

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.

MI-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)

MI-2

S-line -the border between normal swallowing and dysphagia- 151

Shuichi Kaneyama, M.D., et al.

(Department of Orthopaedicaedic Surgery, Kobe Rosai, Kobe, Hyogo)

MI-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)

MI-4

Atlanto-axial fixation using atlantal lateral mass screw prevents postoperative kyphosis 155

Jun Mizutani, M.D., et al.

(Nagoya City University Hospital, Orthopaedicaedic Surgery, Nagoya, Aichi)

MI-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)

MI-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, Shinjyuku-ku, Tokyo)

MI-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.

(Orthopaedicedic 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.

AL-I

3D and Balance Major functions in spinal pathology with special attention to the EOS imaging system 104

Jean Dubousset, 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)

9:55 ~ 10:25 (30min.)

Chairpersons Noriaki Kawakami, M.D.

SLL-B-I-1

Pedro Berjano, M.D. Ph.D. (Istituto Ortopedico Galeazzi, Milan, Italy)

Extreme lateral interbody fusion (XLIF) in adult sagittal and coronal deformity: applications and treatment-oriented classification 122

(NuVasive Japan K.K.)

10 : 25 ~ 10 : 55 (30min.)

Chairpersons Jun Mizutani, M.D.

SLL-B-I-2 Federico P. Girardi, M.D. (Associate Professor of Orthopedic Surgery, Associate Attending Spinal Surgeon, Director of Research, Hospital for Special Surgery, Weill Medical College of Cornell University, New York, USA)
Revision Surgery for Degenerative Scoliosis 124
(Japan Medical Dynamic Marketing, Inc.)

9 : 55 ~ 10 : 55 (Spine Leader's Lecture B-II of Main Hall 2 page 71)

10 : 55 ~ 11 : 55 (60min.)

Spine Leader's Lecture C-I (Postgraduate Lecture of JOA)

10 : 55 ~ 11 : 25 (30min.)

Chairpersons Tokumi Kanemura, M.D.

SLL-C-I-1 Christopher P. Ames, M.D. (Professor of Neurological Surgery, Department of Neurological Surgery, University of California, San Francisco, USA)
Pedicle Subtraction Osteotomy: Realignment Planning, Evolution of Construct Design and Outcome Variability 128
(JPSTSS)

11 : 25 ~ 11 : 55 (30min.)

Chairpersons Yuichi Kasai, M.D.

SLL-C-I-2 Mun Keong Kwan, M.D. (Department of Orthopaedic Surgery, Faculty of Medicine, University of Malaya, Kuala Lumpur, Malaysia)
Minimally Invasive stabilization (MIST): Current indications and its safety in Asian Population 130
(Medtronic Safamor Danek, Co., Ltd.)

10 : 55 ~ 11 : 55 (Spine Leader's Lecture C-II of Main Hall 2 page 72)

11 : 55 ~ 12 : 05 Transfer 10min.

12 : 05 ~ 13 : 05 (60min.)

“Nobunaga Oda” Lunch-on Seminar 1 (Postgraduate Lecture of JOA)

Chairpersons Shigeru Hirabayashi, M.D.

LS-I Sakae Tanaka, M.D. (Department of Orthopaedic Surgery, Faculty of Medicine, The University of Tokyo, Bunkyo-ku, Tokyo)
Pharmacological treatment of osteoporosis: an update 113
(Eli Lilly Japan K.K.)

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 (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 162
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 (MIST) in Management of Advanced Metastatic Spinal Disease 164
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 167
Takeshi Arizono, M.D., et al.
(Orthopaedic Department, Kyushu Central Hospital, Fukuoka, Fukuoka)
- S-I-4** Multi-level MIS-TLIF for degenerative lumbar scoliosis 169
Keisuke Nakano, M.D., et al.
(Orthopaedic Department, Takaoka Seishikai Hospital, Takaoka, Toyama)
- S-I-5** Clinical results of minimally invasive spine stabilization (MIST) for metastatic spine tumor 171
Kazuo Nakanishi, M.D., et al.
(Department of Orthopaedics, 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 173
Takashi Tomita, M.D.
(Orthopaedic Department, Aomori City Hospital, Aomori, Aomori)

S-I-7	Preliminary Report of CBT Screw with PLIF 175 Tetsuo Ohwada, M.D., et al. (Department of Orthopaedic Surgery, Kansai Rousai Hospital, Amagasaki, Hyogo)
S-I-8	The XLIF surgery assisted with micro-endoscope 177 Hirohiko Inanami, M.D., et al. (Orthopaedic Department, Iwai Orthopaedic Medical Hospital, Edgawa-ku, Tokyo)
S-I-9	Posterior Fusion in the Cervical Spine using Percutaneous Pedicle Screw 179 Yukio Someya, M.D., et al. (Orthopaedic Department, Omigawa Hospital, Katori, Chiba)
S-I-10	Minimally Invasive Dorsal Percutaneous Spondylodesis for the Treatment of Adult Pyogenic Spondylodiscitis 181 Tomoyuki Ozawa, M.D., et al. (Teikyo Chiba Medical Center, Ichihara, Chiba)

14 : 50 ~ 14 : 55 **Break** 5min.

14 : 55 ~ 16 : 05 (70min.) _____

Free Papers a

< Minimally invasive spine stabilization >

Chairpersons Tsuyoshi Arizono, M.D., Masahiro Hoshino, M.D.

Fa-1	Accuracy of percutaneous pedicle screw placement using the oblique fluoroscopic view based on preoperative CT measurement 183 Go Yoshida, M.D., et al. (Orthopaedic Department, Hamamatsu medical center, Hamamatsu, Shizuoka)
Fa-2	Cutting edge of microendoscopic TLIF 185 Yuichi Takano, M.D., et al. (Department of Orthopaedic Surgery, Iwai Orthopaedic Medical Hospital, Edogawa-ku, Tokyo)
Fa-3	Effectiveness of MIS-TLIF as revision surgery 187 Yasuhito Kaneko, M.D., et al. (Department of Orthopaedic Surgery, Kawasaki Municipal Kawasaki Hospital, Kawasaki, Kanagawa)
Fa-4	Comparison of clinical outcomes and complications of minimally invasive lumbar interbody fusion among age 189 Koichiro Ono, M.D., et al. (Orthopaedic Department, Nihon Koukan Hospital, Kawasaki, Kanagawa)

Fa-5	Mini-open TLIF with cannulated polyaxial screws 191 Yasuhiro Nakajima, M.D., et al. (Department of Neurosurgery, Nagoya University, Graduate School of Medicine, Nagoya, Aichi)
Fa-6	Extreme lateral interbody fusion (XLIF): initial experiences and early outcomes 193 Hidetoshi Yamaguchi, M.D., et al. (Department of Spine & Orthopaedic Surgery, Konan Kosei Hospital, Konan, Aichi)
Fa-7	Approach selection in the L5/S1 fixation using MIST 195 Kenji Fukaya, M.D., et al. (Department of Neurosurgery, Ayabe Renaiss Hospital, Ayabe, Kyoto)
Fa-8	MRI evaluation of posterior muscle atrophy by posterolateral approach for cervical pedicle screw fixation 197 Hideyuki Doi, M.D., et al. (Department of Orthopaedic Surgery, Kochi Health Sciences Center, Kochi, Kochi)
Fa-9	Perioperative complications of mini-open Oblique Lateral Interbody Fusion 199 Bungo Otsuki, M.D., et al. (Department of Orthopaedics, Graduate School of Medicine, Kyoto University, Kyoto, Kyoto)
Fa-10	Radiological Assessments of Indirect Neural Decompression after Oblique Lateral Interbody Fusion 201 Shunsuke Fujbayashi, M.D., et al. (Department of Orthopaedic Surgery, Graduate School of Medicine, Kyoto University, Kyoto, Kyoto)

16 : 05 ~ 16 : 10 **Transfer** 5min.

16 : 10 ~ 17 : 10 (Hands-on Session1 of Main Hall 2 page 75)

16 : 10 ~ 17 : 10 (Hands-on Session2 of Main Hall 3 page 79)

16 : 10 ~ 17 : 10 (Hands-on Session3 of Main Hall 4 page 81)

17 : 10 ~ 17 : 40 Booth Viewing 30min.

17 : 40 ~ 18 : 40 (Hands-on Session4 of Main Hall 2 page 75)

17 : 40 ~ 18 : 40 (Hands-on Session5 of Main Hall 3 page 80)

17 : 40 ~ 18 : 40 (Hands-on Session6 of Main Hall 4 page 82)

18 : 45 ~ 20 : 20 **Banquet (Main Hall 1)**



6 September (Fri.)

Main Hall 2

7:30 Registration

8:00~8:10 Transfer 10min.

8:10~8:55 (45min.)

Free Papers b
< Lumbar spinal decompression >

Chairpersons Hitoshi Hase, M.D.

- Fb-1** Necessity of discectomy for decompression in lumbar canal stenosis ... 203
 Hiroshi Nakamura, M.D., et al.
 (Department of Orthopaedicaedic Surgery, Musashino Red Cross Hospital, Musashino, Tokyo)
- Fb-2** The prevalence and natural history of asymptomatic cervical canal stenosis in patients undergoing surgery for lumbar canal stenosis 205
 Yoshifumi Kawanabe, M.D., et al.
 (Department of Neurosurgery, Shizuoka General Hospital, Shizuoka, Shizuoka)
- Fb-3** Strategy of Surgical treatment for L5 root pain of Lumbar Spinal Canal Stenosis 207
 Michinori Yamashita, M.D., et al.
 (Department of Orthopaedic Surgery, Nishijima Hospital, Numazu, Shizuoka)
- Fb-4** Global sagittal alignment after posterior decompression surgery in lumbar spinal canal stenosis patients 209
 Yusuke Nakao, M.D., et al.
 (Orthopaedicedic & Spine Center, Sanraku Hospital, Chiyoda-ku, Tokyo)
- Fb-5** Retrospective Study of Re-operation for Lumbar Degenerative Disease 211
 Sei Terayama, M.D., et al.
 (Department of Orthopaedicaedic Surgery, Japanese Red Cross Musashino Hospital, Musashino, Tokyo)

Fb-6

- Minimally invasive surgery for L5 nerve root with intra- and extra-foraminal stenosis 213
 Hirohiko Inanami, M.D., et al.
 (Orthopaedicedic Department, Iwai Orthopaedicedic Medical Hospital, Edogawa-ku, 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.
- SLL-A**
- Koji Sato, M.D. (Department Orthopedic and Spine Surgery, Nagoya Daini Red Cross Hospital, Nagoya, Aichi)
- Spinal Surgery navigation with ARCADIS Orbic 3D 121
 (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.
- SLL-B-II-1**
- 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 ... 127
 (Johnson & Johnson K.K. DePuy Synthes Spine)
- 10:25~10:55 (30min.)
- Chairpersons Takeshi Uchida, M.D.
- SLL-B-II-2**
- 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)

10:55 ~ 11:55 (60min.)

Spine Leader's Lecture C-II (Postgraduate Lecture of JOA)

10:55 ~ 11:25 (30min.)

Chairpersons Masashi Saito, M.D.

SLL-C-II-1 Eiji Abe, M.D. (Department of Orthopedic Surg., Akita Kumiai General Hospital, Akita, Akita)
Surgical Technique of S2 Alar Iliac Screw Fixation for Lumbopelvic Fusion 133
(Mizuho Ikakogyo Co., Ltd.)

11:25 ~ 11:55 (30min.)

Chairpersons Minoru Hoshimaru, M.D.

SLL-C-II-2 Ken Ishii, M.D. (Department of Orthopaedic Surgery, School of Medicine, Keio University, Shinjuku-ku, Tokyo)
Clinical trial for lower radiation exposure in Minimally Invasive spine Stabilization 135
(GE Healthcare Japan)

10:55 ~ 11:55 (Spine Leader's Lecture C-I of Main Hall 1 page 66)

11:55 ~ 12:05 Transfer 10min.

12:05 ~ 13:05 (60min.)

“Toshiie Maeda” Lunch on Seminar 2

(Postgraduate Lecture of JOA)

Chairpersons Sadaaki Nakai, M.D.

LS-2 Atsushi Harada, M.D. (Orthopedic Department, National Center for Geriatrics and Gerontology, Obu, Aichi)
Bone and muscle decline with age? 115
Osteoporosis and sarcopenia 115
(Taisho Toyama Pharmaceutical Co., Ltd.)

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

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 ~ 14:35 (65min.)

Main Thema 2

< Dialysis associated spondylosis >

Chairpersons Yoshiharu Kato, M.D., Junichi Kunogi, M.D.

M2-1	Surgical therapy for dialysis-related spondyloarthropathy 215 Tomoyuki Ozawa, M.D., et al. (Teikyo Chiba Medical Center, Ichihara, Chiba)
M2-2	Clinical assesments of postoperative survival in patients with spinal disorders resulting from hemodialysis 217 Tokuhide Moriyama, M.D., et al. (Orthopaedic Department, Hyogo College of Medicine, Nishinomiya, Hyogo)
M2-3	Evaluation of surgical outcomes for patients undergoing hemodialysis ... 219 Shigeru Soshi, M.D., et al. (Department of Orthopaedicaedic Surgery, The Jikei University School of Medicine, Minato-ku, Tokyo)
M2-4	Surgical treatment for cervical myelopathy in hemodialysis patients ... 221 Kazuhiro Takeuchi, M.D., et al. (Orthopaedic Department, National Okayama Medical Center, Okayama, Okayama)
M2-5	Spinal fusion for the dialysis associated spondylosis of lumbar spine... 223 Yoshito Katayama, M.D., et al. (Department of Orthopaedicaedic Surgery, Nagoya Daini Red Cross Hospital, Nagoya, Aichi)
M2-6	Posterior Lumbar Interbody Fusion in patients with long term hemodialysis 225 Hiroaki Nakashima, M.D., et al. (Orthopaedic Department, Nagoya University Hospital, Nagoya, Aichi)
M2-7	Surgical result of lumbar destructive spondyloarthropathy - PLIF combined PLF procedure - 227 Norihiko Nakata, M.D., et al. (Spine Center, Social Insurance Central General Hospital, Shinjyuku-ku, Tokyo)
M2-8	Two year follow up outcome of Dynamization PLIF for dialysis associated spondylosis 229 Naoki Okamoto, M.D., et al. (Spine-Orthopaedic Surgery, Japan Red Cross Medical Center, Tokyo Medical Center, Shibuya-ku, 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.

Fc-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 Orthopaedicaedics, Kyushu Kosei Nenkin Hospital, Kitakyushu, Fukuoka)

Fc-2

Analysis of deep surgical site infections after spinal surgery for hemodialysis patients 233
Hiroyoshi Wada, M.D., et al.
(Department of Orthopaedicedic Surgery, Tokyo Women's Medical University, Shinjyuku-ku, Tokyo)

Fc-3

Reoperation of dialysis-associated spondylosis 235
Hideo Baba, M.D., et al.
(Department of Orthopaedicaedic Surgery, Nagasaki University School of Medicine, Nagasaki, Nagasaki)

Fc-4

9 cases that needed spinal fuion in short period after decompression for dialysis associated spondylosis 237
Hiroshi Nakayama, M.D., et al.
(Sapporo City General Hospital, Sapporo, Hokkaido)

Fc-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 ~ 16:10

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

(Hands-on Session 2 of Main Hall 3 page 79)

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 4

Chairpersons Yasutsugu Yukawa, M.D.

XLIF Surgical Technique
by Pedro Berjano, M.D. (NuVasive Japan. K.K.)

17:40 ~ 18:40

(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)



6 September (Fri.)

Main Hall 3

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.

Fd-1

An experience of anterior decompression to spinal cord through a posterior approach using endoscope together for the treatment of thoracic OPLL 241
Shoji Seki, M.D., et al.
(Department Orthopaedicaedic Surgery, Faculty of Medicine, University of Toyama, Toyama, Toyama)

Fd-2

The surgical results of Lumber extra foraminal stenosis-Experience of MED for Recurrent Lumber Extra Foraminal Stenosis- 243
Atsushi Tagami, M.D., et al.
(Department of Orthopaedicaedic Surgery, Nagasaki University School of Medicine, Nagasaki, Nagasaki)

Fd-3

Clinical results of lumbar cystic lesion treated with microendoscopic procedure 245
Kenichi Kawaguchi, M.D., et al.
(Department of Orthopaedicaedic Surgery, Saga-ken Medical Center Koseikan, Saga, Saga)

Fd-4

Clinical results and usefulness of percutaneous endoscopic discectomy interlaminar approach for recurrent lumbar disc herniation 247
Kazuo Ohmori, M.D., et al.
(Department of Orthopaedicaedic Surgery, Nippon Kokan Hospital, Kawasaki, Kanagawa)

Fd-5

Percutaneous endoscopic discectomy for far-lateral disc herniation ... 249
Takahiro Funato, M.D., et al.
(Department of Orthopaedic Surgery, Teikyo University Mizonokuchi 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)
9:55~10:55 (Spine Leader's Lecture B-II of Main Hall 2 page 71)
10:55~11:55 (Spine Leader's Lecture C-I of Main Hall 1 page 66)
10:55~11:55 (Spine Leader's Lecture C-II of Main Hall 2 page 72)
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.

Fe-1

How to reduction of spodylolisthesis with cortical bone trajectory screw 251
Shinya Kato, M.D., et al.
(Orthopaedicedic Department, Kantoh Rosai Hospital, Kawasaki, Kanagawa)

Fe-2

Initial experience of posterior lumbar fusion using cortical bone trajectory screws: Grading of screw position on postoperative CT 253
Kentaro Naito, M.D., et al.
(Department of Neurosurgery, Osaka City University Graduate School of Medicine, Osaka, Osaka)

Fe-3

CBT screws can be useful for reduction and fixation of lumbar spondylolisthesis 255
Seiji Ueda, M.D., et al.
(Orthopaedic Department, Saiseikai Yokohama-shi Nanbu Hospital, Yokohama, Kanagawa)

Fe-4

Lumbar stabilization using CBT for the treatment of lumbar spondylitis ... 257
Keita Kuraishi, M.D., et al.
(Mie University, Department of Neurosurgery, Tsu, Mie)

Fe-5

Posterior lumbar interbody fusion using unilateral cortical bone trajectory method 259
Koji Akeda, M.D., et al.
(Department of Orthopaedic Surgery, Mie University Graduate School of Medicine, Tsu, Mie)

Fe-6

Comparison of Hybrid MIS-TLIF and the bilateral PPS method 261
Yohei Ito, M.D., et al.
(Yokohama City University Medical Center, Department of Orthopaedic Surgery, Yokohama, Kanagawa)

14 : 15 ~ 14 : 50 (35min.)

Free Papers f
< Lumbar spinal fusion >
Chairpersons Shigehiko Ito, M.D.

Ff-1

PEEK cages in lumbar interbody fusion: short-term clinical and radiological outcomes 263
Osamu Nemoto, M.D., et al.
(Orthopaedic Department, Self Defense Forces Central Hospital, Setagaya-ku, Tokyo)

Ff-2

Comparison of titanium cage and PEEK cage in Posterior lumbar interbody fusion 265
Yu Sato, M.D., et al.
(Spine Center, Department of Orthopaedic Surgery, Niigata Central Hospital, Niigata, Niigata)

Ff-3

Subsidence of interbody cage after minimally invasive posterior lumbar interbody fusion with bilateral decompression through unilateral laminotomy 267
Naoki Segi, M.D., et al.
(Department of Orthopaedics Nagoya Daini Red Cross Hospital, Nagoya, Aichi)

Ff-4

Surgical treatment using the connector in posterior re-fusion of the spine 269
Yosuke Kobayashi, M.D., et al.
(Department of Orthopaedic Surgery, Kanto Rosai Hospital, Kawasaki, Kanagawa)

Ff-5

Corrective lumbopelvic fixation for spinal deformity using mini-open Oblique Lateral Interbody Fusion (OLIF) and S2 Alar Iliac Screw fixation 271
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.

Fg-1

A new procedure for fragment and end plate reduction of thoracolumbar burst fracture 273
Kazunori Hayashi, M.D., et al.
(Orthopaedic Department, Osaka City General Hospital, Osaka, Osaka)

Fg-2

Combined posterior short segment fixation and anterior interbody reconstruction for compression or burst fractures at lumbar spine 275
Kei Miyamoto, M.D., et al.
(Reconstructive Surgery for Spine, Bone, and Joint, Gifu University Graduate School of Medicine, Gifu, Gifu)

Fg-3

Navigation assisted posterior spinal fusion with percutaneous pedicle screw fixation for vertebral burst fracture 277
Tadashi Komatsubara, 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.

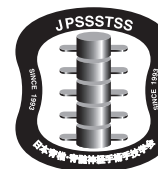
Mini-open PLIF using midline approach
by Toshihiro Ando, M.D. (Japan Medical Dynamic Martceting, Inc.)

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 Imagama, M.D.
Severe coronal plane deformity correction techniques
 by Kota Watanabe, M.D. (Medtronic Sofamor Danek, Co., Ltd.)

17:40 ~ 18:40 (Hands-on Session 4 of Main Hall 2 page 75)
 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)



6 September (Fri.)

Main Hall 4

7:30 Registration

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)
 9:55 ~ 10:55 (Spine Leader's Lecture B-II of Main Hall 2 page 71)
 10:55 ~ 11:55 (Spine Leader's Lecture C-I of Main Hall 1 page 66)
 10:55 ~ 11:55 (Spine Leader's Lecture C-II of Main Hall 2 page 72)
 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)
 13:20 ~ 13:25 Transfer 5min.
 15:20 ~ 16:10 Booth Viewing 50min.

16:10 ~ 17:10 (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 Yuichi Takano, M.D., Kiyoshi Miyazaki, M.D.
 (B. BRAUN AESCULAP JAPAN Co., LTD.)

17:10 ~ 17:40 Booth Viewing 30min.

17:40 ~ 18:40 (60min.)

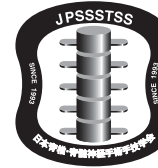
Hands-on Session 6

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-I-1

Futoshi Suetsuna, M.D. Ph.D. (Department of Orthopaedic Surgery, Hachinohe
Municipal Hospital, Hachinohe, Aomori)

Posterior decompression methods of upper cervical spine - Especially
a new C2 tunneled dome laminectomy 107

MS-I-2

Naoki Asami, M.D. (Spine Surgery, Ikeda Hspital, Kobayashi, Miyazaki)

C1-2 posterior fusion The surgical history and now 109
(HOYA CORPORATION PENTAX New Ceramics Division)

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., Yukihiko Matsuyama, M.D.

S-II-1

Circumferential fusion is superior to all posterior approaches in adult
spinal deformity treatment 278

Christopher P. Ames, M.D.

(Professor of Neurological Surgery, Department of Neurological Surgery,
University of California, San Francisco, USA)

S-II-2

The Limitation of Adult Spine Deformity Surgery 280

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)

S-II-3	<p>Congruent sagittal spinopelvic alignment in adult spinal deformity: Verification of sagittal modifiers of the SRS-Schwab ASD classification based on Japanese standard values 283</p> <p>Tokumi Kanemura, M.D., et al. (Spine Center, Konan Kosei Hospital, Konan, Aichi)</p>
S-II-4	<p>Validation Study of Schwab and Rose Formulas in Adult Spinal Deformity: How to Use These Formulas in Planning of Corrective Surgery..... 285</p> <p>Yu Yamato, M.D., et al. (Department of Orthopaedic Surgery, Hamamatsu University School of Medicine, Hamamatsu, Shizuoka)</p>
S-II-5	<p>HAS-HAT9 Angle; A sagittal parameter which significantly influence sagittal alignment of the whole spine 287</p> <p>Kei Miyamoto, M.D., et al. (Reconstructive Surgery for Spine, Bone, and Joint, Gifu University Graduate School of Medicine, Gifu, Gifu)</p>
S-II-6	<p>How much correction was necessary in elderly kyphosis patients? Sanraku formula based on Full balance integrated(FBI) technique 289</p> <p>Yusuke Nakao, M.D., et al. (Orthopaedic & Spine Center, Sanraku Hospital, Chiyoda-ku, Tokyo)</p>
S-II-7	<p>Surgical algorithm for adult spinal deformity 291</p> <p>Tomohiko Hasegawa, M.D., et al. (Orthopaedic Department, Hamamatsu University School of Medicine, Hamamatsu, Shizuoka)</p>
S-II-8	<p>Clinical outcomes of spinal fusion for severe degenerative lumbar scoliosis - Is the short fusion suitable for DLS?..... 293</p> <p>Hiroki Matsui, M.D., et al. (Department of Orthopaedics Surgery, Nagoya University Graduate School of Medicine, Nagoya, Aichi)</p>
S-II-9	<p>Postoperative thoracic kyphosis >45 degrees results in poor sagittal alignment after lumbar PSO; irrespective of LL >PI-10..... 295</p> <p>Tomoaki Toyone, M.D., et al. (Department of Orthopaedic Surgery, Teikyo University Chiba Medical Center, Ichihara, Chiba)</p>

10 : 20 ~ 10 : 25

Break 5min

10 : 25 ~ 10 : 55 (30min)

Free Papers h
< Adult spinal deformity >
Chairpersons Akiyoshi Yamazaki, M.D.

Fb-1	<p>Pedicle subtraction osteotomy for rigid kyphotic deformity in adults ... 297</p> <p>Toru Doi, M.D., et al. (Department of Spine and Orthopaedic Surgery, Japanese Red Cross Medical Center, Shibuya-ku, Tokyo)</p>
Fb-2	<p>Spinal fusion for the cases with high Pelvic Incidence 299</p> <p>Yusuke Nakao, M.D., et al. (Spine center, Orthopaedic Department, Sanraku Hospital, Chiyoda-ku, Tokyo)</p>
Fb-3	<p>Clinical outcomes of posterior spinal short segmental decompression and fusion for lumbar spinal stenosis associated slight degenerative lumbar scoliosis 301</p> <p>Hiroki Matsui, M.D., et al. (Department of Orthopaedics Surgery, Nagoya University Graduate School of Medicine, Nagoya, Aichi)</p>
Fb-4	<p>Effectiveness of casting test as preoperative simulation for correction surgery of adult spinal deformity 303</p> <p>Shinjiro Kaneko, M.D., et al. (Department of Orthopaedic Surgery, National Hospital Organization Murayama Medical Center, Musashimurayama, Tokyo)</p>

10 : 55 ~ 11 : 05

Transfer 10min

11 : 05 ~ 12 : 05 (60min)

Spine Leader's Lecture D-I (Postgraduate Lecture of JOA)

11 : 05 ~ 11 : 35 (30min)

Chairpersons Koji Sato, M.D.

SLL-D-I-1	<p>Takashi Agari, M.D. (Okayama Graduate School, Okayama, Okayama)</p> <p>Spinal cord stimulation for intractable pain -Advanced devices enable new treatment strategies and clinical effects- 137</p> <p>(Medtronic Japan Co., Ltd.)</p>
------------------	---

11 : 35 ~ 12 : 05 (30min)

Chairpersons Makoto Taniguchi, M.D.

SLL-D-I-2 Motosu Kubota, M.D. (Department of Spinal Surgery, Kameda Medical Center, Kamogawa, Chiba)

Surgical treatment for spinal arachnoid lesions..... 139
(Century Medical, Inc.)

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

12 : 05 ~ 12 : 15 Transfer 10min

12 : 15 ~ 13 : 15 (60min)

“Ieyasu Tokugawa” Lunch on Seminar 3 (Postgraduate Lecture of JOA)

Chairpersons Masatoshi Sumi, M.D.

LS-3 Jeffrey S. Roh, M.D., et al.

(Division of Proliance Surgeons, ProOrtho, Seattle Minimally Invasive Spine Center, Seattle, USA)
Minimally Invasive Reconstructive Solutions for Spinal Deformity... 116
(Stryker Japan K.K.)

12 : 15 ~ 13 : 15 (“Katsuei Shibata” Lunch on Seminar 4 of Main Hall 2 Page 94)

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 ~ 15 : 15 (Spine Leader's Lecture E of Main Hall 2 Page 95)

14 : 25 ~ 14 : 35

Break 10min

14 : 35 ~ 15 : 55 (80min)

Main Theme 3

〈 Risk management for spinal surgery 〉

Chairpersons Takashi Yamazaki, M.D., Yutaka Hiraizumi, M.D.

M3-1

Uncertainty in surgery as preoperative informed consent “prevention of conflict and trustful medicine” 305

Takashi Yamazaki, M.D., et al.

(Department of Orthopaedic. Surgery Musashino Red Cross Hospital, Musashino, Tokyo)

M3-2

Airway management after the multilevel anterior cervical decompression and fusion surgery 307

Atsuomi Aiba, M.D., et al.

(Orthopaedic Department, Numazu City Hospital, Numazu, Shizuoka)

M3-3

Natural course of CSF leakage secondary to anterior corpectomy for cervical degenerative diseases 309

Macondo Mochizuki, M.D., et al.

(Department of Orthopaedic. Surgery, Numazu City Hospital, Numazu, Shizuoka)

M3-4

Management of asymptomatic vertebral artery injury associated with traumatic cervical spine injury 311

Yaoki Nakao, M.D., et al.

(Spine Center, Takazaki Hospital, Himeji, Hyogo)

M3-5

Intraoperative spinal cord monitoring during spinal osteotomy for adult spinal deformity 313

Sho Kobayashi, M.D., et al.

(Department of Orthopaedic Surgery, Hamamatsu University School of Medicine, Hamamatsu, Shizuoka)

M3-6

Dual rod method as a reconstruction surgery is effective for delayed union after lumbosacral fusion 315

Akiyoshi Yamazaki, M.D., et al.

(Spine Center, Department of Orthopaedic. Surgery, Niigata Central Hospital, Niigata, Niigata)

M3-7

Prevention of postoperative epidural hematoma - Is blood pressure control with nifedipine hydrochloride effective?..... 317

Takamitsu Tokioka, M.D., et al.

(Department of Orthopaedic Surgery, Kochi Health Sciences Center, Kochi, Kochi)

M3-8	Management of intraoperative dural injury 319 Kazunori Shibamoto, M.D., et al. (Department of Neurosurgery, Ichinomiya Nishi Hospital, Ichinomiya, Aichi)
M3-9	Prophylatic intraoperative powdered vancomycin in patients undergoing spinal surgery 321 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 Japan, Niigata, Niigata, Niigata)
M3-10	A case of the remote cerebellar hemorrhage after spinal surgery 323 Zaika Tei, M.D., et al. (Orthopaedic Department, Japanese Red Cross Medical Center, Shibuya-ku, Tokyo)

14 : 35 ~ 17 : 35 (Hands-on lecture for young surgeon and nurse course of Main Hall 3 page 102)

15 : 55 ~ 16 : 05 Break 10min

16 : 05 ~ 17 : 20 (75min)

Main Theme 4

< Intraoperative support equipment >

Chairpersons Masashi Neo, M.D., Tokumi Kanemura, M.D.

M4-1	New knowledge of intraoperative monitoring -multicenter study in JSSR- 325 Zenya Ito, M.D., et al. (Orthopaedic Department, Nagoya University, Nagoya, Aichi)
M4-2	Validity of MEP monitoring to cervical epidural space surgery 327 Eiichiro Honda, M.D., et al. (Neurospinal surgery Department, Seibindo shiroishikyoriutsu Hospital, Kishima, Saga)
M4-3	Intraoperative monitoring of the bulbocavernous reflex is useful in surgery for a tumor, however, not for the tethered cord 329 Tetsuryu Mitsuyama, M.D., et al. (Department of Neurosurgery, Tokyo Women's Medical University, Shinjyuku-ku, Tokyo)

M4-4	Utility and problems associated with the O-arm for intraoperative 3D-imaging during spinal surgeries 331 Hidetoshi Yamaguchi, M.D., et al. (Department of Spine & Orthopaedic Surgery, Konan Kosei Hospital, Konan, Aichi)
M4-5	The present situation of spinal surgery after the introduction of intraoperative CT navigation system 333 Hirotugu Omi, M.D., et al. (Takaoka Seishikai Orthopaedic Hospital, Takaoka, Toyama)
M4-6	Development of the new device for inserting pedicle screw using 3D images 335 Yoshiharu Kawaguchi, M.D., et al. (Orthopaedic Department, Toyama University, Toyama, Toyama)

M4-7	Surgeries of cervical spine using spinal navigation system -investigation of safeties and invasiveness 337 Takamitsu Tokioka, M.D., et al. (Department of Orthopaedic Surgery, Kochi Health Sciences Center, Kochi, Kochi)
-------------	---

M4-8	The utility of Jackson table for posterior spinal surgery 339 Satoshi Suzuki, M.D., et al. (Orthopaedic Department, SANO KOSEI General Hospital, Sano, Tochigi)
-------------	--

M4-9	Protective effect of recurrence on lumbar disk hernia using Pal 1 341 Tatsuya Tanaka, M.D., et al. (Neurosurgery Department, Imariaritaryoritsu, Hospital, Nishimatsuura, Saga)
-------------	--

17 : 20 ~ 17 : 25 Break 5min

17 : 25 ~ 18 : 15 (50min)

Main Theme 5

< Chronic pain after spinal surgery >

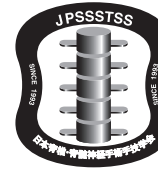
Chairpersons Hideo Hosoe, M.D., Macoudo Mochizuki, M.D.

M5-1	Axial pain of double door laminoplasty in which muscles are preserved with spinous processes 343 Masahito Oshina, M.D., et al. (Orthopaedic Department, center of Spine and Spinal Nerves, NTT Medical Center Tokyo, Shinagawa-ku, Tokyo)
-------------	--

M5-2	Issues in chronic pain after spine surgery 345 Yuichi Takano, M.D., et al. (Department of Orthopaedicaedic Surgery, Iwai Orthopaedicaedic Medical Hospital, Edogawa-ku, Tokyo)
M5-3	Frequency of Pain Deterioration after Intramedullary Hemangioblastoma Resection 347 Hideyuki Arima, M.D., et al. (Department of Orthopaedicaedic Surgery, Hamamatsu University School of Medicine, Hamamatsu, Shizuoka)
M5-4	Transdermal fentanyl for chronic low back pain 349 Tomoyuki Ozawa, M.D., et al. (Teikyo Chiba Medical Center, Ichihara, Chiba)
M5-5	Local administration of morphine for bone graft harvest 351 Kiyoshi Miyazaki, M.D., et al. (Nara Kashiba center for arthroplasty and spinal surgery, Kashibaasahigaoka Hospital, Kashiba, Nara)
M5-6	Quantitative Evaluation of the pain in degenerative spinal disease 353 Naoki Higashiyama, M.D., et al. (Department of neurosurgery, Akita university graduate school of medicine, Akita, Akita)

18:15 ~ 18:20

~ **Closing Remarks** ~
 President Koji Sato, M.D.



7 September (Sat.)

Main Hall 2

7:30 Registration

8:00 ~ 9:00 (60min)

“Kiyomasa Kato” Morning Seminar 2
 (Postgraduate Lecture of JOA)

Chairpersons Mitsuhiro Kamiya, M.D.

MS-2

Akira Shinohara, M.D. (Department of Orthopedic Surgery, The Jikei University Kashiwa
 Hospital, Kashiwa, Chiba)

**Surgical technique and application of minimally invasive spine
 stabilization for multilevel percutaneous spinal fixation** 111
 (Asahi Kasei Pharma Corp.)

8:00 ~ 9:00 (“Hideyoshi Toyotomi” Morning Seminar 1 of Main Hall 1 Page 83)

9:00 ~ 9:05

Break 5min

9:05 ~ 10:25 (80min)

Main Theme 6
< Spinal cord tumors >

Chairpersons Shiro Imakama, M.D., Masahito Hara, M.D.

M6-1

**Surgical results of intramedullary spinal cord hemangioma
 and impacts on QOL** 355

Shiro Imagama, M.D., et al.

(Department of Orthopaedicaedic Surgery, Nagoya University
 Graduate School of Medicine, Nagoya, Aichi)

M6-2

**Posterior median sulcus approach for spinal intramedullary lesions:
 Anatomical background and surgical essentials** 357

Toshihiro Takami, M.D., et al.

(Department of Neurosurgery, Osaka City University
 Graduate School of Medicine, Osaka, Osaka)

M6-3	Surgery for intramedullary spine tumor —DREZ approach— 359 Masahito Hara, M.D. (Department of Neurosurgery, Nagoya Graduate School of Medicine, Nagoya, Aich)
M6-4	Feasibility study about the novel videography with indocyanine green for intraoperative localization of intradural spinal tumors 361 Toshinori Tsukanishi, M.D., et al. (University of Tsukuba, Department of Orthopaedicaedic Surgery, Tsukuba, Ibaraki)
M6-5	Hemangioblastoma: Relationship between localization and age 363 Tatsuya Yasuda, M.D., et al. (Department of Orthopaedicaedic Surgery, Hamamatsu University School of Medicine, Hamamatsu, Shizuoka)
M6-6	Unilateral instrumented fixation for the cervical spinal and spinal cord tumor 365 Kei Ando, M.D., et al. (Department of Orthopaedicaedic Surgery, Nagoya University Graduate School of Medicine, Nagoya, Aichi)
M6-7	Osteoplastic hemilaminofacetotomy for resection of spinal dumbbell neurinoma 367 Minoru Hoshimaru, M.D., et al. (Shin-aikai Spine Center, Shijyouawate, Osaka)
M6-8	Surgical strategy for ventral spinal meningioma 369 Hironori Arima, M.D., et al. (Department of Neulosurgery, Osaka City Univercity Hospital, Osaka, Osaka)
M6-9	The analysis of spinal cord intradural extramedullary tumor around conus in our experience 371 Junichi Ukai, M.D., et al. (Orthopaedicedics Department, Nagoya Univesity, Nagoya, Aichi)

10 : 25 ~ 10 : 30 Break 5min

10 : 30 ~ 10 : 55 (25min)

Free Papers i < Case presentation (spinal cord tumors) >

Chairpersons Eiichiro Honda, M.D.

Fi-1	Spinal cord capillary hemangioma with extensive syringomyelia 373 Kazuhiro Masuda, M.D., et al. (Department of Spine and Orthopaedicedic Surgery, Japan Red Cross Medical Center, Shibuya-ku, Tokyo)
Fi-2	Thoracic arachnoid cyst with axial pain 375 Toshiya Tachibana, M.D., et al. (Department of Orthopaedicaedic Surgery, Hyogo College of Medicine, Nishinomiya, Hyogo)
Fi-3	A case of spinal epidural cyst occurred in the cervical region at C7- T1 junction 377 Ryo Munakata, M.D., et al. (Orthopaedicedic Department, Shinshu University Hospital, Matumoto city, Matsumoto, Nagano)
Fi-4	A case of spinal dural AVF of craniovertebral junction presented with brainstem syndromes 379 Tomohiro Murakami, M.D., et al. (Department of Neurosurgery, Sapporo Miyanosawa Neurosurgical Hospital, S apporo, Hokkaido)

10 : 55 ~ 11 : 05 Break 10min

11 : 05 ~ 12 : 05 (60min)

Spine Leader's Lecture D-II (Postgraduate Lecture of JOA)

11 : 05 ~ 11 : 35 (30min)

Chairpersons Takashi Miyamoto, M.D.

SLL-D-II-1 Katsushi Takeshita, M.D. (Orthopaedicedic Surgery, the University of TOKYO, Bunkyo-ku,
Tokyo)

Surgical treatment of osteoporosis-related spinal disorders 141
(Eli Lilly Japan K.K.)

11 : 35 ~ 12 : 05 (30min)

Chairpersons Zenya Ito, M.D.

SLL-D-II-2 Yoshito Katayama, M.D. (Department of Orthopaedic Surgery, Nagoya daini Red Cross
Hospital, Nagoya, Aichi)

Usefulness of multiple modal spinal corol monitoring 143
(NIHON KOHDEN)

11:05 ~ 12:05 (Spine Leader's Lecture D-I of Main Hall 1 page 85)

12:05 ~ 12:15 Transfer 10min

12:15 ~ 13:15 (60min)

“Katsuei Shibata” Lunch-on Seminar 4 (Postgraduate Lecture of JOA)

Chairpersons Toshiyuki Tsukagawa, M.D.

LS-4 Tsunehiko Yoshida, M.D. (Nagoya University Graduate School of Medicine, etc.)
(JPSTSS)

12:15 ~ 13:15 (“Ieyasu Tokugawa” Lunch-on Seminar 3 of Main Hall 1 page 86)

13:15 ~ 13:25 Transfer 10min

13:25 ~ 14:10 (45min)

Free Papers j < Video Presentation > Chairpersons Yasuo Mikami, M.D.

Fj-1 Surgical techniques of approaches to the cervical spine 381
Masahito Yuzurihara, M.D., et al.
(Spine Surgery, Kameda medical center, Kamogawa, Chiba)

Fj-2 Cervical MIST via posterolateral small skin incision 383
Hideyuki Doi, M.D., et al.
(Department of Orthopaedic Surgery, Kochi Health Sciences Center,
Kochi, Kochi)

Fj-3 Surgical technic of lumbar spinal canal stenosis
using 8mm PED system 385
Souta Okamoto, M.D., et al.
(Orthopaedic Department, Omigawa Hospital, Katori, Chiba)

Fj-4 Trials of Percutaneous Endoscopic laminotomy
for lumbar canal stenosis 387
Kiyoshi Yoshihara, M.D.
(Orthopaedic Department, Sangenjaya Daiichi Hospital, Setagaya-ku, Tokyo)

Fj-5 Medial fenestration for far-lateral lumbar disc herniation 389
Kentaro Shimizu, M.D., et al.
(Orthopaedic Department, Sano Kosei General Hospital, Sano, Tochigi)

Fj-6

Mono-portal PLIF technique to prevent complications 391
Keiji Hayakawa, M.D., et al.
(Department of Orthopaedic Surgery Musashino Red Cross Hospital,
Musashino, Tokyo)

13:25 ~ 14:25 (20th Anniversary Lecture II of Main Hall 1 page 86)

14:10 ~ 14:15 Break 5min

14:15 ~ 15:15 (60min)

Spine Leader's Lecture E (Postgraduate Lecture of JOA)

14:15 ~ 14:45 (30min)

Chairpersons Naohiro Iida, M.D.

SLL-E-1 Takanori Saito, M.D. (Orthopedic Department, Kansai Medical University Takii Hospital)
Correction and fusion for degenerative lumbar kyphoscoliosis
using MIS technique 145
(BIOMET JAPAN, INC.)

14:45 ~ 15:15 (30min)

Chairpersons Masakazu Takayasu, M.D.

SLL-E-2 Shiro Imagama, M.D. (Department of Orthopedic Surgery, Nagoya University Graduate
School of Medicine, Nagoya, Aichi)
Neuropathic pain in the spine disease 147
(Pfizer Japan Inc)

14:35 ~ 17:35 (Hands-on lecture for young surgeon and nurse course
of Main Hall 3 page 102)

15:15 ~ 15:20 Break 5min

15:20 ~ 15:45 (25min)

Free Papers k < Anterior cervical fusion > Chairpersons Mitsuru Inada, M.D.

Fk-1

Anterior cervical discectomy and fusion to cervical spondylotic
radiculopathy with cervical kyphosis 393
Koichiro Murata, M.D., et al.
(Department of Orthopaedic Surgery, Mie University
Graduate School of Medicine, Tsu, Mie)

Fl-2

Surgical outcomes of anterior cervical discectomy and fusion using rectangular titanium stand-alone cage with β -TCP granule..... 397
Toru Yamagata, M.D., et al.
(Department of Neurosurgery, Osaka City University Graduate School of Medicine, Osaka, Osaka)

Fl-3

An anchored PEEK standalone cage in anterior cervical discectomy and fusion: short-term clinical and radiological outcomes 397
Osamu Nemoto, M.D., et al.
(Orthopaedicaedic Department, Self Defense Forces Central Hospital, Setagaya-ku, Tokyo)

15 : 45 ~ 16 : 10 (25min)

Free Papers I < Case presentation (cervical spine) >

Chairpersons Naoyuki Shizu, M.D.

Fl-1

A case of embolic bow hunter's stroke associated with anomalous vertebral artery 399
Keishi Tsunoda, M.D., et al.
(Department of Neurosurgery, Nagasaki University Hospital, Nagasaki, Nagasaki)

Fl-2

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 401
Naohiro Asada, M.D.
(Department of Orthopaedicedic Surgery, Municipal Tsuruga Hospital, Tsuruga, Fukui)

Fl-3

A case of venous air embolism during Marmot operation 403
Marehoshi 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.

Fm-1

Surgical outcome of pyogenic spondylitis using posterior instrumentation..... 405
Kosuke Nakajo, M.D., et al.
(Spine Center, Tsukazaki Hospital, Himeji, Hyogo)

Fm-2

A novel surgical technique of TES (Total en bloc spondylectomy) using an ultrasonic bone curette 407
Kengo Fujii, M.D., et al.
(Spine and Orthopaedicaedic Surgery, Japanese Red Cross Medical Center, Shibuya-ku, Tokyo)

Fm-3

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 409
Kei Yoshikawa, M.D., et al.
(Orthopaedicedic Department, Juntendo University Shizuoka Hospital Izunokuni, Shizuoka)

Fm-4

Co-operation with the thoracic surgery group for the primary lung tumor which invades chest wall and/or thoracic spine..... 411
Ikuo Aita, M.D., et al.
(Department of Orthopaedicaedic Surgery, Tsukuba Medical Center Hospital, Tsukuba, Ibaraki)

16 : 40 ~ 16 : 45 Break 5min

16 : 45 ~ 17 : 35 (50min)

Main Theme 7 < Surgery for severe osteoporotic spine >

Chairpersons Suguru Tomita, M.D.

M7-1

Critical Issues of Balloon Kyphoplasty - Surgical Indication 413
Yudo Hachiya, M.D., et al.
(Hachiya Orthopaedic Hospital, Nagoya, Aichi)

M7-2

Indication and limitation of vertebroplasty with short posterior spinal fusion for pseudoarthrosis of osteoporotic vertebral fracture: A prospective multicenter study 415
Keiichi Katsumi, M.D., et al.
(Department of Orthopaedicedic Surgery, Niigata University, Niigata, Niigata)

M7-3

Posterior spinal shortening osteotomy for pseudoarthrosis of osteoporotic thoracolumbar and lumbar vertebral fracture 417
Toshihiro Ando, M.D., et al.
(Orthopaedicedic Department, Nagoya Daini Red Cross Hospital, Nagoya, Aichi)

M7-4 Posterior corrective fusion using double trajectory technique (cortical bone trajectory combined with traditional trajectory) for degenerative lumbar scoliosis with osteoporosis 419
Masaki Ueno, M.D., et al.
(Department of Orthopaedicaedic Surgery, Kitasato Univ, Sagamihara, Kanagawa)

M7-5 Surgical results of thoracolumbar burst fracture in aged patients 421
Takeshi Kataoka, M.D., et al.
(Department of Orthopaedicaedic Surgery, Hyogo Prefectural Kakogawa Medical Center, Kakogawa, Hyogo)

M7-6 A modification of the reduction for the distraction type fracture of the ankylosis spine with the severe osteoporosis 423
Akira Itoi, M.D., et al.
(Orthopaedicedic Department, Juntendo Shizuoka Hospital, Izunokuni, Shizuoka)

17:35 ~ 18:10 (35min)

Free Papers n

< Surgery for severe osteoporotic spine >

Chairpersons Norimoto Wakao, M.D.

Fn-1 Vertebroplasty with short posterior spinal fusion for non-union of osteoporotic vertebral fracture 425
Hiroki Hirabayashi, M.D., et al.
(Orthopaedicedic Department, Shinshu University Hospital, Matsumoto, Nagano)

Fn-2 Combined anterior-posterior surgery vs. posterior surgery with vertebral column resection for osteoporotic vertebral fracture 427
Kotaro Satake, M.D., et al.
(Orthopaedicedic Department, Konan Kosei Hospital, Konan, Aichi)

Fn-3 Clinical results of spinal stabilization for osteoporotic thoracolumbar burst fracture 429
Tetsuya Abe, M.D., et al.
(Department of Orthopaedicedic Surgery, Tsukuba University Hospital, Tsukuba, Ibaraki)

Fn-4 Short term postoperative course of ballon kyphoplasty(BKP) in patients with vertebra fracture due to osteoporosis 431
Takuya Kato, M.D., et al.
(Department of Orthopaedic. Surgery, Fujisawasyounandai Hospital, Fujisawa, Kanagawa)

Fn-5 A examination of the amount of change in area of the spinal canal by BKP..... 433
Yoh Fujimoto, M.D., et al.
(Orthopaedicedic Department, Tokyo Metropolitan Geriatric Hospital, Itabashi-ku, Tokyo)

18:10 ~ 18:15

Transfer 5min



7 September (Sat.)

Main Hall 3

7:30 Registration

9:00 ~ 9:05

Transfer 5min

9:05 ~ 10:15 (70min)

Free Papers o

< Posterior cervical decompression >

Chairpersons Yoshimitsu Oosawa, M.D., Taichi Tsuji, M.D.

- | | |
|-------------|--|
| Fo-1 | <p>Is instrumental stabilization indispensable to laminectomy for cervical spondylotic myelopathy? 435</p> <p>Junichi Yamane, M.D., et al.
(Orthopaedic Department, National Hospital Organization Saitama National Hospital, Wako, Saitama)</p> |
| Fo-2 | <p>Transspinous sublaminar decompression for cervical and lumbar spinal canal stenosis..... 437</p> <p>Hitoshi Hayase, M.D., et al.
(Department of Neurosurgery, Kaneda Hospital, Maniwa, Okayama)</p> |
| Fo-3 | <p>Preservation of the spinous process and deep extensor muscle after cervical laminoplasty using posterior complex reconstruction technique 439</p> <p>Masakazu Yoshida, M.D.
(Department of Spine Surgery, Kyusyu Memorial Hospital, Kumamoto, Kumamoto)</p> |
| Fo-4 | <p>Cervical Laminoplasty with Interconnective Pore Hydroxyapatite Spacer... 441</p> <p>Masataka Sakane, M.D., et al.
(Critical-path Research and Education Integrated Leading Center, Tsukuba, Ibaraki)</p> |
| Fo-5 | <p>Surgical outcomes of selective laminectomy for cervical disc herniation 443</p> <p>Ryoma Aoyama, M.D., et al.
(Department of Orthopaedics, Tokyo Dental College Ichikawa General Hospital, Ichikawa, Chiba)</p> |

- | | |
|-------------|--|
| Fo-6 | <p>Posterior spinal fusion for cervical ossification of posterior longitudinal ligament 445</p> <p>Tomohiro Izumi, M.D., et al.
(Spine Center, Orthopaedic Department Niigata Central Hospital, Niigata, Niigata)</p> |
| Fo-7 | <p>Laminoplasty with TAKAYASU-type spacer, mid-term clinical results for OPLL 447</p> <p>Muneyoshi Yasuda, M.D., et al.
(Department of Neurological Surgery, Center for Spinal Disorder, Nagakute, Aichi)</p> |
| Fo-8 | <p>A Clinical Result of Selective Laminectomy for Cervical Spondylotic Myelopathy Associated with Kyphosis 449</p> <p>Ken Ninomiya, M.D., et al.
(Orthopaedic Department, Tokyo Dental College Ichikawa Hospital, Ichikawa, Chiba)</p> |

10:15 ~ 11:00 (45min)

Free Papers p

< Posterior cervical fusion >

Chairpersons Keigo Ito, M.D., Tateru Shiraishi, M.D.

- | | |
|-------------|---|
| Fp-1 | <p>Ingenuity of the driver of cervical pedicle screw and creating of the percutaneous probe guide..... 451</p> <p>Ikuo Aita, M.D., et al.
(Department of Orthopedic Surgery, Tsukuba Medical Center Hospital, Tsukuba, Ibaraki)</p> |
| Fp-2 | <p>Evaluation of Navigation Surgery for Cervical Spine Using Cannulated pedicle Screws 453</p> <p>Katsuhiko Ishibashi, M.D., et al.
(Department of Orthopaedic Surgery, Kagawa Rosai Hospital, Marugame, Kagawa)</p> |
| Fp-3 | <p>Clinical application of our original cervico-thoracic brace, MACSFIT, preliminary report 455</p> <p>Kanji Mori, M.D., et al.
(Department of Orthopaedic Surgery, Shiga University of Medical Science, Otsu, Shiga)</p> |
| Fp-4 | <p>A study on C5 palsy after minimally invasive cervical expansive open-door laminoplasty (K-method) 457</p> <p>Shunichi Kihara, M.D., et al.
(Kyoto Spine and Ophthalmology Hospital, Kyoto, Kyoto)</p> |

Fp-5

**Narrowed C6/7 disc space as a leading factor reducing neck mobility -
Analysis of dynamic X-ray and MRI in 100 asymptomatic volunteers ... 459**

Toshiki Okubo, M.D., et al.

(Department of Orthopaedicaedic Surgery, Tokyo Dental College Ichikawa
General Hospital, Ichikawa, Chiba)

Fp-6

**Radiological findings and surgical results of Juvenile muscular atrophy of
unilateral upper extremity (Hirayama disease) 461**

Takahiro Kaneko, M.D., et al.

(Department of Orthopaedic Surgery, Hachinohe Municipal Hospital,
Hachinohe, Aomori)

11:00 ~ 11:05	Transfer	5min
11:05 ~ 12:05	(Spine Leader's Lecture D-I of Main Hall 1 page 85)	
11:05 ~ 12:05	(Spine Leader's Lecture D-II of main Hall 2 page 93)	
12:05 ~ 12:15	Transfer	10min
12:15 ~ 13:15	("Ieyasu Tokugawa" Lunch-on Seminar 3 of Main Hall 1 page 86)	
12:15 ~ 13:15	("Katsuei Shibata" Lunch-on Seminar 4 of Main Hall 2 page 94)	
13:15 ~ 13:25	Transfer	10min
13:25 ~ 14:25	(20th Anniversary Lecture II of Main Hall 1 page 86)	
14:10 ~ 14:15	Break	5min
14:15 ~ 15:15	(Spine Leader's Lecture E of Main Hall 2 page 95)	
14:25 ~ 14:35	Transfer	10min
14:35 ~ 17:35	<hr/>	

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.