopaedic Surgery, National Hospital Organization Kobe
Medical Center

01-3-5 Which spinopelvic and hip morphological parameter are risk factors for hip joint osteoarthritis in postoperative adult spinal deformity patients ▶ page165

○Satoshi Inami¹, Kazuo Tomizawa¹, Hiroshi Moridaira¹, Daisaku Takeuchi², Tsuyoshi Sorimachi³, Haruki Ueda¹, Hiromichi Aoki¹, Takuya Imura², Hidekazu Arai¹, Nobuki Tanaka¹, Satoshi Takada¹, Hiroshi Taneichi¹

¹Department of Orthopedic Surgery, Dokkyo Medical University,

²Nasu Red Cross Hospital, ³Gotenyama Hospital

01-3-6 Trunk kinematics in relation with hip joint moment during gait in patients with adult spinal deformity ▶ page166

○Shogo Matsumoto^{1,3}, Satoshi Hakukawa², Satoshi Suzuki³, Mitsuru Yagi³, Morio Matsumoto³, Masaya Nakamura³, Takeo Nagura^{2,3}, Kota Watanabe³

¹Tokyo dental college Ichikawa general hospital,

²Department of Clinical Biomechanics, Keio University,

³Department of Orthopedic Surgery, Keio University

01-3-7 Nonoperative study of adult spinal deformity with minimum 2-year follow up ▶ page167

○Norichika Yoshie, Keishi Maruo, Tomoyuki Kusukawa, Kazuya Kishima, Humihiro Arizumi, Toshiya Tachibana

Orthopedic Department, Hyogo College of Medicine, Nishinomiya

Luncheon Seminar 2

11:30 ~ 12:30

Moderator : Naobumi Hosogane (Kyorin University)

LS2 Management of lower lumbar and pelvic alignment in adult spinal deformity surgery ▶ page132

○Tomohiko Hasegawa, Yukihiro Matsuyama

Dept. Orthopaedics, Hamamatsu university school of medicine

Sweets Seminar 2

14:30 ~ 15:30

Moderator : Koki Uno (National Hospital Organization Kobe Medical Center)

SS2 3D Correction for Adolescent Idiopathic Scoliosis ▶ page141

○Peter O. Newton

Rady Children's Hospital, UCSD

Moderator : Tomoaki Toyone (Department of Orthopaedic Surgery, Showa University School of Medicine)

01-4-1 Influence of Posterior Correction and Fusion Surgery for Adolescent Idiopathic Scoliosis on Sports and Trunk Movements - A Questionnaire Study ▶ page168

○Aimi Nagano¹, Yuto Tomita², Satoshi Suzuki², Yohei Takahashi²,
Satoshi Nori², Narihito Nagoshi², Mitsuru Yagi², Masaya Nakamura²,
Morio Matsumoto²

¹Keio Shonan Fujisawa Senior High School,

²Department of Orthopedic Surgery, Keio University School of Medicine

01-4-2 Actual condition of back pain in patients with adolescent idiopathic scoliosis ▶ page169

○Kei Watanabe¹, Masayuki Ohashi¹, Yuta Kusabe¹, Hideki Tashi¹,
Yohei Shibuya¹, Tatsuo Makino¹, Hiroyuki Kawashima¹, Kazuhiro Hasegawa²,
Toru Hirano³

¹Department of Orthopaedic Surgery, Niigata University Medical and Dental Hospital,

²Department of Orthopaedic Surgery, Uonuma Kikan Hospital, ³Niigata Spine Center

01-4-3 Substantial mismatch of skeletal maturity assessment between Risser sign and SSMS/TOCI in patients with idiopathic scoliosis ▶ page170

○Masaaki Chazono^{1,2}, Takeshi Inoue², Shintaro Obata²

¹Department of Orthopaedic Surgery, Utsunomiya National Hospital,

²Department of Orthopaedic Surgery, The Jikei University School of Medicine

01-4-4 Deformation of the vertebral body near the aorta after idiopathic scoliosis surgery ▶ page171

○Taiji Iwasawa, Ryouji Tauti, Tetsuya Ohara, Kosuke Takimura,
Yuuta Hosokawa, Yosuke Takeichi

Orthopedics and spine center, Meijo Hospital

01-4-5 Three-dimensional evaluation of vertebral deformity in a main thoracic curve of adolescent idiopathic scoliosis of Lenke type 1 and 2 ▶ page172

○Hideki Tashi, Masayuki Ohashi, Yohei Shibuya, Tatsuo Makino, Kei Watanabe
Division of Orthopedic Surgery, Niigata University Medical and Dental Hospital

01-4-6 Relationship cervical kyphosis and thoracic kyphosis angle in children with restricted forward bending ▶ page173

○Bunichiro Izumi¹, Yasuhiro Izumi²

¹Hiroshima City Hiroshima Citizens Hospital, ²IZUMI Orthopedic Clinic

01-4-7 Risk factor of allogenic blood transfusion in scoliosis surgery-comparison of AIS and NMS ▶ page174

○Gen Inoue, Wataru Saito, Eiki Shirasawa, Masayuki Miyagi, Takayuki Imura, Shinsuke Ikeda, Yusuke Mimura, Toshiyuki Nakazawa, Masashi Takaso
Department of Orthopaedic Surgery, Kitasato University School of Medicine

Evening Seminar 2

17:10 ~ 18:10

Moderator : Katsumi Harimaya (Kyushu University Beppu Hospital)

ES2 Evolution of correction techniques and 3-D Correction using Spinal Rod Link Reducer ▶ page136

○Daisuke Sakai
Dept. of Orthop. Surg., Tokai Univ. School of Med.

Hands-on Seminar

1st day - Friday, November 5th

Hands-on Seminar 1

14:00 ~ 15:30

HS-1 MAZOR X Spine Robot System Hands-on

Room1

2nd day - Saturday, November 6th

Morning Seminar 1

8:00 ~ 9:00

Moderator : Kentaro Fukuda (Saiseikai Yokohamashi Tobu Hospital)

MS1-1 Achievement of Appropriate Spinal Alignment in Adult Spinal Deformity Surgery ▶ page137

○Hiroaki Nakashima

Orthopedic Department, Nagoya University Graduate School of Medicine

MS1-2 Mechanical Complication Countermeasures for Adult Spinal Deformity Surgery-Changing the Fate of the Non-physiological Spine- ▶ page138

○Yu Yamato^{1,2}

¹Division of Geriatric Musculoskeletal Health, Hamamatsu University School of Medicine,

²Department of Orthopaedic Surgery, Hamamatsu University School of Medicine

International Case Discussion 1 - AIS-

9:10 ~ 9:40

Moderator : Daisuke Sakai (Department of Orthopaedic Surgery, Tokai University School of Medicine)

○Shinji Takahashi

Department of Orthopaedic Surgery, Osaka City University Graduate School of Medicine

○Cheung, Jason Pui Yin

The University of Hong Kong

○Chee Kidd Chiu

University of Malaya

○Takashi Kaito

Department of Orthopaedic Surgery, Osaka University Graduate School of Medicine

○Hideki Shigematsu

The Department of Orthopaedics, Nara Medical University

International Case Discussion 2 - ASD-**9:40 ~ 10:10**

Moderator : Tokumi Kanemura (Konan Kosei Hospital)

- Akira Matsumura
Department of Orthopaedic Surgery, Osaka City General Hospital
- Hiroaki Nakashima
Orthopedic Department, Nagoya University Graduate School of Medicine
- Hey Hweng Dennis
National University of Singapore
- C.C.Wong
University Malaysia Sarawak Kuching, Sarawak, Malaysia
- Naobumi Hosogane
Department of Orthopedic Surgery, Kyorin University School of Medicine

Special Symposium Future of School Screening in Scoliosis**10:20 ~ 11:40**

Moderator : Manabu Ito (President of Japanese Scoliosis Society, Department of
Orthopaedic Surgery, National Hospital Organization
Hokkaido Medical Center)

Kota Watanabe (Department of Orthopedic Surgery, Keio University
School of Medicine)

SSY-1 Policy on early detection of scoliosis in child growth and development Process ▶ page105

- Hanako Jimi
A member of House of Councilors, Doctor

SSY-2 Issues and prospects on school scoliosis screening in Japan ▶ page106

- Hiroshi Kuroki
Department of Orthopaedic Surgery, National Hospital Organization, Miyazaki
Higashi Hospital

SSY-3 The issues of the scoliosis screening in the school medical examination for locomotive organ ▶ page107

- Sadao Arai
Arai orthopedic clinic

SSY-4 学校健康診断におけるより正確な脊柱側弯症検診のための仕組みづくりに向けて ▶ page108

- Tadakazu Miki
Health Education and Shokuiku Division, Elementary and Secondary Education
Bureau, Ministry of Education, Culture, Sports, Science and Technology

Luncheon Seminar 3

12:00 ~ 13:00

Moderator : Takeshi Maeda (Department of Orthopedic Surgery, Spinal Injuries Center)

LS3 Prevention of complications in adult spinal deformity surgery

▶ page133

○Bungo Otsuki

Department of Orthopaedic surgery, Graduate School of Medicine, Kyoto University

Sweets Seminar 3 Hemostasis procedure in scoliosis surgery

13:15 ~ 14:15

Moderator : Masashi Takaso (Department of Orthopedics Surgery, Kitasato University School of Medicine)

SS3-1 Concepts of spinal flexibility on treatment of adolescent idiopathic scoliosis

▶ page142

○Hideki Shigematsu, Sachiko Kawasaki, Yuma Suga, Masaki Ikejiri,
Yasuhito Tanaka

Department of Orthopaedic surgery, Nara Medical University

SS3-2 Bleeding countermeasures for scoliosis surgery in the coronavirus era

▶ page143

○Toshiaki Kotani

Department of Orthopedic Surgery, Seirei Sakura Citizen Hospital

Oral2-4 Surgical Complication

14:25 ~ 15:15

Moderator : Hideki Nagashima (Department of Orthopedic Surgery, Tottori University)

O2-4-1 High volume of intraoperative blood loss in corrective surgery for thoracic kyphosis among patients with adolescent idiopathic scoliosis

▶ page194

○Yuta Hosokawa, Tetsuya Ohara, Ryoji Tauchi, Kosuke Takimura,
Taiji Iwasawa, Yosuke Takeichi

Department of Orthopaedic surgery and spinal surgery,Meijo Hospital

O2-4-2 Intraoperative blood loss during posterior spinal fusion in adolescent idiopathic scoliosis patients at our hospital

▶ page195

○Terue Hatakenaka, Hiroki Oba, Shota Ikegami, Shugo Kuraishi,
Masashi Uehara, Takashi Takizawa, Ryo Munakata, Takayuki Kamanaka,
Yoshinari Miyaoka, Tetsuhiko Mimura, Jun Takahashi
Shinshu University Department of Orthopaedic Surgery

02-4-3 Reoperation and its causes in adolescent idiopathic scoliosis

▶ page196

○Masaaki Iizuka¹, Noriaki Kawakami², Ryoji Tauchi³, Ayato Nohara^{1,3},
Tetsuya Ohara³, Toshiki Saito², Takashi Ono¹

¹Department of Spinal Surgery, JCHO Tokyo Shinjuku Medical Center,

²Department of Orthopedic and Spinal Surgery, Ichinomiyanishi Hospital,

³Department of Orthopedic and Spinal Surgery, Meijo Hospital

02-4-4 Preoperative nutritional intervention in malnourished adult spinal deformity patients reduces the incidence of postoperative medical complications

▶ page197

○Shin Oe¹, Jyun Watanabe², Tatsuya Akai², Tomomi Makino², Midori Ito²,
Yu Yamato¹, Tomohiko Hasegawa¹, Go Yoshida¹, Tomohiro Banno¹,
Hideyuki Arima¹, Yuki Mihara¹, Kouichiro Ide¹, Yuh Watanabe¹,
Kenta Kurosu¹, Yukihiro Matsuyama¹

¹Department of Orthopedic Surgery and Division of Geriatric Musculoskeletal
Health, Hamamatsu University School of Medicine,

²Department of Clinical Nutrition Unit, Hamamatsu University School of
Medicine

02-4-5 The impact of frailty on the recovery trajectory from the readmission and reoperation following ASD surgery

▶ page198

○Mitsuru Yagi, Satoshi Nori, Satoshi Suzuki, Yohei Takahashi, Osahiko Tsuji,
Narihito Nagoshi, Masaya Nakamura, Morio Matsumoto, Kota Watanabe
Department of Orthopedic Surgery, Keio University School of Medicine

02-4-6 Surgical outcome of revision surgery for proximal junctional failure in adult spine deformity

▶ page199

○Go Yoshida, Tomohiko Hasegawa, Yu Yamato, Tomohiro Banno,
Hideyuki Arima, Shin Oe, Yuki Mihara, Koichiro Ide, Yuh Watanabe,
Kenta Kurosu, Kenichi Nakai, Yukihiro Matsuyama
Orthopedic Department, Hamamatsu University School of Medicine

02-4-7 Prospective investigation of perioperative complications after correction surgery for spinal deformity

▶ page200

○Yohei Takahashi, Satoshi Suzuki, Osahiko Tsuji, Satoshi Nori,
Narihito Nagoshi, Mitsuru Yagi, Masaya Nakamura, Morio Matsumoto,
Kota Watanabe
Department of Orthopaedic Surgery, Keio University

Symposium 4 (Video Session) The Challenge of Elderly Spinal Deformity -My Surgical Technique and Special Points- 15:20 ~ 16:50

Moderator : Kazuhiro Hasegawa (Niigata Spine Surgery Center)

SY4-1 Spinal deformity in older adults, how to manage sagittal and coronal mal-alignment conservatively: tips and tricks

▶ page124

○Ibrahim Obeid

Bordeaux university hospital And Clinique du Dos Bordeaux Terrefort,
Bordeaux, France

SY4-2 Surgical technique to achieve the physiological proportion of postoperative lumbar lordosis in adult spinal deformity surgery

▶ page125

○Kentarō Fukuda

Department of Orthopediac Surgery, Saiseikai Yokohamashi Tobu Hospital,
Kanagawa

SY4-3 L5 osteotomy based on the disease state

▶ page126

○Takahashi Kobayashi¹, Eiji Abe¹, Yoshinori Ishikawa¹, Kazuma Kikuchi¹,
Hayato Kinoshita¹, Hajime Murai¹, Natsuo Konishi¹, Tsuyoshi Kawaraki¹,
Naohisa Miyakoshi²

¹Department of orthopedic surgery, Akita Kosei Medical Center,

²Department of Orthopedic Surgery, Akita University Graduate School of Medicine

SY4-4 Tips on correcting adult spinal deformity with minimally invasive technique

▶ page127

○Tomohisa Harada, Satoshi Makio

Spine Center, Rakuwakai Marutamachi Hospital

SY4-5 Dorsal ventral dorsal three stage correction for adult spinal deformity

▶ page128

○Kazuyuki Otani, Osamu Nakai, Shigeo Shindo

Department of Orthopaedic Surgery, Kudanzaka Hospital

Room2

2nd day - Saturday, November 6th

Morning Seminar 2

8:00 ~ 9:00

Moderator : Katsushi Takeshita (Department of Orthopaedic Surgery, Jichi Medical University)

MS2 What should we select the fusion area for adolescent idiopathic scoliosis? - What we learned from long-term results and endless discussion -

▶ page139

○Ayato Nohara

The Department of Spine surgery, JCHO Tokyo Shinjuku Medical Center

Oral2-1 AIS Lumbar Curve

9:10 ~ 9:55

Moderator : Hideki Murakami (Department of Orthopaedics, Iwate Medical University)

O2-1-1 The impact of overcorrection in the anterior surgery for adolescent idiopathic scoliosis with lumbar modifier A-R curve type

▶ page175

○Nobuki Tanaka¹, Satoshi Inami¹, Hiroshi Moridaira¹, Daisaku Takeuchi²,
Tsuyoshi Sorimachi³, Haruki Ueda¹, Hiromichi Aoki¹, Takuya Iimura²,
Hidekazu Arai¹, Satoshi Takada¹, Hiroshi Taneichi¹

¹Orthopedics, Dokkyo Medical University Hospital, ²Nasu Red Cross Hospital,

³Gotenyama Hospital

O2-1-2 Surgical treatment for the Lenke 1 AR curve patterns

▶ page176

○Satoshi Inami¹, Hiroshi Moridaira¹, Daisaku Takeuchi², Tsuyosi Sorimachi³,
Haruki Ueda¹, Hiromichi Aoki¹, Takuya Iimura¹, Hidekazu Arai¹,
Nobuki Tanaka¹, Satoshi Takada¹, Hiroshi Taneichi¹

¹Department of Orthopedic Surgery, Dokkyo Medical University,

²Nasu Red Cross Hospital, ³Gotenyama Hospital

O2-1-3 Male sex and preoperative apical vertebral translation of MT curve increase risk of MT progression in Lenke 5C AIS surgery.

▶ page177

○Hiroki Ushirozako^{1,2}, Weng Hong Chung³, Mohd Shahnaz Hasan³,
Chee Kidd Chiu³, Chris Yin Wei Chan³, Mun Keong Kwan³

¹Department of Orthopaedic Surgery, Hokkaido Spinal Cord Injury Center,

²Department of Orthopaedic Surgery, Hamamatsu University School of Medicine,

³Department of Orthopaedic Surgery (NOCERAL), University of Malaya

02-1-4 Relationship between sacral tilt and coronal alignment parameters in patients with Lenke type 5 adolescent idiopathic scoliosis

► page178

○Satoshi Takada, Satoshi Inami, Hiroshi Moridaira, Haruki Ueda,
Hiromichi Aoki, Hidekazu Arai, Hiroshi Taneichi
Department of Orthopaedic Surgery, Dokkyo medical university

02-1-5 Influence on LIV disc wedging by TL/T ration after selective lumbar fusion in patients with AIS Lenke 5

► page179

○Ryoji Tauchi, Tetsuya Ohara, Kosuke Takimura, Yuta Hosokawa,
Taiji Iwasawa, Yosuke Takeichi
The Department of Orthopaedic and Spine surgery, Meijo Hospital

02-1-6 Evaluation of cervical sagittal alignment after selective posterior correction and fusion surgery for patient with Lenke Type5 adolescent idiopathic scoliosis

► page180

○Toshiki Okubo^{1,2,3}, Satoshi Suzuki^{2,3}, Youhei Takahashi^{2,3}, Osahiko Tsuji^{2,3},
Narihito Nagoshi^{2,3}, Mitsuru Yagi^{2,3}, Masaya Nakamura^{2,3}, Morio Matsumoto^{2,3},
Kota Watanabe^{2,3}

¹Department of orthopaedics surgery, National hospital organization, Murayama medical center,

²Department of orthopaedics surgery, Keio university school of medicine,

³Keio spine research group

Oral2-2 Adult Adolescent idiopathic Scoliosis and Others 10:00 ~ 10:45

Moderator : Norio Kawahara (Department of Orthopedic Surgery, Kanazawa Medical University)

02-2-1 Changes of SRS-22 score after the correction and fusion surgery for adult patients with idiopathic scoliosis Lenke 1

► page181

○Yasuhiro Kamata, Satoshi Suzuki, Yohei Takahashi, Osahiko Tsuji,
Satoshi Nori, Narihito Nagoshi, Mitsuru Yagi, Masaya Nakamura,
Morio Matsumoto, Kota Watanabe
Department of Orthopaedic Surgery, Keio University School of Medicine

02-2-2 Evaluation of outcomes of posterior corrective fusion using SRS-22 for AIS of Lenke type 5 left behind in adults.

► page182

○Reo Shibata, Satoshi Suzuki, Yohei Takahashi, Osahiko Tsuji, Satoshi Nori,
Narihito Nagoshi, Mitsuru Yagi, Masaya Nakamura, Morio Matsumoto,
Kota Watanabe
Department of Orthopaedics Surgery, Keio University School of Medicine

02-2-3 Clinical outcomes and disability of daily life of corrective fusion surgery down to L4, L5, and pelvis for adult scoliosis ▶ page183

○Hideyuki Arima, Tomohiko Hasegawa, Yu Yamato, Go Yoshida,
Tomohiro Banno, Shin Oe, Yuki Mihara, Yuh Watanabe, Keiichi Nakai,
Kenta Kurosu, Yukihiro Matsuyama
Department of Orthopedic Surgery, Hamamatsu University School of Medicine

02-2-4 Clinical feasibility of completely autologous fibrin glue in surgery for spinal deformity ▶ page184

○Yuki Taniguchi^{1,2}, Yoshitaka Matsubayashi¹, Toshiyuki Ikeda³, So Kato¹,
Toru Doi^{1,2}, Yasushi Oshima¹, Hitoshi Okazaki³, Sakae Tanaka¹
¹Department of Orthopedics, the University of Tokyo Hospital,
²Department of Next Generation Locomotive Imaging System, The University of
Tokyo,
³Department of Blood Transfusion, The University of Tokyo Hospital

02-2-5 The influence of rib resection on pulmonary function in spine surgery ▶ page185

○Satoru Demura, Satoshi Kato, Kazuya Shinmura, Noriaki Yokogawa,
Norihiko Oku, Makoto Handa, Ryohei Annen, Motoya Kobayashi,
Yohei Yamada, Ken Nagatani, Hiroyuki Tsuchiya
Department of Orthopedic Surgery, Kanazawa University

02-2-6 Sagittal imbalance and need for future long-term care: Locomotive Syndrome and Health Outcomes in the Aizu Cohort Study (LOHAS) ▶ page186

○Kazuyuki Watanabe¹, Koji Otani¹, Miho Sekiguchi¹, Takuya Nikaido¹,
Kinshi Kato¹, Hiroshi Kobayashi¹, Ryoji Tominaga², Yoshihiro Kobayashi¹,
Shoji Yabuki¹, Shin-ichi Kikuchi¹, Shin-ichi Konno¹
¹Department of Orthopaedic Surgery, Fukushima Medical University,
²Department of Orthopaedic and Spinal Surgery, Aizu Medical Center of
Fukushima Medical University

Oral2-3 EOS (Congenital, Nuromuscular and Syndromic) 10:50 ~ 11:40

Moderator : Masashi Takaso (Department of Orthopaedic Surgery, Kitasato
University School of Medicine)

02-3-1 Examination of factors related to growing rod lengthening ▶ page187

○Yoshiaki Oda, Haruo Misawa, Tomoko Tetsunaga, Kouji Uotani,
Shinichirou Takao, Yuya Kaziki, Toshifumi Ozaki
Orthopedic Department, Okayama University Hospital, Okayama

02-3-2 The spinal growth process after VEPTR surgery for early onset scoliosis ▶ page188

○Satoshi Baba^{1,2}, Noriaki Kawakami^{2,3}, Tetsuya Ohara², Toshiki Saito^{2,3}, Ryoji Tauchi²

¹Department of Spinal Surgery, JCHO Tokyo Shinjuku Medical Center,

²Department of Orthopaedic / Spine Surgery, Meijo Hospital,

³Department of Orthopaedic / Spine Surgery, Ichinomiyanishi Hospital

02-3-3 An exploratory study of the risk of infection after surgery for neuromuscular scoliosis in children ▶ page189

○Naoyuki Nakamura¹, Takako Momose¹, Masatoshi Oba¹, Wataru Nakamura¹, Yota Katsuyama¹, Jiro Machida¹, Yutaka Inaba², Yuichiro Kawabe²

¹Dept. of Orthop. Surg., Kanagawa Children's Medical Center.,

²Dept. of Orthopedic Surgery, Yokohama City University

02-3-4 Posterior spinal correction fusion surgery for neuromuscular scoliosis patients who were planning to be treated with Nusinersen ▶ page190

○Shinsuke Ikeda¹, Masayuki Miyagi¹, Wataru Saito¹, Ayano Matsui², Toshiyuki Nakazawa¹, Takayuki Imura¹, Eiki Shirasawa¹, Akiyoshi Kuroda¹, Ayumu Kawakubo¹, Yuji Yokoze¹, Gen Inoue¹, Masashi Takaso¹

¹Department of Orthopaedic Surgery Kitasato University School of Medicine,

²Department of Orthopaedic Surgery National Center of Neurology and Psychiatry

02-3-5 Incidence of complications for scoliosis surgery with cerebral palsy ▶ page191

○Hidemasa Umekoji, Nohara Ayato, Masaaki Iizuka, Syunichi Kishida, Satoshi Baba, Takashi Ono

Department of Spinal Surgery, Tokyo Shinjuku Medical Center

02-3-6 Tracheomalacia among neuromuscular scoliosis ▶ page192

○Yoh Fujimoto, Kazuharu Takikawa

Department of Pediatric orthopedics, Shizuoka Children's Hospital

02-3-7 Risk Factors of Unplanned Return to OR due to Postoperative Progression of scoliosis in Congenital Scoliosis: Minimum 10-year Follow-up Study ▶ page193

○Noriaki Kawakami¹, Hiroko Matsumoto², Toshiki Saito¹, Ryoji Tauchi³, Tetsuya Ohara³

¹Orthopedics Surgery, Ichinomiyanishi Hospital,

²Pediatric Orthopedics, Columbia University,

³Orthopedics Surgery, Meijo Hospital

Luncheon Seminar 4**12:00 ~ 13:00**

Moderator : Kazuhiro Hasegawa (Niigata Spine Surgery Center)

LS4 Perspectives for sagittal profiles in pediatric spinal deformity

▶ page134

○Kota Watanabe

Department of Orthopedic Surgery, Keio University School of Medicine

Sweets Seminar 4**13:15 ~ 14:15**

Moderator : Haruhisa Yanagida (Department of Orthopaedics & Spine Surgery, Fukuoka Children's Hospital)

SS4 Four-dimensional spinal reconstruction using anatomically pre-bent rods in thoracic adolescent idiopathic scoliosis

▶ page144

○Hideki Sudo

Department of Advanced Medicine for Spine and Spinal Cord Disorders, Faculty of Medicine and Graduate School of Medicine, Hokkaido University

Oral2-5 Screening, Conservative Treatment**14:25 ~ 15:15**

Moderator : Hiroshi Ozawa (Department of Orthopaedic Surgery, Tohoku Medical and Pharmaceutical University)

O2-5-1 Effectiveness of a mobile Silhouetter system for mass scoliosis screening.

▶ page201

○Ryo Mizukoshi¹, Kazuki Takeda¹, Kei Ito¹, Tatsuya Yamamoto¹,
Yoshio Shinozaki¹, You Shiba², Eisaku Satou³, Ritsu Shiba², Jun Ogawa¹¹The Department of Spine, Japanese Red Cross Shizuoka Hospital,²Shiba Orthopedics surgery, ³Oya Orthopedic surgery Clinic**O2-5-2 Scoping reviews on the cost of school scoliosis screening**

▶ page202

○Masaaki Chazono^{1,2}¹Department of Orthopaedic Surgery, Utsunomiya National Hospital,²Department of Orthopaedic Surgery, The Jikei University School of Medicine**O2-5-3 Effectiveness of scoliosis screening using a 3D scanner-based Moire imaging device**

▶ page203

○Kota Watanabe¹, Katsumi Abe², Hiroaki Jinguji², Masamichi Takahashi²,
Masaya Nakamura¹, Morio Matsumoto¹¹Department of Orthopedic Surgery, Keio University School of Medicine,²Tokyo health service association

02-5-4 Curve changes after brace treatment in Lenke type1,2 A/B

► page204

○Masaki Tomori¹, Yoshiyasu Arai¹, Kyohei Sakaki¹, Yu Matsukura²

¹Department of Orthopedics, Saiseikai kawaguchi General Hospital,

²Department of Orthopedics, Tokyo Medical &Dental University

02-5-5 Comparison between brace therapy alone and brace therapy in combination with exercise therapy for adolescent idiopathic scoliosis

► page205

○Ken Yamazaki¹, Takayuki Kikuchi², Satoshi Yoshida³

¹Iwate Spine, Scoliosis Center, ²Kitakami Saiseikai Hospital,

³Yoshida Orthopedic Surgery Clinic

02-5-6 Deep learning predicts the curve progression in adolescent idiopathic scoliosis

► page206

○Yasuhito Yahara^{1,2}, Shoji Seki¹, Ai Tamura³, Yongbum Lee³, Hiroto Makino¹, Hayato Futakawa¹, Katsuhiko Kamei¹, Yoshiharu Kawaguchi¹

¹Department of Orthopaedic Surgery, Faculty of Medicine, University of Toyama,

²Department of Molecular and Medical Pharmacology, Faculty of Medicine, University of Toyama,

³Graduate School of Health Science, Niigata University

02-5-7 Marriage and childbirth of patients with operatively and nonoperatively treated adolescent idiopathic scoliosis at a mean 26-year follow-up

► page207

○Masayuki Ohashi¹, Kei Watanabe¹, Toru Hirano², Kazuhiro Hasegawa³, Hideki Tashi¹, Yohei Shibuya¹, Tatsuo Makino¹, Hiroyuki Kawashima¹

¹Department of Orthopedic Surgery, Niigata University,

²Department of Orthopedic Surgery, Uonuma Kikan Hospital,

³Niigata Spine Surgery Center

Oral2-6 AIS Thoracic Curve

15:20 ~ 16:10

Moderator : Hiroshi Taneichi (Department of Orthopaedic Surgery, Dokkyo Medical University)

02-6-1 Characteristics of Distal Adding-on in Lenke type 1A and 2A according to last touching vertebra

► page208

○Shinji Takahashi, Hidetomi Terai, Hiromitsu Toyoda, Hiroaki Nakamura

Department of Orthopaedic Surgery, Osaka City University Graduate School of Medicine

02-6-2 Midterm surgical outcomes of selective thoracic fusion and time dependent change of distal adding-on in Lenke type 1B and 1C

► page209

○ Takeshi Fujii^{1,2}, Satoshi Suzuki¹, Yohei Takahashi¹, Osahiko Tsuji¹,
Satoshi Nori¹, Narihito Nagoshi¹, Mitsuru Yagi¹, Masaya Nakamura¹,
Morio Matsumoto¹, Kota Watanabe¹

¹Department of Orthopaedic Surgery, Keio University School of Medicine, Tokyo, Japan,

²Department of Orthopaedic Surgery, Saiseikai Yokohama-shi Tobu Hospital

02-6-3 Evaluation of Shoulder Balance in Adolescent Idiopathic Scoliosis Lenke Type 2 in Males -Differences from Females Using Propensity Score Matching

► page210

○ Naohiro Nakachi, Masaaki Ito, Teppei Suzuki, Koki Uno
National Hospital Organization Kobe Medical Center

02-6-4 Impact of the correction surgery on upper ribs in patients with thoracic adolescent idiopathic scoliosis

► page211

○ Yoko Ishikawa, Yuichiro Abe, Terufumi Kokabu, Hiroyuki Tachi,
Yasushi Yanagibashi, Takahiko Hyakumachi
Wajo-kai Eniwa hospital

02-6-5 Post-operative Cobb angle is predictable by the Cobb angle at bending position in adolescent idiopathic scoliosis surgery

► page212

○ Hidetomi Terai, Shinji Takahashi, Hiromitsu Toyoda, Minoru Kato,
Hiroaki Nakamura
Department of Orthopaedic Surgery, Osaka City University Graduate School of Medicine, Osaka, Japan

02-6-6 Which factors affect to deterioration of upper thoracic curve on adolescent idiopathic scoliosis?

► page213

○ Takahiro Kawakami, Hideki Shigematsu, Sachiko Kawasaki, Yuma Suga,
Yusuke Yamamoto, Yasuhito Tanaka
Nara Medical University, The Department of Orthopaedic Surgery

02-6-7 Comparison of long-term outcomes between selective thoracic fusion and long fusion in adolescent idiopathic thoracic scoliosis

► page214

○ Ayato Nohara¹, Noriaki Kawakami², Tetsuya Ohara³, Toshiki Saito²,
Ryoji Tauchi³

¹Department of Spine Surgery, JCHO Tokyo Shinjuku Medical Center,

²Department of Spine and Scoliosis Center, Ichinomiya Nishi Hospital,

³Department of Orthopedics and Spine Surgery, Meijo Hospital

Hands-on Seminar

2nd day - Saturday, November 6th

Hands-on Seminar2

10:00 ~ 11:30

HS-2 Decompression and osteotomy using an ultrasonic scalpel

○Tomohiko Hasegawa

Department of Orthopedic Surgery, Hamamatsu Medical University School of
Medicine

Short Talk1 AIS Thoracic Curve

On-demand Streaming

Questioner : Toru Hirano (Department of Orthopedic Surgery, Niigata University Medical and Dental Hospital Uonuma Kikan Hospital)

Shoji Seki (Department of Orthopaedic Surgery, University of Toyama)

ST-1-1 Surgical results of upper thoracic curve with Lenke type 2 adolescent idiopathic scoliosis ▶ page215

○Tsuyoshi Sakuma¹, Toshiaki Kotani¹, Tsutomu Akazawa², Yasushi Iijima¹, Kotaro Sakashita¹, Seiji Ohtori³, Shohei Minami¹

¹Department of Orthopaedic Surgery, Seirei Sakura Citizen Hospital,

²Department of Orthopaedic Surgery, St. Marianna University School of Medicine,

³Department of Orthopaedic Surgery, Graduate School of Medicine, Chiba University

ST-1-2 Intraoperative predictive factors of postoperative shoulder balance in Lenke 2 AIS patients ▶ page216

○Akira Matsumura¹, Takashi Namikawa¹, Masatoshi Hoshino¹, Ryosuke Yanai¹, Yusuke Hori¹, Masaki Kawamura¹, Hiroaki Nakamura²

¹Department of Orthopaedic Surgery, Osaka City General Hospital,

²Department of Orthopaedic Surgery, Osaka City University Graduate School of Medicine

ST-1-3 Posterior correction surgery using sublaminar tape on concave side of proximal thoracic curve for Lenke type 2 adolescent idiopathic scoliosis ▶ page217

○Kota Watanabe, Mitsuru Yagi, Satoshi Suzuki, Yohei Takahashi, Satoshi Nori, Osahiko Tsuji, Masaya Nakamura, Morio Matsumoto

Department of Orthopedic Surgery, Keio University School of Medicine

ST-1-4 Upper end vertebra at T1 is a risk factor of postoperative shoulder imbalance in Lenke type 2A adolescent idiopathic scoliosis ▶ page218

○Norihito Isogai^{1,2,3}, Mitsuru Yagi^{1,3}, Nao Otomo^{1,2,3}, Yoshihiro Maeda^{1,3}, Satoshi Suzuki^{1,3}, Satoshi Nori^{1,3}, Osahiko Tsuji^{1,3}, Narihito Nagoshi^{1,3}, Masaya Nakamura^{1,3}, Morio Matsumoto^{1,3}, Kota Watanabe^{1,3}

¹Department of Orthopaedic Surgery, Keio University School of Medicine,

²Department of Orthopaedic Surgery, School of Medicine, International University of Health and Welfare (IUHW) Mita Hospital,

³Keio Spine Research Group

ST-1-5 Difference between segmental screw fixation and skip segment screw in adolescent idiopathic scoliosis surgery of Lenke type 1 and 2

► page219

○Yuki Mihara¹, Weng Hong Chung², Chee Kidd Chiu², Chris Yin Wei Chan²,
Mun Keong Kwan², Yukihiro Matsuyama¹

¹Dept. of Orthopaedic surgery, Hamamatsu University School of Medicine,

²Dept. of orthopaedic surgery, Faculty of medicine, University of Malaya

ST-1-6 Long-term clinical outcome of short fusion strategy for Lenke type 1A adolescent idiopathic scoliosis

► page220

○Soya Kawabata¹, Takeshi Fujii², Satoshi Suzuki³, Yohei Takahashi³,
Satoshi Nori³, Osahiko Tsuji³, Narihiro Nagoshi³, Nobuyuki Fujita¹,
Mitsuru Yagi³, Masaya Nakamura³, Morio Matsumoto³, Kota Watanabe³

¹Department of Orthopaedic Surgery, Fujita Health University,

²Department of Orthopaedic Surgery, Saiseikai Yokohamashi Tobu Hospital,

³Department of Orthopaedic Surgery, Keio University

ST-1-7 Correction loss of lower lumbar hemi-curves impacts on postoperative coronal balance remodeling after selective thoracic fusion for Lenke 1C curves

► page221

○Masayuki Ishikawa, Tomohisa Tabata, Mitsuhiro Nishida, Yasuhito Kaneko,
Osamu Sekiguchi

Department of Orthopaedic Surgery, Keiyu Hospital

ST-1-8 Changes of shoulder balance and thoracic kyphosis in the surgical correction for Lenke 1A-R and 1A-L

► page222

○Ryota Takatori¹, Masateru Nagae¹, Taisuke Watanabe², Tomonori Itsuji³,
Yuichi Shimizu¹, Hitoshi Tonomura¹, Kenji Takahashi¹

¹Department of Orthopaedics, Graduate School of Medical Science, Kyoto
Prefectural University of Medicine,

²Department of Orthopedic Surgery, Akashi City Hospital,

³Department of Orthopedic Surgery, Japanese Red Cross Kyoto Daini Hospital

ST-1-9 The use of sublaminar wiring and hooks can provide as much correction as the pedicle screws for idiopathic scoliosis

► page223

○Toshiyuki Ogata, Kentaro Fukuda, Takeshi Fujii, Masahiro Ozaki
Saiseikai Yokohamashi Tobu Hospital

ST-1-10 Modified rod rotation correction maneuver in Lenke type2

► page224

○Masayoshi Machida¹, Kentaro Fukuda², Hiroyuki Kato³, Mitsuru Yagi⁴,
Atsushi Miyake⁵, Takuya Kawai⁶, Yosuke Kobayashi⁶, Masashi Saito⁷,
Masafumi Machida¹

¹The Department of Orthopaedic Surgery, Saitama Children Medical Center,

²The Department of Orthopaedic Surgery, Saiseikai Yokohama Tobu Hospital,

³The Department of Orthopaedic Surgery, Tokai University,

⁴The Department of Orthopaedic Surgery, Keio University,

⁵The Department of Orthopaedic Surgery, National Defense Medical College,

⁶The Department of Spine and Spinal Cord Surgery, Yokohama Brain Spine Center,

⁷The Department of Orthopaedic Surgery, Taisei Hospital

Short Talk2 AIS Surgery 1

On-demand Streaming

Questioner : Ryuichi Takemasa (Department of Orthopaedic Surgery, Kochi Medical School, Kochi University)
Ikuho Yonezawa (Sangubashi Spine Surgery Hospital)

ST-2-1 Surgical outcome of posterior spinal fusion in severe adolescent idiopathic scoliosis (Cobb angle>80°.)

► page225

○Masaki Kawamura¹, Akira Matsumura¹, Takashi Namikawa¹,
Masatoshi Hoshino¹, Yuusuke Hori¹, Ryosuke Yanai¹, Hiroaki Nakamura²

¹Department of Orthopedic Surgery, Osaka City General Hospital,

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ST-2-2 The efficacy of intraoperative tranexamic acid administration and simultaneous exposure in double and triple curve adolescent idiopathic scoliosis surgery

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○Yasushi Iijima¹, Toshiaki Kotani¹, Tsuyoshi Sakuma¹, Tsutomu Akazawa²,
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ST-2-3 Sagittal spinopelvic alignment after anterior spinal fusion in adolescent idiopathic scoliosis(Lenke Type 5C)

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○Shinya Arataki, Yoshihiro Fujiwara, Taro Yamauchi, Masato Tanaka
Department of Orthopaedic Surgery, Okayama Rosai Hospital

ST-2-4 Both thoracic and lumbar curve fusion for Lenke 3,4,6 adolescent idiopathic scoliosis - A case series of stopping at L3

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○Takanao Shimabukuro, Hideo Kinjyou, Chikashi Yamakawa, Shogo Fukase, Hiromichi Oshiro, Yasunori Tome, Kotaro Nishida
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○Shingo Maekawa¹, Nobuchika Kawasaki¹, Yoshinori Nakata², Masashi Takaso³, Toshiki Saito⁴
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○Sohei Ebara
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○Sohei Ebara
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Short Talk3 AIS Surgery 2

On-demand Streaming

Questioner : Yoichi Aota (Department of Orthopaedics, Fureai Yokohama Hospital)
Koji Kanzaki (Department of Orthopedic Surgery, Showa University Fujigaoka Hospital)

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The Department of Orthopedic Surgery, Tottori University Hospital

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Department of Orthopaedic Surgery, Kanazawa University
- ST-3-3 Dose posterior correction and fusion to upper thoracic spine cause neck axial pain for adolescent idiopathic scoliosis?** ▶ page236
- Kei Watanabe¹, Masayuki Ohashi¹, Hideki Tashi¹, Yohei Shibuya¹, Tatsuo Makino¹, Hiroyuki Kawashima¹, Kazuhiro Hasegawa³, Toru Hirano²
¹Department of Orthopaedic Surgery, Niigata University School of Medicine,
²Department of Orthopaedic Surgery, Uonuma Kikan Hospital,
³Niigata Spine Center
- ST-3-4 Examination of activities of daily living in postoperative AIS patients using the Japanese version of the Lumbar Stiffness Disability Index** ▶ page237
- Taro Okumura¹, Takehide Katogi¹, Yasushi Iijima², Tsuyoshi Sakuma², Toshiaki Kotani², Shohei Minami²
¹Department of Physical therapy Seirei Sakura Citizen Hospital,
²Department of Orthopedic Surgery Seirei Sakura Citizen Hospital
- ST-3-5 Pneumothorax after scoliosis surgery; report of 3 cases** ▶ page238
- Hidetomi Terai, Shinji Takahashi, Hiromitsu Toyoda, Minori Kato, Hiroaki Nakamura
Department of Orthopaedic Surgery, Osaka City University Graduate School of Medicine
- ST-3-6 Effects of posterior fusion surgery on Body Image(BI) of Adolescent Idiopathic Scoliosis(AIS).** ▶ page239
- Takehide Katogi¹, Taro Okumura¹, Toshiaki Kotani², Yasushi Iijima², Tsuyoshi Sakuma², Syohei Minami²
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²Department of Orthopedic Surgery Seirei Sakura Citizen Hospital
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Department of Orthopedic Surgery, Keio University School of Medicine
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Department of Orthopaedic Surgery, Faculty of Medicine, Oita University

Questioner : Satoru Demura (Department. of Orthopaedic Surgery, University of Kanazawa)
Masashi Miyazaki (Department of Orthopaedic Surgery, Faculty of
Medicine, Oita University)

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○Tetsuro Ohba, Koji Fujita, Kotaro Oda, Nobuki Tanaka, Marina Katsu,
Hirotaka Haro
Department of Orthopaedic Surgery, University of Yamanashi

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○Yohshiro Nitobe, Kanichiro Wada, Toru Asari, Gentaro Kumagai,
Yasuyuki Ishibashi
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○Keisuke Masuda¹, Hideki Shigematsu², Akinori Okuda³, Sachiko Kawasaki²,
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○Toru Doi¹, Kei Watanabe², Ryo Sugawara³, Hirokazu Inoue³, So Kato¹,
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○Shoji Seki, Hiroto Makino, Yasuhito Yahara, Katsuhiko Kamei,
Hayato Futagawa, Taketoshi Yasuda, Kenta Watanabe, Yoshiharu Kawaguchi
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○Shoji Seki, Hiroto Makino, Yasuhito Yahara, Katsuhiko Kamei, Hayato Futagawa, Taketoshi Yasuda, Kenta Watanabe, Yoshiharu Kawaguchi
Department of Orthopaedic Surgery, University of Toyama

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○Yusuke Yamamoto, Hideki Shigematsu, Sachiko Kawasaki, Yuma Suga, Yasuhito Tanaka
Department of Orthopaedic surgery, Nara Medical University

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○Kanichiro Wada, Gentaro Kumagai, Toru Asari, Yoshiro Nitobe, Yasuyuki Ishibashi
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○Yusuke Yamamoto, Hideki Shigematsu, Sachiko Kawasaki, Yuma Suga, Yasuhito Tanaka
Department of Orthopaedic surgery, Nara Medical University

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○Natsumi Horikita^{1,4}, Takashi Uemura², Fuko Murai³, Takayuki Warita⁴, Daisuke Sakai⁵, Hiroshi Yamada², Seiji Miyazaki², Masahiko Watanabe⁵

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Questioner : Ichiro Kikkawa (Jichi Children's Medical Center Tochigi)

Yu Yamato (Division of Geriatric Musculoskeletal Health, Hamamatsu University School of Medicine)

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○Naoyuki Nakamura¹, Takako Momose¹, Masatoshi Oba¹, Wataru Nakamura¹, Yota Katsuyama¹, Jiro Machida¹, Yutaka Inaba², Yuichiro Kawabe²

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○Hiromu Kawakami^{1,2}, Hiroki Oba¹, Terue Hatakenaka¹, Shugo Kuraishi¹, Shota Ikegami¹, Masashi Uehara¹, Takashi Takizawa¹, Ryo Munakata¹, Takayuki Kamanaka¹, Yoshinari Miyaoka¹, Noriko Sakai², Jun Takahashi¹

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○Tomomi Iitsuka¹, Ryouji Tauchi², Kousuke Takimura², Yuta Hosokawa², Taiji Iwasawa², Yousuke Takeichi², Toshiki Saito³, Tetsuya Ohara^{1,2}

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○Misaki Shimura¹, Yuumi Tutiya¹, Yukina Shimizu¹, Mieko Aoyagi¹, Hiroki Oba², Jun Takahashi²

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○Keiko Suzuki, Tetsuya Torio, Fumitaka Kugimiya, Seiji Uogishi, Hiroshi Masaki, Yuuho Kadono

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○Ayato Nohara, Hidemasa Umekoji, Shunichi Kishida, Satoshi Baba, Masaaki Iizuka, Takashi Ono

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Questioner : Naoyuki Nakamura (Dept. of Orthop. Surg., Kanagawa Children's Medical Center.)
Toshiki Saito (Department of Orthopaedics Surgery, Ichinomiya West Hospital)

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○Hiroki Oba, Terue Hatakenaka, Kuraishi Shugo, Shouta Ikegami,
Masashi Uehara, Takashi Takizawa, Ryo Munakata, Takayuki Kamanaka,
Yoshinari Miyaoka, Jun Takahashi
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○Wataru Saito^{1,2}, Eiki Shirasawa², Masayuki Miyagi², Takayuki Imura²,
Toshiyuki Nakazawa², Yusuke Mimura², Yuji Yokozeki², Akiyoshi Kuroda²,
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○Tomoya Kanto, Hiroshi Moridaira, Satoshi Inami, Haruki Ueda,
Hiromichi Aoki, Hidekazu Arai, Nobuki Tanaka, Satoshi Takada,
Hiroshi Taneichi

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○Yoshitaka Suzuki¹, Noriaki Kawakami², Tetsuya Ohara³, Sachiko Inukai⁴,
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○Masatake Ino, Takachika Shimizu, Keisuke Fueki, Naofumi Toda,
Masatoshi Ono
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Short Talk6 ASD Surgery 1

On-demand Streaming

Questioner : Satoshi Inami (Department of Orthopaedic Surgery, Dokkyo Medical University)
Masaaki Chazono (Department of Orthopaedic Surgery, Utsunomiya National Hospital)

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○Takumi Takeuchi, Kazumasa Konishi, Hideto Sano, Masato Takahashi,
Shoichi Ichimura, Naobumi Hosogane
Department of Orthopedic Surgery, Kyorin University School of Medicine

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○Shunsaku Takigami, Yoshiaki Hiranaka, Masaaki Ito, Teppei Suzuki,
Kohei Kawakita, Kokichi Uno
The Department of Orthopedics, Kobe Medical Center

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○Masanari Takami¹, Hiroshi Hashizume¹, Hiroshi Iwasaki¹, Syunji Tsutsui¹,
Keiji Nagata¹, Ryo Taiji¹, Shizumasa Murata¹, Takuhei Kozaki¹,
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○Kenyu Ito¹, Tokumi Kanemura¹, Hiroaki Nakashima², Kotaro Satake¹,
Mikito Tsushima¹, Hiroyuki Koshimizu², Jun Ouchida², Yoshinori Morita²,
Yukihito Ode¹, Shiro Imagama²
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○Masayuki Ishihara, Shinichirou Taniguuchi, Masaaki Paku, Yoichi Tani,
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Department of Orthopaedic surgery, Kansai Medical University

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○Kensuke Kubota, Takeshi Maeda
Department of Orthopedic Surgery, Spinal Injuries Center

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○Yusuke Chiba, Hideki Murakami, Hirooki Endo, Daisuke Yamabe,
Ryosuke Oikawa, Hirotaka Yan, Minoru Doita
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○Takashi Kaito, Shota Takenaka, Takahito Fujimori, Yuya Kanie, Seiji Okada
Department of Orthopaedic Surgery, Osaka University Graduate School of Medicine

Short Talk7 ASD Surgery 2

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Questioner : Ken Ishii (International University of Health and Welfare)
Hideo Hosoe (Hirano General Hospital)

ST-7-1 Treatment results of lumbosacral fusion for lumbar degenerative posterior scoliosis with lumbar spinal stenosis ▶ page272

○Kyotaro Ota, Taichi Tsuji
Department of Orthopedic Surgery, Toyota Kosei Hospital

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○Kyotaro Ota, Taichi Tsuji
Department of Orthopedic Surgery, Toyota Kosei Hospital

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○Kenyu Ito¹, Tokumi Kanemura¹, Kotaro Satake¹, Hiroaki Nakashima²,
Hiroyuki Koshimizu², Jun Ouchida², Yoshinori Morita², Yukihide Ode¹,
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○Takuya Mishiro
Department of Orthopaedic Surgery, Takamatsu Red Cross Hospital

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○Takashi Kaito

Department of Orthopaedic Surgery, Osaka University Graduate School of Medicine

ST-7-6 Predictors of ADL restriction after correction surgery for adult spinal deformity**▶ page277**○Masayuki Ishihara, Shinichirou Taniguuchi, Masaaki Paku, Yoichi Tani, Takashi Adachi, Muneharu Ando, Takanori Saito
Department of Orthopaedic surgery, Kansai Medical University**ST-7-7 Difference in Impact of Spinal Fusion on Activity of Daily Living between US and Japanese Adult Spinal Deformity Patients****▶ page278**○Naobumi Hosogane^{1,6,7}, Mitsuru Yagi^{2,6,7}, Christopher Ames^{3,6},
Virginie Lafage^{4,6}, Hitoshi Kono^{5,7}, Masahito Takahashi¹, Hideto Sano¹,
Takumi Takeuchi¹, Kazumasa Konishi¹, Shoichi Ichimura¹¹Department of Orthopedic Surgery, Kyorin University,²Department of Orthopedic Surgery, Keio University,³University of California, San Francisco,⁴Hospital for Special Surgery, ⁵Keiyu Orthopedic Hospital, ⁶ISSG, ⁷KSRG**ST-7-8 Change of pelvic incidence and pelvic ring ratio after lumbosacral fusion****▶ page279**○Hiroaki Nakashima^{1,3}, Noriaki Kawakami^{2,3}, Tetsuya Ohara³, Toshiki Saito^{2,3},
Ryoji Tauchi³, Shiro Imagama¹¹Orthopedic Department, Nagoya University Graduate School of Medicine,²Department of Orthopedics and Spine Surgery, Ichinomiyanishi Hospital,³Meijo Hospital Orthopedics and Spine Center

Short Talk8 ASD Surgical Complication**On-demand Streaming**Questioner : Masato Tanaka (Department of Orthopedic Surgery, Okayama Rosai Hospital)
Takahiro Iida (Department of Orthopaedic Surgery Spine Center, Teine Keijinkai Hospital)

ST-8-1 The efficacy of junctional tether weave technique for preventing PJF after adult deformity surgery**▶ page280**○Keishi Maruo, Fumihiro Arizumi, Kazuya Kishima, Norichika Yoshie,
Tomoyuki Kusukawa, Toshiya Tachibana
Department of Orthopaedic Surgery, Hyogo College of Medicine**ST-8-2 Analysis of mechanical complications using GAP score after adult spinal deformity surgery with LLIF and posterior fusion****▶ page281**○Akihiko Hiyama, Daisuke Sakai, Hiroyuki Katoh, Masato Sato,
Masahiko Watanabe
Department of Orthopaedic Surgery, Tokai University School of Medicine

ST-8-3 Revision spine deformity surgery -10 years or longer after primary procedure- ▶ page282

○Masatoshi Inoue¹, Hidehisa Torikai¹, Keigo Enomoto¹, Yoshinori Nakata², Kazuhide Inage³, Seiji Ohtori³

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○Yoshiaki Hiranaka, Koki Uno, Kohei Kawakita, Teppei Suzuki, Masaaki Ito
The Department of Orthopaedic Surgery, National Hospital Organization Kobe Medical Center

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○Masayuki Ishihara, Shinichirou Taniguchi, Masaaki Paku, Yoichi Tani, Takashi Adachi, Muneharu Ando, Takanori Saito
Department of Orthopaedic surgery, Kansai Medical University

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○Yutaro Shimooki, Hideki Murakami, Hirooki Endo, Daisuke Yamabe, Yusuke Chiba, Ryosuke Oikawa, Hirotaka Yan, Minoru Doita
Department of Orthopedics, Iwate Medical University

ST-8-7 Mechanical Failure of Pan-Lumbar Spinal Arthrodesis for Adult Spinal Deformity: PLIF / TLIF vs. LIF combined with L5/S PLIF ▶ page286

○Kotaro Satake¹, Tokumi Kanemura¹, Kenyu Ito¹, Hiroaki Nakashima², Shiro Imagama²
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○Katsuhito Kiyasu, Nobuaki Tadokoro, Naoki Aoyama, Ryuichi Takemasa, Masahiko Ikeuchi
Department of Orthopaedics Surgery, Kochi Medical School

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○Toshiki Saito¹, Noriaki Kawakami¹, Tomoyuki Ohsato¹, Tetsuya Ohara², Ryoji Tauchi²
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Questioner : Kanichiro Wada (Orthopaedic Surgery, Hirosaki University Graduate School of Medicine)
Takanori Saito (Kansai Medical University Orthopedic Surgery)

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○Hiroki Takeda¹, Yuichiro Abe^{1,3}, Sota Nagai², Soya Kawabata², Daiki Ikeda², Tatsushi Inoue¹, Nobuyuki Fujita², Shinjiro Kaneko¹

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○Masato Tanaka¹, Taro Yamauchi¹, Shinya Arataki¹, Yoshihiro Fujiwara¹, Tomoyoshi Sakaguchi²

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○Hiromichi Aoki, Satoshi Inami, Hiroshi Moridaira, Daisaku Takeuchi, Haruki Ueda, Hutoshi Asano, Takuya Iimura, Hidekazu Arai, Tomoya Kantou, Satoshi Takada, Hiroshi Taneichi

Department of Orthopaedic Surgery, Dokkyo Medical University

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○kohei Okuyama¹, Toshiaki Kotani¹, Tsuyoshi Sakuma¹, Yasushi Iijima¹, Kotaro Sakashita¹, Tsutomu Akazawa², Shohei Minami¹, Kazuhide Inage³, Yasuhiro Shiga³, Seiji Ohtori³

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³Department of Orthopedic Surgery, Chiba University, Graduate School of Medicine

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○Yusuke Mimura, Masayuki Miyagi, Kosuke Murata, Tomohisa Koyama, Akiyoshi Kuroda, Eiki Shirasawa, Wataru Saito, Takayuki Imura, Toshiyuki Nakazawa, Gen Inoue, Masashi Takaso

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○Hiroto Makino, Shoji Seki, Taketoshi Yasuda, Yasuhito Yahara,
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○Kenyu Ito¹, Tokumi Kanemura¹, Yujiro Kagami¹, Jun Ouchida²,
Kotaro Satake¹, Hiroaki Nakashima², Mikito Tsushima¹, Hiroyuki Koshimizu²,
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○Sho Inoue¹, Masayuki Miyagi¹, Kosuke Murata¹, Tomohisa Koyama¹,
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○Akiyoshi Kuroda, Masayuki Miyagi, Kosuke Murata, Tomohisa Koyama,
Ayumu Kawakubo, Yuji Yokozeki, Motoki Makabe, Gen Inoue,
Masashi Takaso
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Short Talk10 Screening, and Conservative Treatment On-demand Streaming

Questioner : Kenta Fujiwara (Doi Orthopaedic Clinic)
Takuya Yamamoto (Japanese Red Cross Kagoshima Hospital)

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Questioner : Yuichiro Abe (Wajo-kai Eniwa hospital)

Naohisa Miyakoshi (Department of Orthopedic Surgery, Akita
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○Kenta Kurosu¹, Go Yoshida¹, Yu Yamato², Tomohiko Hasegawa¹,
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○Kota Watanabe, Mitsuru Yagi, Satoshi Suzuki, Yohei Takahashi, Satoshi Nori,
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○Toshiaki Kotani¹, Tsuyoshi Sakuma¹, Yasushi Iijima¹, Kotaro Sakashita¹, Kohei Okuyama¹, Tsutomu Akazawa², Shohei Minami¹, Kazuhide Inage³, Seiji Ohtori³

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○Nozomu Ohtomo, Yuki Taniguchi, Keiichiro Tozawa, Yuichi Yoshida, Kosei Nagata, Hideki Nakamoto, So Kato, Toru Doi, Yoshitaka Matsubayashi, Yasushi Oshima

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