The 20th Annual Meeting of Japan Society for the Study of Surgical Technique for Spine and Spinal Nerves (JPSTSS)

Program
6 ~ 7 September 2013

6 September (Fri.)
Main Hall 1

7:30 Registration
7:55 ~ 8:00 ~ Opening Remarks ~ President Koji Sato, M.D.
8:00 ~ 9:00 (60min.)

Main Theme 1
〈Tips of craniocervical surgery〉
Chairpersons Masakazu Takayasu, M.D., Masanori Ito, M.D.

M1-1
A basilar invagination case treated with posterior decompressive fixation using occipital condyle screw .................................................. 149
Nobuyuki Shimokawa, M.D., et al.
(Spine Center, Tsukazaki Hospital, Himeji, Hyogo)

M1-2
S-line - the border between normal swallowing and dysphagia- .......... 151
Shuichi Kaneyama, M.D., et al.
(Department of Orthopaedic Surgery, Kobe Rosai, Kobe, Hyogo)

M1-3
Acutrak screw fixation with endoscopic system for the dens fracture ... 153
Shingo Onda, M.D., et al.
(Orthopedics Department, Jyuntendou Shizuoka Hospital, Izunokuni, Shizuoka)

M1-4
Atlanto-axial fixation using atlantal lateral mass screw prevents postoperative kyphosis ................................................................. 155
Jun Mizutani, M.D., et al.
(Nagoya City University Hospital, Orthopaedic Surgery, Nagoya, Aichi)

M1-5
Facetectomy is more effective than foraminotomy to prevent iatrogenic foraminal stenosis after cervical pedicle screw fixation ......... 157
Akiyoshi Yamazaki, M.D., et al.
(Spine Center, Department of Orthopaedic Surgery, Niigata Central Hospital, Niigata, Niigata)

M1-6
Surgical results of laminoplasty for cervical myelopathy due to localized anterior compression ....................................................... 159
Toshikatsu Mamada, M.D., et al.
(Spine Center, Social Insurance Central General Hospital, Shinjuku, Tokyo)

M1-7
Is modified K line effective for deciding the number of expanded laminae of selective expansive double-door laminoplasty? .......... 161
Shunsuke Kanbara, M.D., et al.
(Orthopaedic Department, Chutoen General Medical Center, Spine Center, Kakegawa, Shizuoka)

9:00 ~ 9:05 Break 5min.

9:05 ~ 9:50 (45min.) 20th Anniversary Lecture I (Postgraduate Lecture of JOA)
Chairpersons Masafumi Machida, M.D.

AI-1
3D and Balance Major functions in spinal pathology with special attention to the EOS imaging system ........................................... 104
Jean Duboussé, M.D. [Member of French National Academy of Medicine, Paris, France]

9:25 ~ 9:55 (Spine Leader’s Lecture A of Main Hall 2 page 71)
9:50 ~ 9:55 Transfer 5min.

9:55 ~ 10:55 (60min.) Spine Leader’s Lecture B-I (Postgraduate Lecture of JOA)
Chairpersons Noriaki Kawakami, M.D.

SLL-B-I
Extreme lateral interbody fusion (XLIF) in adult sagittal and coronal deformity: applications and treatment-oriented classification ...... 122
[NuVasive Japan K.K.]
13:05〜13:10  Transfer  5min.
13:10〜13:25 (15min.)  
General Assembly (Report of board meeting and finance)  
President  Koji Sato, M.D.
Announcement of President-elect  
Naoki Asami, M.D.  (Spine Surgery, Ikeda Hospital, Kobayashi, Miyazaki)

13:25〜14:45 (80min.)  
Symposium I  
Minimally invasive spine stabilization  
Chairpersons  Ken Ishii, M.D., Takanori Saito, M.D.

S-I-1  
Limitation of MIS in Complex Deformity and Revision Surgery  
Jeffrey S. Roh, M.D.  
(Division of Proliance Surgeons, ProOrtho, Seattle Minimally Invasive Spine Center, Seattle, USA)

S-I-2  
The use Minimally Invasive Stabilization (MIS) in Management of Advanced Metastatic Spinal Disease  
Mun Keong Kwan, M.D.  
(Department of Orthopaedic Surgery, Faculty of Medicine, University of Malaya, Kuala Lumpur, Malaysia)

S-I-3  
Difference of approaches of MIS-PLIF in decreasing postoperative symptoms  
Takeshi Arizono, M.D., et al.  
(Orthopaedic Department, Kyushu Central Hospital, Fukuoka, Fukuoka)

S-I-4  
Multi-level MIS-TLIF for degenerative lumbar scoliosis  
Keisuke Nakano, M.D., et al.  
(Orthopaedic Department, Takeoka Seishikai Hospital, Takeoka, Toyama)

S-I-5  
Clinical results of minimally invasive spine stabilization (MIS) for metastatic spine tumor  
Kazuo Nakanoishi, M.D., et al.  
(Department of Orthopaedic, Traumatology and Spine Surgery, Kawasaki Medical School, Kurashiki, Okayama)

S-I-6  
MIST with vertebral osteotomy for osteoporotic vertebra: a preliminary report of two cases  
Takashi Tomita, M.D.  
(Orthopaedic Department, Aomori City Hospital, Aomori, Aomori)
Preliminary Report of CBT Screw with PLIF
Tetsuo Ohwada, M.D., et al.  
[Department of Orthopaedic Surgery, Kansai Rousai Hospital, Amagasaki, Hyogo]
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The XLIF surgery assisted with micro-endoscope
Hirohiko Inanami, M.D., et al.  
[Orthopaedic Department, Iwai Orthopaedic Medical Hospital, Edogawa-ku, Tokyo]
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Posterior Fusion in the Cervical Spine using Percutaneous Pedicle Screw
Yokio Someya, M.D., et al.  
[Orthopaedic Department, Omigawa Hospital, Katori, Chiba]
179

Minimally Invasive Dorsal Percutaneous Spondylodesis for the Treatment of Adult Pyogenic Spondylodiscitis
Tomoyuki Ozawa, M.D., et al.  
[Teikyo Chiba Medical Center, Ichihara, Chiba]
181

Accuracy of percutaneous pedicle screw placement using the oblique fluoroscopic view based on preoperative CT measurement
Go Yoshida, M.D., et al.  
[Orthopaedic Department, Hamamatsu medical center, Hamamatsu, Shizuoka]
183

Cutting edge of microendoscopic TLIF
Yuichi Takano, M.D., et al.  
[Department of Orthopaedic Surgery, Iwai Orthopaedic Medical Hospital, Edogawabashi, Tokyo]
185

Effectiveness of MIS-TLIF as revision surgery
Yasuhito Kaneko, M.D., et al.  
[Department of Orthopaedic Surgery, Kawasaki Municipal Kawasaki Hospital, Kawasaki, Kanagawa]
187

Comparison of clinical outcomes and complications of minimally invasive lumbar interbody fusion among age
Koichiro Ono, M.D., et al.  
[Orthopaedic Department, Nihon Koukan Hospital, Kawasaki, Kanagawa]
189

Mini-open TLIF with cannulated polyaxial screws
Yasuhiro Nakajima, M.D., et al.  
[Department of Neurosurgery, Nagoya University, Graduate School of Medicine, Nagoya, Aichi]
191

Extreme lateral interbody fusion (XLIF): initial experiences and early outcomes
Hidetoshi Yamaguchi, M.D., et al.  
[Department of Spine & Orthopaedic Surgery, Konan Kosei Hospital, Konan, Aichi]
193

Approach selection in the L5/S1 fixation using MIS
Kenji Fukaya, M.D., et al.  
[Department of Neurosurgery, Ayabe Renaiss Hospital, Ayabe, Kyoto]
195

MRI evaluation of posterior muscle atrophy by posterolateral approach for cervical pedicle screw fixation
Hideyuki Doi, M.D., et al.  
[Department of Orthopaedics, Kochi Health Sciences Center, Kochi, Kochi]
197

Perioperative complications of mini-open Oblique Lateral Interbody Fusion
Bungo Otsuki, M.D., et al.  
[Department of Orthopaedics, Graduate School of Medicine, Kyoto University, Kyoto, Kyoto]
199

Radiological Assessments of Indirect Neural Decompression after Oblique Lateral Interbody Fusion
Shunsuke Fujibayashi, M.D., et al.  
[Department of Orthopaedic Surgery, Graduate School of Medicine, Kyoto University, Kyoto, Kyoto]
201

Free Papers a
〈Minimally invasive spine stabilization〉
Chairpersons  Tsuyoshi Arizono, M.D., Masahiro Hoshino, M.D.
Minimally invasive surgery for L5 nerve root with intra- and extra-foraminal stenosis

Hirohiko Inanami, M.D., et al.
[Orthopaedicaedic Department, Iwai Orthopaedicaedic Medical Hospital, Edogawaku, Tokyo]

8:55〜9:05 Transfer 10min.
9:05〜9:50 (20th Anniversary Lecture I of Main Hall 1 page 65)
9:25〜9:55 (30min.)

Spine Leader’s Lecture A (Postgraduate Lecture of JOA)

9:55〜10:25 (30min.)
Chairpersons Nobuyuki Shimokawa, M.D.
Koji Sato, M.D. (Department Orthopedic and Spine Surgery, Nagoya Daini Red Cross Hospital, Nagoya, Aichi)

Spinal Surgery navigation with ARCADIS Orbic 3D
[Siemens Japan K.K.]

9:55〜10:55 (60min.)

Spine Leader’s Lecture B-II (Postgraduate Lecture of JOA)

9:55〜10:25 (30min.)
Chairpersons Masashi Yamazaki, M.D.
Takachika Shimizu, M.D. (Harunaso Hospital, Gunma Spine Center, Takasaki, Gunma)

Posterior cervical instrumented fusion surgery: positioning technique, surgical approach to CVJ, and appropriate anchor placement
[Johnson & Johnson K.K. DePuy Synthes Spine]

10:25〜10:55 (30min.)
Chairpersons Takeshi Uchida, M.D.
Masaya Nakamura, M.D. (Department of Orthopaedic Surgery, School of Medicine, Keio University, Shinjuku-ku, Tokyo)

Surgical procedures and outcomes of spinal cord tumors
[THE CHEMO-SERO-THERAPEUTIC RESEARCH INSTITUTE]

9:55〜10:55 (Spine Leader’s Lecture B-I of Main Hall 1 page 65)
Main Thema 2

〈 Dialysis associated spondylosis 〉
Chairpersons  Yoshiharu Kato, M.D., Junichi Kunogi, M.D.

Surgical therapy for dialysis-related spondyloarthritis 
Tomoyuki Ozawa, M.D., et al.
(Teikyo Chiba Medical Center, Ichihara, Chiba)

Clinical assessments of postoperative survival in patients with spinal disorders resulting from hemodialysis 
Tokuhide Moriyama, M.D., et al.
[Orthopaedic Department, Hyogo College of Medicine, Nishinomiya, Hyogo]

Evaluation of surgical outcomes for patients undergoing hemodialysis 
Shigeru Soshi, M.D., et al.
[Department of Orthopaedic Surgery, The Jikei University School of Medicine, Minato-ku, Tokyo]

Surgical treatment for cervical myelopathy in hemodialysis patients 
Kazuhiro Takeuchi, M.D., et al.
[Orthopaedic Department, National Okayama Medical Center, Okayama, Okayama]

Spinal fusion for the dialysis associated spondylosis of lumbar spine 
Yoshito Katayama, M.D., et al.
[Department of Orthopaedic Surgery, Nagoya Daini Red Cross Hospital, Nagoya, Aichi]

Posterior Lumbar Interbody Fusion in patients with long term hemodialysis 
Hirooki Nakashima, M.D., et al.
[Orthopaedic Department, Nagoya University Hospital, Nagoya, Aichi]

Surgical result of lumbar destructive spondyloarthropathy 
Norihiko Nakata, M.D., et al.
[Spine Center, Social Insurance Central General Hospital, Shinjyuku, Tokyo]

Two year follow up outcome of Dynamization PLIF for dialysis associated spondylosis 
Naoki Okamoto, M.D., et al.
[Spine-Orthopaedic Surgery, Japan Red Cross Medical Center, Tokyo Medical Center, Shibuyaku, Tokyo]
14:35 ~ 14:40 Break 5min.
14:40 ~ 15:20 (40min.)

Free Papers c
〈Dialysis associated spondylosis〉
Chairperson Kazuhiro Takeuchi, M.D., Norihide Moriyama, M.D.

Fe-1
Consideration of bleeding during the spine surgery in the patients with maintenance hemodialysis-factors for increased intraoperative bleeding and comparison with non-HD patients……………………………… 231
Kuniyoshi Tsuchiya, M.D., et al.
[Department of Orthopaedics, Kyushu Kosai Nenkin Hospital, Kitakyushu, Fukuoka] 14:35 ~ 14:40

Fe-2
Analysis of deep surgical site infections after spinal surgery for hemodialysis patients .......................... 233
Hiroyoshi Wada, M.D., et al.
[Department of Orthopaedic Surgery, Tokyo Women's Medical University, Shinjuku, Tokyo] 14:40 ~ 15:00

Fe-3
Reoperation of dialysis-associated spondylosis ........................................ 235
Hideo Baba, M.D., et al.
[Department of Orthopaedic Surgery, Nagasaki University School of Medicine, Nagasaki, Nagasaki] 14:55 ~ 15:15

Fe-4
9 cases that needed spinal fusion in short period after decompression for dialysis associated spondylosis ................................................................................. 237
Hiroshi Nakayama, M.D., et al.
[Sapporo City General Hospital, Sapporo, Hokkaido] 15:00 ~ 15:20

Fe-5
Antero-lateral partial vertebrectomy using beta-TCP in patients with hemodialysis .................................................. 239
Fumiyuki Momma, M.D., et al.
[Neurosurgical Service, Yamagata Tokushukai Hospital, Yamagata, Yamagata] 15:20 ~ 15:40

15:40 ~ 16:20 Booth Viewing 50min.

16:10 ~ 17:10 (60min.)

Hands-on Session 1
Chairpersons Masashi Yamazaki, M.D.
Posterior spinal instrumentation surgery : clinical significance and trick of cervical anchor placement by Takachika Shimizu, M.D.
[Johnson & Johnson K.K. DePuy Synthes Spine] 16:10 ~ 17:10

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Hands-on Session 3 of Main Hall 4 page 81
17:10 ~ 17:40

Hands-on Session 4
Chairpersons Yasutsugu Yukawa, M.D.
XLIF Surgical Technique by Pedro Berjano, M.D. [NuVasive Japan. K.K.] 17:40 ~ 18:40 (60min.)

Hands-on Session 5 of Main Hall 3 page 80
17:40 ~ 18:40

Hands-on Session 6 of Main Hall 4 page 82
18:40 ~ 18:45

Transfer 5min.

18:45 ~ 20:20

Banquet (Main Hall 1)
7:30 Registration

8:00 ~ 8:10 Transfer 10min.

8:10 ~ 8:50 (40min.)

Free Papers d

〈Endoscopic lumbar spinal decompression〉
Chairpersons Yukihiro Nakagawa, M.D.

An experience of anterior decompression to spinal cord through a posterior approach using endoscope together for the treatment of thoracic OPLL
Shoji Seki, M.D., et al.
(Department Orthopaedic Surgery, Faculty of Medicine, University of Toyama, Toyama, Toyama)

The surgical results of Lumbar extra foraminal stenosis—Experience of MED for Recurrent Lumbar Extra Foraminal Stenosis
Atsushi Tagami, M.D., et al.
(Department of Orthopaedic Surgery, Nagasaki University School of Medicine, Nagasaki, Nagasaki)

Clinical results of lumbar cystic lesion treated with microendoscopic procedure
Kenichi Kawaguchi, M.D., et al.
(Department of Orthopaedic Surgery, Saga-ken Medical Center Koseikan, Saga, Saga)

Clinical results and usefulness of percutaneous endoscopic discectomy interlaminar approach for recurrent lumbar disc herniation
Kazuo Ohmori, M.D., et al.
(Department of Orthopaedic Surgery, Nippon Kokan Hospital, Kawasaki, Kanagawa)

8:50 ~ 9:05 Transfer 15min.

9:05 ~ 9:50 (20th Anniversary Lecture I of Main Hall 1 page 65)

9:25 ~ 9:55 (Spine Leader’s Lecture A of Main Hall 2 page 71)

9:55 ~ 10:55 (Spine Leader’s Lecture B-I of Main Hall 1 page 65)

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11:55 ~ 12:05 Transfer 10min.

12:05 ~ 13:05 (“Nobunaga Oda” Lunch-on Seminar 1 of Main Hall 1 page 66)

12:05 ~ 13:05 (“Toshiie Maeda” Lunch-on Seminar 2 of Main Hall 2 page 72)

13:05 ~ 13:10 Transfer 5min.

13:10 ~ 13:25 (General Assembly at Main Hall 1 page 67)

13:25 ~ 13:30 Transfer 5min.

13:30 ~ 14:15 (45min.)

Free Papers e

〈Fusion using cortical bone trajectory screws〉
Chairpersons Tateru Shiraishi, M.D.

How to reduction of spodylolisthesis with cortical bone trajectory screw
Shinya Kato, M.D., et al.
(Orthopaedic Department, Kantoh Rosai Hospital, Kawasaki, Kanagawa)

Initial experience of posterior lumbar fusion using cortical bone trajectory screws: Grading of screw position on postoperative CT
Kentaro Naito, M.D., et al.
(Department of Neurosurgery, Osaka City University Graduate School of Medicine, Osaka, Osaka)
Surgical treatment using the connector in posterior re-fusion of the spine
Yosuke Kobayashi, M.D., et al.
(Orthopaedic Department, Kanto Rosai Hospital, Kawasaki, Kanagawa)

Corrective lumbar pelvic fixation for spinal deformity using mini-open Oblique Lateral Interbody Fusion (OLIF) and S2 Alar Iliac Screw fixation
Masanori Izeki, M.D., et al.
(Orthopaedic Department, Tazuke Kofukai Foundation, Medical Research Institute, Kitano Hospital, Osaka, Osaka)

14:50〜14:55 Break 5min.
14:55〜15:20 (25min.)

Free Papers g
< Spinal trauma >
Chairpersons Yasuo Ito, M.D.

A new procedure for fragment and end plate reduction of thoracolumbar burst fracture
Kazunori Hayashi, M.D., et al.
(Orthopaedic Department, Osaka City General Hospital, Osaka, Osaka)

Combined posterior short segment fixation and anterior interbody reconstruction for compression or burst fractures at lumbar spine
Kei Miyamoto, M.D., et al.
(Reconstructive Surgery for Spine, Bone, and Joint, Gifu University Graduate School of Medicine, Gifu, Gifu)

Navigation assisted posterior spinal fusion with percutaneous pedicle screw fixation for vertebral burst fracture
Tadashi Komatsu, M.D., et al.
(Orthopaedic Department, Kochi Health Sciences Center, Kochi, Kochi)

15:20〜16:10 Booth Viewing 50min.
16:10〜17:10 (60min.)

Hands-on Session 2
Chairpersons Yuji Matsubara, M.D.

Mini-open PLIF using midline approach
by Toshihiro Ando, M.D. (Japan Medical Dynamic Marketing, Inc.)
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<td>Chairpersons Shiro Imama, M.D.</td>
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<td>18:40</td>
<td>Severe coronal plane deformity correction techniques</td>
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<tr>
<td>18:40</td>
<td>by Kota Watanabe, M.D. [Medtronic Sofamor Danek, Co., Ltd.]</td>
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<td>Chairpersons Masakazu Takayasu, M.D.</td>
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<td>18:45</td>
<td>Correction of lumbar alignment using S4 MiSt system</td>
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<td>– current status and challenge in MiSt technique –</td>
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<td>18:45</td>
<td>by Yuich Takano, M.D., Kiyoshi Miyazaki, M.D. [B. BRAUN AESCULAP JAPAN Co., LTD.]</td>
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Hands-on Session 5

Chairpersons: Shiro Imama, M.D.
Severe coronal plane deformity correction techniques
by Kota Watanabe, M.D. [Medtronic Sofamor Danek, Co., Ltd.]

16:10 ~ 17:10 (Hands-on Session 1 of Main Hall 2 page 75)
16:10 ~ 17:10 (Hands-on Session 3 of Main Hall 4 page 81)
17:10 ~ 17:40 Booth Viewing 30min.
17:40 ~ 18:40 (60min.)

### Hands-on Session 5

- **Chairpersons**: Shiro Imama, M.D.
- **Severe coronal plane deformity correction techniques**
  - by Kota Watanabe, M.D. [Medtronic Sofamor Danek, Co., Ltd.]

#### Schedule:
- **16:10 ~ 17:10 (Hands-on Session 1 of Main Hall 2 page 75)**
- **16:10 ~ 17:10 (Hands-on Session 3 of Main Hall 4 page 81)**
- **17:10 ~ 17:40 Booth Viewing 30min.**
- **17:40 ~ 18:40 (60min.)**

### Hands-on Session 3

- **Chairpersons**: Masakazu Takayasu, M.D.
- **Correction of lumbar alignment using S4 MiSt system**
  - current status and challenge in MiSt technique
  - by Yuich Takano, M.D., Kiyoshi Miyazaki, M.D. [B. BRAUN AESCULAP JAPAN Co., LTD.]

#### Schedule:
- **17:10 ~ 17:40 Booth Viewing 30min.**
Hands-on Session 6

Chairpersons: Takanori Saito, M.D.
Effectiveness of using ILLICO SE system for MIS-TLIF
by Hiromichi Hachiya, M.D. (Alphatec Pacific, Inc.)

18:40 ~ 18:45 Transfer 5min.
18:45 ~ 20:20 Banquet (Main Hall 1)

7 September (Sat.)
Main Hall 1

7:30 Registration

8:00 ~ 9:00 (60min)
“Hideyoshi Toyotomi” Morning Seminar 1
(Postgraduate Lecture of JOA)
Chairpersons: Izumi Koyanagi, M.D.

MS-1-1 Futoshi Suetsuna, M.D. Ph.D. (Department of Orthopedic Surgery, Hachinohe Municipal Hospital, Hachinohe, Aomori)
Posterior decompression methods of upper cervical spine - Especially a new C2 tunneled dome laminectomy

MS-1-2 Naoki Asami, M.D. (Spine Surgery, Ikeda Hospital, Kabayashi, Miyazaki)
C1-2 posterior fusion The surgical history and now

8:00 ~ 9:00 ( "Kiyomasa Kato" Morning Seminar 2 of Main Hall 2 Page 91)
9:00 ~ 9:05 Break 5min
9:05 ~ 10:20 (75min)

Symposium II
<Adult spinal deformity>
Chairpersons: Shigeo Sano, M.D., Yukihiro Matsuyama, M.D.

S-II-1 Christopher P. Ames, M.D.
(Professor of Neurological Surgery, Department of Neurological Surgery, University of California, San Francisco, USA)
Circumferential fusion is superior to all posterior approaches in adult spinal deformity treatment

S-II-2 Federico P. Girardi, M.D.
(Associate Professor of Orthopedic Surgery, Associate Attending Spine Surgeon, Director of Research, Hospital for Special Surgery, Weill Medical College of Cornell University, New York, USA)
The Limitation of Adult Spine Deformity Surgery
Congruent sagittal spinopelvic alignment in adult spinal deformity: Verification of sagittal modifiers of the SRS-Schwab ASD classification based on Japanese standard values
Tokumi Kanemura, M.D., et al.
(Spine Center, Konan Kosei Hospital, Konan, Aichi)

Validation Study of Schwab and Rose Formulas in Adult Spinal Deformity: How to Use These Formulas in Planning of Corrective Surgery
Yu Yamato, M.D., et al.
(Department of Orthopaedic Surgery, Hamamatsu University School of Medicine, Hamamatsu, Shizuoka)

HAS-HAT9 Angle; A sagittal parameter which significantly influence sagittal alignment of the whole spine
Kei Miyamoto, M.D., et al.
(Reconstructive Surgery for Spine, Bone, and Joint, Gifu University Graduate School of Medicine, Gifu, Gifu)

How much correction was necessary in elderly kyphosis patients? Sanraku formula based on Full balance integrated (FBI) technique
Yusuke Nakao, M.D., et al.
(Orthopaedic & Spine Center, Sanraku Hospital, Chiyoda-ku, Tokyo)

Surgical algorithm for adult spinal deformity
Tomohiko Hasegawa, M.D., et al.
(Orthopaedic Department, Hamamatsu University School of Medicine, Hamamatsu, Shizuoka)

Clinical outcomes of spinal fusion for severe degenerative lumbar scoliosis - Is the short fusion suitable for DLS?
Hiroki Matsui, M.D., et al.
(Department of Orthopaedics Surgery, Nagoya University Graduate School of Medicine, Nagoya, Aichi)

Postoperative thoracic kyphosis >45 degrees result in poor sagittal alignment after lumbar PSD; irrespective of LL >Pi-10
Tomooki Toyone, M.D., et al.
(Department of Orthopaedic Surgery, Teikyo University Chiba Medical Center, Ichihara, Chiba)

Free Papers h
Chairpersons Akiyoshi Yamazaki, M.D.

Pedicle subtraction osteotomy for rigid kyphotic deformity in adults
Toru Doi, M.D., et al.
(Department of Spine and Orthopaedic Surgery, Japanese Red Cross Medical Center, Shibuya-ku, Tokyo)

Spinal fusion for the cases with high Pelvic Incidence
Yusuke Nakao, M.D., et al.
(Spine Center, Orthopaedic Department, Sanraku Hospital, Chiyoda-ku, Tokyo)

Clinical outcomes of posterior spinal short segmental decompression and fusion for lumbar spinal stenosis associated slight degenerative lumbar scoliosis
Hiroki Matsui, M.D., et al.
(Department of Orthopaedic Surgery, Nagoya University Graduate School of Medicine, Nagoya, Aichi)

Effectiveness of casting test as preoperative simulation for correction surgery of adult spinal deformity
Shinjiro Kaneko, M.D., et al.
(Department of Orthopaedic Surgery, National Hospital Organization Murayama Medical Center, Musashimurayama, Tokyo)

Spine Leader’s Lecture D-I (Postgraduate Lecture of JOA)
Chairpersons Koji Sato, M.D.

Spinal cord stimulation for intractable pain - Advanced devices enable new treatment strategies and clinical effects
Takashi Agari, M.D. (Okayama Graduate School, Okayama, Okayama)
11:35〜12:05 (30min)
Chairpersons  Makoto Taniguchi, M.D., Motoo Kubota, M.D. (Department of Spinal Surgery, Kameda Medical Center, Kamogawa, Chiba)

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(Century Medical, Inc.)

11:05〜12:05  (Spine Leader’s Lecture D-II of Main Hall 2 Page 93)

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12:15〜13:15 (60min)────────────────────────────
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(Postgraduate Lecture of JOA)
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13:15〜13:25  Transfer  10min

13:25〜14:25 (60min)────────────────────────────
20th Anniversary Lecture II
Perspectives for spine surgery: Analyzing the past / present and advice for the oncoming generation
Moderator  Kiyoshi Kumano, M.D. (JPSTSS board member)

Global development of modern spinal surgery is discussed

1. Discussion from spine instrumentation surgeon
   Shigeo Sano, M.D., [Orthopedic Surgeon, Sanraku Hospital]

2. Discussion from MISS surgeon
   Koji Sato, M.D. (Department Orthopedic Surgery, Nagoya Daini Red Cross Hospital)

3. Discussion from microscopic surgery surgeon
   Masakazu Takayasu, M.D. (Department of Neurological Surgery, Aichi Medical University School of Medicine)

14:15〜14:15  (Spine Leader’s Lecture E of Main Hall 2 Page 95)

14:25〜14:35  Break  10min

14:35〜15:15 (60min)

Main Theme 3
〈 Risk management for spinal surgery 〉
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### Management of intraoperative dural injury
Kazunori Shibamoto, M.D., et al.
(Department of Neurosurgery, Ichinomiya Nishi Hospital, Ichinomiya, Aichi)

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### Prophylactic intraoperative powdered vancomycin in patients undergoing spinal surgery
Ikuko Takahashi, M.D., et al.
(Division of Orthopaedic Surgery Department of Regenerative and Transplant Medicine Niigata University Graduate School of medical and dental science, Niigata, Niigata, Niigata)

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### A case of the remote cerebellar hemorrhage after spinal surgery
Zaika Tei, M.D., et al.
(Orthopaedic Department, Japanese Red Cross Medical Center, Shibuya-ku, Tokyo)

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### Main Theme 4
**< Intraoperative support equipment >**
Chairpersons: Masashi Neo, M.D., Tokumi Kanemura, M.D.

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Chairpersons: Hideo Hosoe, M.D., Macoudo Mochizuki, M.D.

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Yuichi Takano, M.D., et al.
(Department of Orthopaedic Surgery, Iwai Orthopaedic Medical Hospital, Edogawabashi, Tokyo)

Frequency of Pain Deterioration after Intramedullary Hemangioblastoma Resection

Hideyuki Arima, M.D., et al.
(Department of Orthopaedic Surgery, Hamamatsu University School of Medicine, Hamamatsu, Shizuoka)

Transdermal fentanyl for chronic low back pain

Tomoyuki Ozawa, M.D., et al.
(Teikyo Chiba Medical Center, Ichihara, Chiba)

Local administration of morphine for bone graft harvest

Kiyoshi Miyazaki, M.D., et al.
(Nara Kashiba center for orthoaplasty and spinal surgery, Kashibaasahigaoka Hospital, Kashiba, Nara)

Quantitative Evaluation of the pain in degenerative spinal disease

Naoki Higashiyama, M.D., et al.
(Department of neurosurgery, Akita university graduate school of medicine, Akita, Akita)

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“Katsuie Shibata” Lunch-on Seminar 4
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Spine Leader’s Lecture E (Postgraduate Lecture of JOA)
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(Department of Neurosurgery, Osaka City University Graduate School of Medicine, Osaka, Osaka)
16:10〜16:40

An anchored PEEK standalone cage in anterior cervical disectomy and fusion: short-term clinical and radiological outcomes
Osamu Nemoto, M.D., et al.
(Orthopaedic Department, Self Defense Forces Central Hospital, Setagayaku, Tokyo)
15:45〜16:10

Free Papers I
〈Case presentation (cervical spine)〉
Chairpersons Naoyuki Shizu, M.D.

A case of embolic bow hunter's stroke associated with anomalous vertebral artery
Keishi Tsunoda, M.D., et al.
(Department of Neurosurgery, Nagasaki University Hospital, Nagasaki, Nagasaki)
16:45〜16:10 (25min)

A case report of idiopathic hypertrophic spinal pachymeningitis of the cervical spine detected on the operation of cervical laminoplasty in the patient with traumatic non-osseous incomplete central spinal cord injury
Naohiro Asada, M.D.
(Department of Orthopaedic Surgery, Municipal Tsuruga Hospital, Tsuruga, Fukui)
15:40〜16:10 (50min)

A case of venous air embolism during Marmot operation
Morehoshi Noboru, M.D., et al.
(Nara Kashiba Center for Arthroplasty and Spine Surgery, Kashibaasahigaoka Hospital, Kashiba, Nara)
16:10〜16:40 (30min)

Free Papers m
〈Spinal tumor etc.〉
Chairpersons Toshiyuki Takahashi, M.D.

Surgical outcome of pyogenic spondylitis using posterior instrumentation
Kosuke Nakajo, M.D., et al.
(Spine Center, Tsukazaki Hospital, Himeji, Hyogo)
16:45〜16:10 (25min)

A novel surgical technique of TES (Total en bloc spondylectomy) using an ultrasonic bone curette
Kengo Fujii, M.D., et al.
(Spine and Orthopaedic Surgery, Japanese Red Cross Medical Center, Shibuya, Tokyo)
16:40〜16:45

One case that I kept a backward supporting tissue for all lap-related pressure of the spinal cord due to thoracic vertebra metastasis-related backbone tumor, and decompressed all laps characteristics by non-fixation
Kei Yoshikawa, M.D., et al.
(Orthopaedic Department, Juntendo University Shizuoka Hospital Izunokuni, Shizuoka)
16:45〜17:15 (30min)

Co-operation with the thoracic surgery group for the primary lung tumor which invades chest wall and/or thoracic spine
Ikku Aita, M.D., et al.
(Department of Orthopaedic Surgery, Tsukuba Medical Center Hospital, Tsukuba, Ibaraki)
16:45〜17:35 (50min)

Main Theme 7
〈Surgery for severe osteoporotic spine〉
Chairpersons Suguru Tomita, M.D.

Critical Issues of Balloon Kyphoplasty - Surgical Indication
Yudo Hachiya, M.D., et al.
[Hachiya Orthopaedic Hospital, Nagoya, Aichi]
16:40〜16:45

Indication and limitation of vertebroplasty with short posterior spinal fusion for pseudoarthrosis of osteoporotic vertebral fracture: A prospective multicenter study
Keichi Katsumi, M.D., et al.
(Department of Orthopaedic Surgery, Niigata University, Niigata, Niigata)
16:45〜17:35 (50min)

Posterior spinal shortening osteotomy for pseudarthrosis of osteoporotic thoracolumbar and lumbar vertebral fracture
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[Orthopaedic Department, Tokyo Metropolitan Geriatric Hospital, Itabashi-ku, Tokyo]

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Main Hall 3

7:30 Registration

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9:05〜10:15 (70min)

Free Papers o
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[Orthopaedic Department, National Hospital Organization Saitama National Hospital, Wako, Saitama]

Fo-2 Transspinous sublaminal decompression for cervical and lumbar spinal canal stenosis 437
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[Department of Neurosurgery, Kaneda Hospital, Maniwa, Okayama]

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Hands-on lecture for young surgeon and nurse course

Chairperson  Yoshito Katayama, M.D.

Keigo Ito, M.D., Hiroaki Nakajima, M.D., Akio Nuramoto, M.D.,
Tomohiro Matsumoto, M.D., Tetsuro Takatsu, M.D., Junichi Ukai, M.D.