

# The 21st Annual Meeting of Japan Society for the Study of Surgical Technique for Spine and Spinal Nerves (JPSTSS)

● Program ●

26 ~ 27 September 2014



26 September (Fri.)

Main Hall 1

7:30 Registration

7:55 ~ 8:00

~ Opening Remarks ~

President Naoki Asami, M.D.

8:00 ~ 8:40 (40min.)

## Main Theme 2-1 < Occipital plate >

Chairpersons Futoshi Suetsuna, M.D., Nobuyuki Shimokawa, M.D.

M2-1-1

Occipito-axial fixation by bone graft in consideration of biomechanics for Atolant-occipital lesion ..... 129

Yoshiki Yamano, M.D., et al.

(Osaka Microsurgery Center, Seikeikai Hospital, Sakai, Osaka)

M2-1-2

The cases of stabilizing the craniocervical junction which is believed to require the occipital bone plate ..... 131

Nobuhiro Sasaki, M.D., et al.

(Neurosurgery Department, Shinaikai Sekitsui Sekizui Center Tesseikai Hospital, Shijyonawate, Osaka)

<b>M2-1-3</b>	<b>Indication of occipito-cervical fixation with the occipital plate in cranio-cervical instability</b> ..... 133 Masakazu Takayasu, M.D., et al. (Department of Neurological Surgery, Spine Center, Aichi Medical University, Nagakute, Aichi)
<b>M2-1-4</b>	<b>Decreasing necessity of occipital plate in treatment of craniocervical lesions</b> ..... 135 Gohsuke Hattori, M.D., et al. (Department of Neurosurgery, Kurume University School of Medicine, Kurume, Fukuoka)
<b>M2-1-5</b>	<b>Revision surgery for failed occipitocervical fusion using multiple screws through the connector with rod-and-screw occipitocervical fixation device and wiring with polyethylene tape</b> ..... 137 Junichi Ohya, M.D., et al. (Department of Orthopaedic Surgery, The University of Tokyo, Bunkyo-ku, Tokyo)

8 : 40 ~ 8 : 45

Break 5min.

8 : 45 ~ 10 : 05 (80min.)

## Main Theme 2-2 < C1-2 Fusion >

Chairpersons Masashi Neo, M.D., Masakazu Takayasu, M.D., Macondo Mochizuki, M.D.

<b>M2-2-1</b>	<b>C1 Lateral Mass Screw Insertion Technique</b> ..... 139 Isao Kitahara, M.D., et al. (Department of Neurosurgery, Chiba Tokushukai Hospital, Funabashi, Chiba)
<b>M2-2-2</b>	<b>Minimally invasive upper cervical posterior fixation—A new technique of C1 lateral mass screw insertion via posterolateral approach—</b> ..... 141 Takamitsu Tokioka, M.D., et al. (Department of Orthopedic Surgery, Kochi Health Sciences Center, Kochi, Kochi)
<b>M2-2-3</b>	<b>The anatomical features of the axis necessary for screw placement</b> ... 143 Muneyoshi Yasuda, M.D., et al. (Department of Neurological Surgery, Spine Center, Aichi Medical University, Nagakute, Aichi)
<b>M2-2-4</b>	<b>Surgical treatment for severe kyphotic deformity due to pathological odontoid fracture in a patient with multiple myeloma</b> ..... 145 Nozomu Ohtomo, M.D., et al. (Department of Orthopaedic Surgery, Faculty of Medicine, The University of Tokyo, Bunkyo-ku, Tokyo)



11 : 25 ~ 12 : 25 (Hands-on Session 1~3 page 70)

12 : 25 ~ 12 : 40 Transfer 15min.

12 : 40 ~ 13 : 40 (60min.)

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## Luncheon Seminar 1 (Postgraduate Lecture of JOA)

Chairperson Satoshi Tani, M.D.

**LS-1-1**

**Junichi Mizuno, M.D.** (Center for Minimally Invasive Spinal Surgery, Shin-Yurigaoka  
General Hospital, Kawasaki, Kanagawa)

Biomechanical study and clinical application of newly introduced  
titanium spacer "Laminoplasty basket" for cervical laminoplasty ... 103

**LS-1-2**

**Futoshi Suetsuna, M.D.** (Department of Orthopaedic Surgery, Hachinohe City Hospital,  
Hachinohe, Aomori)

Development and current problems of cervical laminoplasty..... 105  
(Ammtec Inc.)

12 : 40 ~ 13 : 40 (Luncheon Seminar 2 of Main Hall 2 page 63)

13 : 40 ~ 13 : 45 Break 5min.

13 : 45 ~ 14 : 00 (15min.)

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## General Assembly (Report of board meeting and finance)

President Naoki Asami, M.D.

## Announcement of President-elect

Takashi Yamazaki, M.D.

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

14 : 00 ~ 14 : 05 Break 5min.

14 : 05 ~ 14 : 55 (50min.)

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## Symposium Open PLIF versus MIS PLIF

Chairpersons Shigeo Sano, M.D., Kiyoshi Kumano, M.D.

<b>S</b>	<b>Open PLIF versus MIS PLIF</b> ..... 90
	Symposiasts : Roberto Bassani, M.D., Shigeo Sano, M.D., Stephen Ritland, M.D., Ivan Cheng, M.D.
	Case presentation : Kiyoshi Kumano, M.D.

14 : 55 ~ 15 : 00 Break 5min.

15 : 00 ~ 15 : 50 (50min.)

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## Special Lecture 1

Chairperson Naaki Asami, M.D.

<b>SL-1</b>	<b>Kyphoplasty: A Safe and Mini-Invasive Technique for Post-Traumatic Spine Fracture. Do We Need Dorsal Instrumentation?</b> ..... 92
	Natale Francaviglia, M.D., et al. (Department of Neurosurgery ARNAS Ospedale Civico Di Cristina Palermo, Palermo, Italy)

15 : 50 ~ 15 : 55 Break 5min.

15 : 55 ~ 17 : 15 (80min.)

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## Main Theme 10 〈 Vertebroplasty 〉

Chairpersons Masahiro Kawanishi, M.D., Yoichi Jin, M.D.

<b>M10-1</b>	<b>Reconstruction of vertebral body from posterior approach for delayed paralysis due to osteoporotic vertebral collapse</b> ..... 157
	Toshikatsu Mamada, M.D., et al. (Department of Spine Surgery, Tokyo Yamate Medical Center, Shinjyuku-ku, Tokyo)
<b>M10-2</b>	<b>Posterior spinal fixation with spinous process plate for osteoporotic vertebral fracture</b> ..... 159
	Takeshi Sakamoto, M.D., et al. (Orthopedic Department, Osaka Red Cross Hospital, Osaka, Osaka)

<b>M10-3</b>	<p><b>Clinical and radiological outcomes of Balloon kyphoplasty cases with short posterior fusion</b> ..... 161</p> <p>Haruo Misawa, M.D., et al.          (Department of Orthopaedic Surgery, Okayama Medical Center, Okayama, Okayama)</p>
<b>M10-4</b>	<p><b>Posterior hemi-VCR using an expandable cage for osteoporotic vertebral collapse</b> ..... 163</p> <p>Akiro Higashikawa, M.D., et al.          (Orthopedic Department, Kanto Rosai Hospital, Kawasaki, Kanagawa)</p>
<b>M10-5</b>	<p><b>Posterior spinal fixation of osteoporotic thoracolumbar vertebral fracture. Determination about the necessity of partial vertebral body resection...</b> 165</p> <p>Toshiyuki Takahashi, M.D., et al.          (Spinal Disorders Center, Fujieda Heisei Memorial Hospital, Fujieda, Shizuoka)</p>
<b>M10-6</b>	<p><b>The posterior spinal instrumentation with vertebroplasty for the pseudoarthrosis with neurological deficits following osteoporotic vertebral fractures —preoperative evaluation for the local kyphosis using the spinal frame—</b> ... 167</p> <p>Masateru Nagae, M.D., et al.          (Department of Orthopaedics, Graduate School of Medical Science, Kyoto Prefectural University of Medicine, Kyoto, Kyoto)</p>
<b>M10-7</b>	<p><b>A new monoportal extrapedicle approach (Vesselplasty) for osteoporotic vertebral compression fractures utilizing bioactive bone cement injected mesh bag</b> ..... 169</p> <p>Fujiro Ito, M.D., et al.          (Aichi Spine Institute, Tanbagun, Aichi)</p>
<b>M10-8</b>	<p><b>Risk factors for early adjacent vertebral fractures after BKP</b> ..... 171</p> <p>Jonguk Pak, M.D., et al.          (Department of Orthopedics Surg. Kansai Medical University, Moriguchi, Osaka)</p>
<b>M10-9</b>	<p><b>Is balloon kyphoplasty (BKP) with polymethylmethacrylate (PMMA) useful for osteoporotic vertebral fracture ? —<i>in-vivo</i> study—</b> ..... 173</p> <p>Masafumi Machida, M.D., et al.          (National Institute of Musculo-Skeletal Disorders, Murayama Medical Center, Musashimurayama, Tokyo)</p>

19 : 00 ~ 20 : 30

Banquet



26 September (Fri.)

Main Hall 2

7:30 Registration

8:05 ~ 8:40 (35min.)

### Free Papers a 〈 Iliosacral 〉

Chairpersons Masashi Saito, M.D., Yutaka Hiraizumi, M.D.

**Fa-1**

**Accuracy of Iliac Screws Insertion in Adult Spinal Deformity Surgery ... 175**  
Tomohiro Banno, M.D., et al.  
(Orthopedic Department, Hamamatsu University School of Medicine,  
Hamamatsu, Shizuoka)

**Fa-2**

**Five cases report of S1 pedicle fracture following spinal instrumentation ..... 177**  
Ryuta Kono, M.D., et al.  
(Shinagawa-Shishokai Hospital, Shinagawa-ku, Tokyo)

**Fa-3**

**A modified Galveston technique combined with anterior fixation in the treatment of infectious spondylitis ..... 179**  
Shuhei Osaki, M.D., et al.  
(Department of Orthopaedic Surgery, Kobe Red Cross Hospital, Kobe, Hyogo)

**Fa-4**

**Surgical outcome of lumbosacral fixation with S2 alar iliac screw ..... 181**  
Norihiro Miyake, M.D., et al.  
(Orthopedic Department, Kudanzaka Hospital, Chiyoda-ku, Tokyo)

**Fa-5**

**Techniques and accuracy of free-hand Sacral-Alar-Iliac (SAI) screw placement ..... 183**  
Yasunori Tatara, M.D., et al.  
(Spine Center, Sanraku Hospital, Chiyoda-ku, Tokyo)

8:40 ~ 8:45

Break 5min.

## Main Theme 9 〈 CSF leakage 〉

Chairpersons Shigeru Hirabayashi, M.D., Hisaaki Uchikado, M.D.

<b>M9-1</b>	<p><b>Surgical management of damaged dura mater with micro-endoscope</b> ... 185                  Hirohiko Inanami, M.D., et al.                  (Orthopedic Department, Iwai Orthopedic Medical Hospital, Edogawa-ku, Tokyo)</p>
<b>M9-2</b>	<p><b>The usefulness of VCS Clip For Dural Closure in Spinal Operation. Laboratory study</b> ..... 187                  Kiyoshi Ito, M.D., et al.                  (Department of Neurosurgery, Shinshu University School of Medicine, Matsumoto, Nagano)</p>
<b>M9-3</b>	<p><b>The Dural suture method under the Microendoscope</b> ..... 189                  Atsushi Tagami, M.D., et al.                  (Orthopaedic Department of Nagasaki University, Nagasaki, Nagasaki)</p>
<b>M9-4</b>	<p><b>Prevention of CSF leak by sandwich duraplasty</b> ..... 191                  Taku Sugawara, M.D., et al.                  (Department of Neurosurgery, Akita University School of Medicine, Akita City, Akita, Akita)</p>
<b>M9-5</b>	<p><b>Incidence of dural tears for both various operated thoraco-lumbar spinal diseases and different operation methods</b> ..... 193                  Fujio Ito, M.D., et al.                  (Aichi Spine Institute, Tanbagun, Aichi)</p>
<b>M9-6</b>	<p><b>Treatment of dural tear during minimally invasive spinal surgery for lumbar spinal canal stenosis and lumbar herniated disc</b> ..... 195                  Koichi Sugimoto, M.D., et al.                  (Department of Neurosurgery, Spine Center, Kamagaya General Hospital, Kamagaya, Chiba)</p>
<b>M9-7</b>	<p><b>Surgical technique for postoperative CSF leakage and intraoperative bleeding spinal disease</b> ..... 197                  Hisaaki Uchikado, M.D., et al.                  (Uchikado Neuro-Spine Clinic, Fukuoka, Fukuoka)</p>
<b>M9-8</b>	<p><b>Polyglycolic acid mesh and fibrin glue for dural repair</b> ..... 199                  Toshiya Tachibana, M.D., et al.                  (Department of Orthopaedic Surgery, Hyogo College of Medicine, Nishinomiya, Hyogo)</p>



13:45 ~ 14:00 (General Assembly at Main Hall 1 page 58)

14:00 ~ 14:05 Break 5min.

14:05 ~ 14:55 (Symposium at Main Hall 1 page 59)

14:40 ~ 16:10 (90min.)

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## Main Theme 7-1

### < Original instrumentation 1 >

Chairpersons Masafumi Machida, M.D., Toru Maruyama, M.D.

M7-1-1	<b>Percutaneous guide and probe for the pedicle screw insertion into the cervical spine</b> ..... 203 Ikuro Aita, M.D., et al. (Department of Orthopedic Surgery, Tsukuba Medical Center Hospital, Tsukuba, Ibaraki)
M7-1-2	<b>Development of the cannulated pedicle probe for PPS</b> ..... 205 Takayuki Fujiyoshi, M.D., et al. (Department of Orthop. Surg. Kimitsu Chuo Hospital, Kisarazu, Chiba)
M7-1-3	<b>A radiation-free cervical screw navigation procedure with the Screw Guide Template system</b> ..... 207 Shuichi Kaneyama, M.D., et al. (Department of Orthopaedic Surgery, Kobe Rosai Hospital, Kobe, Hyogo)
M7-1-4	<b>Development of a titanium spacer for cervical laminoplasty</b> ..... 209 Satoshi Tani, M.D., et al. (Department of Neurosurgery, Jikei University, Minato-ku, Tokyo)
M7-1-5	<b>Usefulness of our table-fixed retractor system for anterior cervical approaches</b> ..... 211 Masakazu Takayasu, M.D., et al. (Department of Neurological Surgery, Spine Center, Aichi Medical University, Nagakute, Aichi)
M7-1-6	<b>Usefulness of longitudinal ligament dissector in cervical anterior fusion</b> ..... 213 Tatsuya Tanaka, M.D., et al. (Neurosurgery Department, Imariarita Kyoritsu Hospital, Nishimatsuuragun, Saga)
M7-1-7	<b>Usability of the ultrasonic bone scalpel in foraminotomy for the treatment of cervical radiculopathy</b> ..... 215 Kuniaki Amano, M.D., et al. (Department of Orthop. Surg., Ibaraki Seinan Medical Center Hospital, Sashimagun, Ibaraki)

<b>M7-1-8</b>	<b>Mini-open anterior lumbar interbody fusion (mini-ALIF) with anterior fusion cage for degenerative spondylolisthesis. ....</b> 217 Shinnosuke Nakahara, M.D., et al. (Orthopedic Department, National Okayama Medical Center, Okayama, Okayama)
<b>M7-1-9</b>	<b>Lumbar laminectomy by using an osteotome ..... 219</b> Ado Tamiya, M.D., et al. (Hachioji Spine Clinic, Hachioji, Tokyo)
<b>M7-1-10</b>	<b>Validity of using neuromonitoring system for inserting pedicle screws ... 221</b> Ado Tamiya, M.D., et al. (Hachioji Spine Clinic, Hachioji, Tokyo)
<b>M7-1-11</b>	<b>New trapezoid mesh cage (Pyramesh-LT) for PLIF—To obtain more lordosis— ..... 223</b> Akiyoshi Yamazaki, M.D., et al. (Spine Center, Department of Orthopaedic Surg., Niigata Central Hospital, Niigata, Niigata)

16 : 10 ~ 16 : 20

Break 10min.

16 : 20 ~ 17 : 40 (80min.)

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## Main Theme 7-2 〈 Original instrumentation 2 〉

Chairpersons Takashi Yamazaki, M.D., Shinnosuke Nakahara, M.D.,  
Toshikatsu Mamada, M.D.

<b>M7-2-1</b>	<b>Preparation of original root retractors and spatulas for microscopic low-invasive surgery ..... 225</b> Masami Fujiwara, M.D., et al. (Orthopedic Department, Sada Hospital, Fukuoka, Fukuoka)
<b>M7-2-2</b>	<b>The usefulness of surgical body supporter device in standing operation ... 227</b> Kiyoshi Ito, M.D., et al. (Department of Neurosurgery, Shinshu University School of Medicine, Matsumoto, Nagano)
<b>M7-2-3</b>	<b>Histological, mechanical, and radiological study of osteoformation in titanium foam implants ..... 229</b> Kiyoshi Ito, M.D., et al. (Department of Neurosurgery, Shinshu University School of Medicine, Matsumoto, Nagano)

<b>M7-2-4</b>	<p><b>Creating a curette its tip is bent at a right angle for the micro-endoscopic spine surgery</b> ..... 231</p> <p>Satoshi Baba, M.D., et al. (Neurosurgical Spine Department, JCHO Tokyo Shinjuku Medical Center, Shinjyuku-ku, Tokyo)</p>
<b>M7-2-5</b>	<p><b>Radiation exposure reduction system in spinal endoscopic surgery</b> ... 233</p> <p>Hirohiko Inanami, M.D., et al. (Orthopedic Department, Iwai Orthopadic Medical Hospital, Edogawa-ku, Tokyo)</p>
<b>M7-2-6</b>	<p><b>Preoperative planning using full-scale spine models produced by a 3D printer</b> ..... 235</p> <p>Masahiko Akiyama, M.D., et al. (Spine Center, Division of Neurosurgery, Teishinkai Hospital, Sapporo, Hokkaido)</p>
<b>M7-2-7</b>	<p><b>Evaluation of bone bonding of unidirectional high porous hydroxyapatite spacer for double-door cervical laminoplasty</b> ..... 237</p> <p>Hiroshi Noguchi, M.D., et al. (Department of Orthopaedic Surgery, University of Tsukuba, Tsukuba, Ibaraki)</p>
<b>M7-2-8</b>	<p><b>Technical advantages of Trans-nasal skull base bur in spine and spinal surgery</b> ..... 239</p> <p>Naoki Higashiyama, M.D., et al. (Department of Neurosurgery, Akita University Graduate School of Medicine, Akita, Akita)</p>
<b>M7-2-9</b>	<p><b>Preliminary report of EOS imaging for Japanese adult spine in comparison with Total Spine Long Film technique</b> ..... 241</p> <p>Kiyoshi Kumano, M.D., et al. (Spine Center, Shinagawa Shishokai Hospital, Shinagawa-ku, Tokyo)</p>

17 : 40 ~ 17 : 50

Break 10min.

17 : 50 ~ 18 : 55 (65min.)

## Free Papers b

### 〈 Video presentation 〉

Chairpersons Shinsuke Suzuki, M.D., Takafumi Inoue, M.D.,  
Masatoshi Sumi, M.D.

<b>Fb-1</b>	<p><b>Carpal Tunnel Release with microscope</b>..... 243</p> <p>Masahito Yuzurihara, M.D., et al. (Spinal Surgery, Kameda Medical Center, Kamogawa, Chiba)</p>
<b>Fb-2</b>	<p><b>Usefulness of checking nerve stimulus by holding legs during surgery</b> ... 245</p> <p>Yasuomi Nonaka, M.D., et al. (Orthopedic Department, Iwai orthopedic Medical Hospital, Edogawa-ku, Tokyo)</p>

<b>Fb-3</b>	<b>Cervical laminoplasty using lamina-elevator and tapered hydroxyapatite spacers</b> ..... 247 Shinji Kumamoto, M.D., et al. (Department of Spine and Spinal Cord Center, Shinkomonji Hospital, Kitakyusyu, Fukuoka)
<b>Fb-4</b>	<b>Operative strategy of thoracic OPLL with hyper obesity (over 160 kg)</b> ... 249 Yohei Iguchi, M.D., et al. (Oita Orthopedic Hospital, Oita, Oita)
<b>Fb-5</b>	<b>Dynamic nonfusion stabilization with the Segmental Spinal Correction System combined with spinous process splitting laminectomy for degenerative lumbar spinal diseases with instability</b> ..... 251 Hideki Ohta, M.D., et al. (Orthopedic Department, Oita Orthopedic Hospital, Oita, Oita)
<b>Fb-6</b>	<b>Atraumatic technique to limit bleeding and reduce operative time for less invasive lumbar surgery</b> ..... 253 Masato Noji, M.D., et al. (Department of Neurosurgery Kanagawa Prefectural Ashigarakami Hospital, Ashigarakamigun, Kanagawa)
<b>Fb-7</b>	<b>Pedicle subtraction osteotomy in adult spinal deformity</b> ..... 255 Yu Yamato, M.D., et al. (Department of Orthopaedic Surgery, Hamamatsu University School of Medicine, Hamamatsu, Shizuoka)
<b>Fb-8</b>	<b>The feasibility of the cannulated cervical pedicle screw</b> ..... 257 Nobuyuki Shimokawa, M.D., et al. (Spine Center, Tsukazaki Hospital, Himeji, Hyogo)
<b>Fb-9</b>	<b>The tips in surgery of cervical laminoplasty (French door open type) with partial foraminotomy for C5 palsy prevention</b> ..... 259 Shinsuke Suzuki, M.D., et al. (Department of Neurosurgery, National Hospital Organization Sendai Medical Center, Sendai, Miyagi)

19 : 00 ~ 20 : 30

Banquet (Main Hall 1)



26 September (Fri.)

Main Hall 3

7 : 30 Registration

8 : 05 ~ 8 : 55 (50min.)

## Free Papers c < Cervical Lesions >

Chairpersons Hideo Hosoe, M.D., Makoto Taniguchi, M.D.

<i>Fc-1</i>	<p><b>A comparative study of autologous cancellous bone grafting vs. beta-tricalcium phosphate in anterior cervical discectomy and fusion using rectangular titanium stand-alone cage</b> ..... 261</p> <p>Toru Yamagata, M.D., et al. (Neurosurgical Department, Osaka City General Hospital, Osaka, Osaka)</p>
<i>Fc-2</i>	<p><b>Delayed diagnosis of cervical dislocation</b> ..... 263</p> <p>Hiroyuki Hashidate, M.D., et al. (Department of Orthopedic Surgery, Shinonoi General Hospital, Nagano, Nagano)</p>
<i>Fc-3</i>	<p><b>Initial Fixation Strength of Cervical Open-Door Laminoplasty Using Basket-Shaped titanium plate</b> ..... 265</p> <p>Yukoh Ohara, M.D., et al. (Shinyurigaoka General Hospital, Surgical Department of Spine, Spinal Cord and Peripheral Nerve, Kawasaki, Kanagawa)</p>
<i>Fc-4</i>	<p><b>3 cases of VAIs following cervical spine fracture-dislocation.—Should VAI be treated prior to reduction?—</b> ..... 267</p> <p>Evan Morita, M.D., et al. (Orthopedic Department, Musashino Red Cross Hospital, Musashino, Tokyo)</p>
<i>Fc-5</i>	<p><b>Radiological Evaluation of Open-Door Cervical Laminoplasty Utilizing Spring-Back Pressure of Compacted Cancellous Bone of the Lamina</b>··· 269</p> <p>Minoru Hoshimaru, M.D., et al. (Shin-aiikai Spine Center, Shijyonawate, Osaka)</p>
<i>Fc-6</i>	<p><b>Surgical treatment for completely dislocated cervical spine without spinal cord injury</b>..... 271</p> <p>Yaoki Nakao, M.D., et al. (Department of Emergency, Daiyukai General Hospital, Ichinomiya, Aichi)</p>

*Fc-7*

**Surgical management of cervical myelopathy—laminoplasty VS posterior fusion—** ..... 273

Takashi Kuniya, M.D., et al.  
(Orthopaedic Department, Yokohama City University Medical Center,  
Yokohama, Kanagawa)

8 : 55 ~ 9 : 00

Break 5min.

9 : 00 ~ 10 : 05 (65min.)

## Free Papers d < Lumbar >

Chairpersons Masato Noji, M.D., Hirohiko Inanami, M.D., Toshiyuki Takahashi, M.D.

*Fd-1*

**Posterior decompression fusion for lumbar canal stenosis associated with osteoporotic vertebral fracture** ..... 275

Kengo Fujii, M.D., et al.  
(Spine and Orthopaedic Surgery, Japanese Red Cross Medical Center,  
Shibuya-ku, Tokyo)

*Fd-2*

**Microendoscopic herniotomy using translaminar approach for lumbar disc herniation** ..... 277

Yasuhiro Ueda, M.D., et al.  
(Department of Orthopaedic Surgery, Fukui Prefectural Hospital, Fukui, Fukui)

*Fd-3*

**Stabilization surgery using the ISOBAR TTL rod for the treatment of lumbar spinal canal stenosis with intervertebral instability** ..... 279

Noburo Hashimoto, M.D.  
(Department of Orthopedic Surgery, National Hospital Organization Kumamoto  
Medical Center, Kumamoto, Kumamoto)

*Fd-4*

**A case of fusion cage migration after posterior lumbar interbody fusion for degenerative spondylolisthesis** ..... 281

Keiichi Akatsuka, M.D., et al.  
(Department of Neurosurgery, Tottori Municipal Hospital, Tottori, Tottori)

*Fd-5*

**Outcome of Lumbar Spine Microendoscopic Laminectomy for Lumbar Canal Stenosis** ..... 283

Kazuki Takeda, M.D., et al.  
(Orthopedic Department, Ogikubo Hospital, Suginami-ku, Tokyo)

*Fd-6*

**Relationship between spinal sagittal alignment and clinical results after microendoscopic laminotomy (MEL) for patients with lumbar spinal canal stenosis** ..... 285

Kenichi Kawaguchi, M.D., et al.  
(Department of Orthopaedic Surgery, Saga-Ken Medical Center Koseikan,  
Saga, Saga)

*Fd-7*

**A surgical procedure for caudad migration lumbar disc hernia causing assured herniotomy through a trans-axilla approach. .... 287**  
Masanori Aoki, M.D.  
(Department of Neurosurgery, Yukioka Hospital, Osaka, Osaka)

*Fd-8*

**Percutaneous Endoscopic Decompression for Far-out Syndrome of the Fifth Lumbar Spinal Nerve ..... 289**  
Takahiro Funato, M.D., et al.  
(Department of Orthopedic Surgery, Teikyo University Mizonokuchi Hospital, Kawasaki, Kanagawa)

10:15 ~ 11:15 (Spine Leader's Lecture A of Main Hall 1 page 57)

10:15 ~ 11:15 (Spine Leader's Lecture B of Main Hall 2 page 63)

11:15 ~ 11:25 Transfer 10min.

11:25 ~ 12:25 (60min.)

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## Hands-on Session 1

ROOM

Hands-on Session  
Room ①

Chairperson Tomoaki Toyone, M.D.  
Techniques for the various vertebral body osteotomies  
by Shigeo Sano, M.D. (PETER BREHM JAPAN KK)

## Hands-on Session 2

Hands-on Session  
Room ②

Chairperson Tateru Shiraishi, M.D.  
Spinal instrumentation using the CBT technique  
by Yoshiyuki Yato, M.D. (Johnson & Johnson K.K. DePuy Synthes Spine)

## Hands-on Session 3

Hands-on Session  
Room ③

Chairperson Masatoshi Sumi, M.D.  
Cervical and thoracic screw insertion method with screw guide  
template system  
by Taku Sugawara, M.D. (NuVasive Japan Inc., FUTURO)

12:40 ~ 13:40 (Luncheon Seminar 1 of Main Hall 1 page 58)

12:40 ~ 13:40 (Luncheon Seminar 2 of Main Hall 2 page 63)

13:40 ~ 13:45 Break 5min.

13:45 ~ 14:00 (General Assembly at Main Hall 1 page 58)

14:00 ~ 14:05 Break 5min.

14 : 05 ~ 14 : 55

(Symposium at Main Hall 1 page 59)

14 : 40 ~ 15 : 10 (30min.)

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## Main Theme 3

### < SCS >

Chairperson Makoto Taniguchi, M.D.

**M3-1**

**Spinal cord stimulation for intractable chronic pain (SCSICP) : An interim report of prospective multicenter observational study** ..... 291

Takashi Agari, M.D., et al.

(Department of Neurological Surgery, Okayama University Graduate School of Medicine, Okayama, Okayama)

**M3-2**

**Placement of a catheter-type electrode under general anesthesia with partial laminectomy in spinal cord stimulation**..... 293

Masatoshi Yunoki, M.D., et al.

(Department of Neurosurgery, Kagawa Rosai Hospital, Marugame, Kagawa)

**M3-3**

**Complicated cases of spinal cord stimulation** ..... 295

Tomohiro Murakami, M.D., et al.

(Department of Neurosurgery, Sapporo Miyanosawa Neurosurgical Hospital, Sapporo, Hokkaido)

15 : 10 ~ 15 : 15

Break 5min.

15 : 15 ~ 16 : 35 (80min.)

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## Main Theme 4

### < Anterior cervical plate >

Chairpersons Masahito Hara, M.D., Izumi Koyanagi, M.D., Junichi Kunogi, M.D.

**M4-1**

**Cervical anterior fusion using cylindrical cage without anterior plate is possible or not** ..... 297

Eiichiro Honda, M.D., et al.

(Department of Neurospinal Surgery, Shiroishikyoritsu Hospital, Kijimagu, Saga)

**M4-2**

**Advantages of anterior cervical plate application for degenerative cervical spine surgery** ..... 299

Atsuumi Aiba, M.D., et al.

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

<b>M4-3</b>	<p>The bony union after single level anterior cervical discectomy and fusion with PEEK cage without plating and iliac crest harvest. .... 301</p> <p>Norihiko Minami, M.D., et al. (Orthopedic Department, Kashiwa City Hospital, Kashiwa, Chiba)</p>
<b>M4-4</b>	<p>Surgical indication, strategy and future of anterior plate fixation for degenerative cervical disease ..... 303</p> <p>Hisaki Uchikado, M.D., et al. (Uchikado Neuro-Spine Clinic, Fukuoka, Fukuoka)</p>
<b>M4-5</b>	<p>The anterior fusion of cervical spondylosis : The necessity of anterior plating ..... 305</p> <p>Kazunari Kogure, M.D. (Department of Neurosurgery, Nippon Medical School, Tama, Tokyo)</p>
<b>M4-6</b>	<p>Anterior spinal surgery for multi-level cervical degenerative disease ... 307</p> <p>Masahito Hara, M.D., et al. (Department of Neurosurgery, Nagoya University Graduate School of Medicine, Nagoya, Aichi)</p>
<b>M4-7</b>	<p>The difference between autologous bone graft and PEEK cage used in ACDF of hybrid anterior cervical fusion ..... 309</p> <p>Ryo Kadota, M.D., et al. (Orthopedic Department, Numadu City Hospital, Numazu, Shizuoka)</p>
<b>M4-8</b>	<p>Long-term outcomes of one-level or two level anterior cervical fusion; plating or non plating, and ADL disturbance and adjacent disc disease ... 311</p> <p>Yuka Horiuchi, M.D., et al. (Department of Orthopaedic Surgery, Hachinohe City Hospital, Hachinohe, Aomori)</p>
<b>M4-9</b>	<p>Selection of anterior decompression and fusion for degenerative cervical spine disorders : Adverse events and reoperations ..... 313</p> <p>Izumi Koyanagi, M.D., et al. (Department of Neurosurgery, Hokkaido Neurosurgical Memorial Hospital, Sapporo, Hokkaido)</p>

16 : 35 ~ 16 : 45

Break 10min.

## Free Papers e 〈 Thoraco lumbar 〉

Chairpersons Yukoh Ohara, M.D., Masaki Mizuno, M.D.

- Fe-1** Surgical case of vertebral tumor expanding to ventral epidural space of Th2 and Th3 ..... 315  
Masahito Yuzurihara, M.D., et al.  
(Spinal Surgery, Kameda Medical Center, Kamogawa, Chiba)
- Fe-2** Microsurgical bilateral decompression via unilateral approach for patients with thoracic myelopathy due to ossification of the ligamentum flavum. ... 317  
Shinichirou Taniguchi, M.D., et al.  
(Department of Orthopaedic Surgery, Kansai Medical University Takii Hospital, Moriguchi, Osaka)
- Fe-3** Outcome of Anterior and Posterior Spinal fusion on Osteoporotic spinal body fractures with neurological symptoms : Five case Report..... 319  
Toru Kono, M.D., et al.  
(Orthopedic Department, Ogikubo Hospital, Suginami-ku, Tokyo)
- Fe-4** The operation techniques of posterior decompression with instrumented fusion in OPLL of the thoracic spine..... 321  
Hiromitsu Takano, M.D., et al.  
(Department of Orthopedic Surgery, Juntendo University, Bunkyo-ku, Tokyo)
- Fe-5** Posterior instrumented fusion without neural decompression for incomplete neurological deficits following vertebral collapse in the osteoporotic thoracolumbar spine—Short fusion combined with spinous process plate— ..... 323  
Atsushi Nakano, M.D., et al.  
(Department of Orthopedic Surgery, Osaka Medical College, Takatsuki, Osaka)
- Fe-6** Transforaminal Thoracic Interbody Fusion for Treatment of a combined disc herniation and OFL in lower thoracic spine : Two case reports ... 325  
Takeshi Umebayashi, M.D., et al.  
(Spine Center, Shinagawa Shishokai Hospital, Shinagawa-ku, Tokyo)
- Fe-7** The change of the operation method for the treatment of thoracolumbar burst fracture using percutaneous pedicle screw fixation ..... 327  
Shuntaro Tsuchida, M.D., et al.  
(Fuji Toranomon Orthopaedic Hospital, Gotenba, Shizuoka)

## Free Papers f 〈 Complications 〉

Chairpersons Naohiro Kawamura, M.D., Kiyoshi Ito, M.D.

<i>Ff-1</i>	<p><b>Thoracic arachnoiditis and arachnoid cyst developed 23 years after myelography with an oily contrast medium : A case report</b> ..... 329</p> <p>Leo Ishizuka, M.D., et al. (Department of Orthopedic Surgery, Jikei University School of Medicine, Ninato-ku, Tokyo)</p>
<i>Ff-2</i>	<p><b>Postoperative pleurisy developed in patient after lumbar spine surgery : a case report</b> ..... 331</p> <p>Hiroki Hirabayashi, M.D., et al. (Orthopedic Department, Marunouchi Hospital, Matsumoto, Nagano)</p>
<i>Ff-3</i>	<p><b>The usefulness of urokinase-treated antithrombogenic drain for microendoscopic lumbar laminotomy</b> ..... 333</p> <p>Shu Nakamura, M.D. (Department of Orthopaedic Surgery, Aichi Spine Institute, Tanbagun, Aichi)</p>
<i>Ff-4</i>	<p><b>Attempts to enhance CSF flow restoration in surgery for spinal adhesive arachnoiditis</b> ..... 335</p> <p>Tetsuryu Mitsuyama, M.D., et al. (Department of Neurosurgery, Tokyo Women's Medical University, Shinjyuku-ku, Tokyo)</p>
<i>Ff-5</i>	<p><b>Recurrent symptomatic epidural hematoma after cervical laminectomy</b>... 337</p> <p>Masato Anno, M.D., et al. (Department of Orthopaedic Surgery, Musashino Red Cross Hospital, Musashino, Tokyo)</p>
<i>Ff-6</i>	<p><b>A case of microendoscopic transforaminal lumbar interbody fusion for foraminal stenosis of lumbar spine after Pyogenic spondylodiscitis treatment</b> ..... 339</p> <p>Ryutaro Shibo, M.D., et al. (Department of Orthopedic Surgery, Iwai Orthopaedic Medical Hospital, Edogawa-ku, Tokyo)</p>
<i>Ff-7</i>	<p><b>A case of venous air embolism during posterior spinal surgery for dural arteriovenous fistula</b> ..... 341</p> <p>Seishi Matsui, M.D., et al. (Department of Neurosurgery, Ehime University Graduate School of Medicine, Toon, Ehime)</p>

*Ff-8*

Iatrogenic C8 radiculopathy due to foraminal stenosis after cervical screw fixation ..... 343

Fumio Hasue, M.D., et al.

(Department of Orthopedic Surgery, Kimitsu Chuo Hospital, Kisarazu, Chiba)

19:00 ~ 20:30

Banquet (Main Hall 1)



27 September (Sat.)

Main Hall 1

7:30 Registration

8:00 ~ 9:00 (60min)

### Morning Seminar 1 (Postgraduate Lecture of JOA)

Chairperson Shigeru Hirabayashi, M.D.

**MS-1**

Hisamitsu Ide, M. D. (Department of Urology, Teikyo University, Itabashi-ku, Tokyo)  
With the aim of Men's Healthy life expectancy—Cutting Edge of  
Urological Management useful for Spinal Surgeons— ..... 99  
(Hisamitsu Pharmaceutical Co., inc.)

9:00 ~ 9:05

Break 5min.

9:05 ~ 10:15 (70min)

### Main Theme 8 〈 Post operative infection 〉

Chairpersons Hitoshi Hase, M.D., Keiichi Akatsuka, M.D.

**M8-1**

The efficacy of local application of vancomycin powder to reduce the  
incidence of surgical site infection for instrumented spine surgery ..... 345  
Daisuke Numaguchi, M.D., et al.  
(Orthopedic Department, Tokyo Women's Medical University Hospital,  
Shinjyuku-ku, Tokyo)

**M8-2**

Effectiveness of teriparatide for spinal infection ..... 347  
Ko Ishida, M.D., et al.  
(Orthopaedic Department, Yokohama City University Medical Center,  
Yokohama, Kanagawa)

**M8-3**

Treatment method for deep infection after spinal instrumentation surgery  
by using Negative pressure wound therapy ..... 349  
Koichiro Ide, M.D., et al.  
(Department of Orthopaedics, Shizuoka City Shizuoka Hospital,  
Shizuoka, Shizuoka)



11 : 35 ~ 12 : 35 (Hands-on Session 4~6 page 88)

12 : 35 ~ 12 : 50 Transfer 15min.

12 : 50 ~ 13 : 50 (60min.)

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### Luncheon Seminar 3 (Postgraduate Lecture of JOA)

Chairperson Takanori Saito, M.D.

**LS-3**

Ken Ishii, M.D. (Department of Orthopaedic Surgery, Keio University, Shinjuku-ku, Tokyo)  
Current management and Future Prospects of Spinal Surgery—with a  
focus on minimally invasive spine stabilization (MIST)— ..... 109  
(Stryker Japan K.K.)

12 : 50 ~ 13 : 50 (Luncheon Seminar 4 of Main Hall 2 page 84)

13 : 50 ~ 14 : 00 Break 10min.

14 : 00 ~ 14 : 30 (30min.)

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### Special Lecture 2

Chairperson Naaki Asami, M.D.

**SL-2**

Resectability of intramedullary spinal cord tumor—personal cases—  
..... 95  
Tomokazu Goya, M.D. (Department of Neurosurgery, Junwakai Memorial Hospital,  
Miyazaki, Miyazaki)

14 : 30 ~ 14 : 50 Booth Viewing 20min.

## Main Theme 6-1

### 〈 Extramedullary tumor 〉

Chairpersons Motoso Kubota, M.D., Masanori Ito, M.D.

<b>M6-1-1</b>	<p><b>A New Concept for Making Decision Regarding Surgical Approach for Spinal Meningiomas : The T-line</b> ..... 361</p> <p>Toshiya Tachibana, M.D., et al. (Department of Orthopaedic Surgery, Hyogo College of Medicine, Nishinomiya, Hyogo)</p>
<b>M6-1-2</b>	<p><b>Surgical procedures and clinical outcomes of spinal meningioma using METRx tubular retractor system</b> ..... 363</p> <p>Macondo Mochizuki, M.D., et al. (Department of Orthopaedic Surg, Numazu City Hospital, Numazu, Shizuoka)</p>
<b>M6-1-3</b>	<p><b>Hemilaminectomy for removal of intradural extramedullary spinal cord tumors</b> ..... 365</p> <p>Kentaro Naito, M.D., et al. (Department of Neurosurgery, Osaka City University Graduate School of Medicine, Osaka, Osaka)</p>
<b>M6-1-4</b>	<p><b>En bloc open door laminoplasty for thoracolumbar spinal cord tumors</b> ... 367</p> <p>Hiroaki Sameda, M.D., et al. (Orthopedic Department, Funabashi Municipal Medical Center, Funabashi, Chiba)</p>
<b>M6-1-5</b>	<p><b>Surgical management of solitary nerve sheath tumors of cervical spine : a retrospective case analysis based on tumor location and extension</b> ... 369</p> <p>Junya Abe, M.D., et al. (Department of Neurosurgery, Tsukazaki Hospital, Himeji, Hyogo)</p>
<b>M6-1-6</b>	<p><b>A case of Neurofibromatosis type 1 with repeated vertebral arteriovenous fistula</b> ..... 371</p> <p>Yusuke Kamei, M.D., et al. (Department of Neurosurgery, Mie Prefectural General Medical Center, Yokkaichi, Mie)</p>
<b>M6-1-7</b>	<p><b>Interspinous wiring following hemifacetectomy for resection of spinal dumbbell schwannoma. 2 cases report</b> ..... 373</p> <p>Keishi Tsunoda, M.D., et al. (Department of Neurosurgery, Nagasaki University Hospital, Nagasaki, Nagasaki)</p>



**M6-2-7**

**Intradural extramedullary metastatic spinal tumor : A report of three cases** ..... 389

Homare Nakamura, M.D., et al.  
(Division of Neurosurgery St. Marianna University School of Medicine  
Yokohama City Seibu Hospital, Yokohama, Kanagawa)

**M6-2-8**

**Usefulness of preoperative embolization for large cervical hemangioblastoma** ..... 391

Tomohiro Yamauchi, M.D., et al.  
(Department of Neurosurgery, Hokkaido Neurosurgical Memorial Hospital,  
Sapporo, Hokkaido)

**M6-2-9**

**A operative case of cavernous angioma close to conus** ..... 393

Eiichiro Honda, M.D., et al.  
(Department of Neuro-spinal Surgery, Shiroishikyoritsu Hospital, Kijimagun, Saga)

17 : 30 ~ 17 : 35

~ Closing Remarks ~

President Naoki Asami, M.D.



27 September (Sat.)

Main Hall 2

7:30 Registration

8:00 ~ 9:00 (60min)

**Morning Seminar 2**  
**(Postgraduate Lecture of JOA)**

Chairperson Akiyoshi Yamazaki, M.D.

**MS-2**

**Yukihiro Matsuyama, M.D.** (Orthopedic Surgery, Hamamatsu University School of Medicine, Hamamatsu, Shizuoka)

Surgical approach for adult spinal deformity with osteoporosis ... 107  
 (Asahi Kasei Pharma Corp.)

9:00 ~ 9:10

Break 10min.

9:10 ~ 9:50 (40min)

**Main Theme 5**

**< Cervical posterior decompression >**

Chairpersons Tateru Shiraiishi, M.D., Toshihiro Takami, M.D.

**MS-1**

The mid-term results of foraminotomy with muscle preserving off-the-midline approach ..... 395

Ryoma Aoyama, M.D., et al.  
 (Department of Orthopaedics, Tokyo Dental College Ichikawa General Hospital, Ichikawa, Chiba)

**MS-2**

Short-term outcomes of facet joint fixation by absorbable screws ..... 397

Ken Ninomiya, M.D., et al.  
 (Orthopedic Department, Tokyo Dental College Ichikawa General Hospital, Ichikawa, Chiba)

**MS-3**

Posterior elements that should be preserved in posterior cervical spine surgery ..... 399

Shigeo Ueda, M.D., et al.  
 (Shin-ai Spine Center, Tesseikai Neurosurgical Hospital, Shijounawate, Osaka)

M5-4

- Correlation between axial pain and movement of the spinous process toward the periphery after S-ELAP** ..... 401  
Mitsuru Furukawa, M.D., et al.  
(Orthopedic Department, Shizuoka City Shimizu Hospital, Shizuoka, Shizuoka)

M5-5

- Assessment of the posterior cervical muscle volume after transspinous sublaminar decompression** ..... 403  
Hitoshi Hayase, M.D., et al.  
(Department of Neurosurgery, Kaneda Hospital, Maniwa, Okayama)

9 : 50 ~ 9 : 55

Break 5min.

9 : 55 ~ 10 : 15 (20min)

## Spine Key Lecture

Chairperson Takanori Saito, M.D.

SKL

- Tokumi Kanemura, M.D.** (Spine Center, Konan Kosei Hospital, Konan, Aichi)  
**Surgical technique of Extreme lateral Interbody Fusion for correction of spinal deformity**..... 97

10 : 15 ~ 10 : 25

Transfer 10min.

10 : 25 ~ 11 : 25 (60min.)

## Spine Leader's Lecture D (Postgraduate Lecture of JOA)

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

Chairperson Tomoaki Toyone, M.D.

SLL-D-1

- Ivan Cheng, M.D.** (Associate Professor of Orthopaedic Surgery, Stanford University, CA, USA)  
**The use of XLIF for adult deformity** ..... 124  
(NuVasive Japan Inc.)

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

Chairperson Hideki Ota, M.D.

SLL-D-2

- Roberto Bassani, M.D.** (Director 2° Spinal Surgery IRCCS Istituto Ortopedico Galeazzi, Milano, Italy)  
**Surgical strategy for degenerative spinal deformities** ..... 126  
(Johnson & Johnson K.K. DePuy Synthes Spine)

10 : 25 ~ 11 : 25 (Spine Leader's Lecture C of Main Hall 1 page 77)

11 : 25 ~ 11 : 35

Transfer 10min.

11 : 35 ~ 12 : 35

(Hands-on Session 4~6 page 88)

12 : 35 ~ 12 : 50

Transfer 15min.

12:50 ~ 13:50 (60min.)

## Luncheon Seminar 4 (Postgraduate Lecture of JOA)

Chairperson Koji Sato, M.D.

**LS-4**

Seiji Ohtori, M.D. (Department of Orthopaedic Surgery, Graduate School of Medicine,  
Chiba University, Chiba, Chiba)

Current approach for refractory low back pain ..... 111  
(Medtronic Japan Co., Ltd.)

12:50 ~ 13:50 (Luncheon Seminar 3 of Main Hall 1 page 78)

13:50 ~ 14:00 Transfer 10min.

14:00 ~ 14:30 (Special Lecture 2 of Main Hall 1 page 78)

14:35 ~ 15:35 (60min.)

## Main Theme 1-1 < MIST >

Chairpersons Takamitsu Tokioka, M.D., Yasuo Mikami, M.D.

**M1-1-1**

Microscopic MIS-TLIF ..... 405  
Yasuhiro Nakajima, M.D., et al.  
(Department of Neurosurgery, Inazawa City Hospital, Inazawa, Inasawa, Aichi)

**M1-1-2**

Clinical outcomes of minimally invasive posterior lumbar interbody fusion  
for more than 5 years ..... 407  
Hiroki Matsui, M.D., et al.  
(Department of Orthop. and Spine Surg., Nagoya Daini Red Cross Hospital,  
Nagoya, Aichi)

**M1-1-3**

Lumbar interbody fusion with micro-endoscope and 18mm tubular  
retractor ..... 409  
Hirohiko Inanami, M.D., et al.  
(Orthopedic Department, Iwai Orthopadic Medical Hospital, Edogawa-ku, Tokyo)

**M1-1-4**

Minimum invasive lateral access surgery for lumbar degenerative disc  
disease ..... 411  
Masaki Mizuno, M.D., et al.  
(Department of Neurosurgery, Mie University Graduate School of Medicine,  
Tsu, Mie)

<b>MI-1-5</b>	<b>Additional level of MIS-TLIF increased burden but not influenced clinical outcomes</b> ..... 413 Koichiro Ono, M.D., et al. (Center for Spinal Surg., Nippon Kokan Hospital, Kawasaki, Kanagawa)
<b>MI-1-6</b>	<b>Accuracy of percutaneous pedicle screws and the preoperative planning</b> ..... 415 Yosuke Miyamoto, M.D. (Orthopedic Department, Takagi Hospital, Oume, Tokyo)
<b>MI-1-7</b>	<b>A comparison study of Open-PLIF and MIS-TLIF for degenerative lumbar disease</b> ..... 417 Tomoyuki Katsuhata, M.D., et al. (Yokohama City University Medical Center, Department of Orthopaedicaedic Surgery, Yokohama, Kanagawa)

15 : 35 ~ 15 : 40

Break 5min.

15 : 40 ~ 16 : 40 (60min.)

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## Main Theme 1-2

### 〈 CBT 〉

Chairpersons Yoshiyuki Yato, M.D., Shunji Asamoto, M.D.

<b>MI-2-1</b>	<b>Buttress effect theory for CBT under MIS</b> ..... 419 Shunji Asamoto, M.D., et al. (Spine and Spinal Cord Center, International University of Health and Welfare, Minato-ku, Tokyo)
<b>MI-2-2</b>	<b>Clinical results of bone union for lumbar interbody fusion using cortical bone trajectory (CBT) method</b> ..... 421 Hideaki Imabayashi, M.D., et al. (Orthopedic Department, National Defense Medical College, Tokorozawa, Saitama)
<b>MI-2-3</b>	<b>Is Cortical Bone Trajectory (CBT) really a minimum invasive surgery for patients?</b> ..... 423 Ken Ninomiya, M.D., et al. (Orthopedic Department, Iihikawa General Hospital, Ichikawa, Chiba)
<b>MI-2-4</b>	<b>Reduction of degenerative lumbar spondylolisthesis using CBT technique</b> ..... 425 Kanji Mori, M.D., et al. (Department of Orthopaedic Surgery, Shiga University of Medical Science, Otsu, Shiga)





27 September (Sat.)

Main Hall 3

7:30 Registration

8:00~9:00 (Morning Seminar 1 of Main Hall 1 page 76)

8:00~9:00 (Morning Seminar 2 of Main Hall 2 page 82)

9:15~10:05 (50min)

## Free Paper g < Managements >

Chairpersons Kosuke Kuribayashi, M.D., Eiichiro Honda, M.D.

*Fig-1*

Treatment of Syringomyelia Associated with Idiopathic Intradural Thoracic Arachnoid Cyst ..... 443

Yoshifumi Kawanabe, M.D.

(Department of Neurosurgery, Shizuoka General Hospital, Shizuoka, Shizuoka)

*Fig-2*

Spinal surgery in patients who refuse blood transfusions for religious reasons ..... 445

Hiroki Ushirozako, M.D., et al.

(Department of Orthopedic surgery, JA Shizuoka Kohseiren Enshu Hospital, Hamamatsu, Shizuoka)

*Fig-3*

Postoperative deterioration of Parkinsonism after spinal surgery in patients with Parkinson's disease—Administration of L-dopa in the perioperative period— ..... 447

Nozomu Ohtomo, M.D., et al.

(Department of Orthopaedic Surgery, Kanto Rosai Hospital, Kawasaki City, Kanagawa Prefecture, Kawasaki, Kanagawa)

*Fig-4*

Intra-arterial ICG videoangiography during operation for the vascular malformation in the upper cervical spine ..... 449

Hisaharu Gotou, M.D., et al.

(Yamaguchi University School of medicine, Neurosurgery, Ube, Yamaguchi)

*Fg-5*

**Measurement of the 5th lumbar spinal nerve root by MR mylogram reconstruction**..... 451

Sei Terayama, M.D., et al.

(Sangubashi Spine Surgery Hospital, Shibuya-ku, Tokyo)

*Fg-6*

**Cervical canal stenosis in asymptomatic volunteers—Analysis of dynamic MRI and X-ray photography in 100 asymptomatic volunteers—** ..... 453

Ryoma Aoyama, M.D., et al.

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

11 : 35 ~ 12 : 35 (60min.)

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## Hands-on Session 4

ROOM

Hands-on Session  
Room ①

Chairperson Naoki Asami, M.D.

**Anterior Cervical Fixation Using Screw/ Cage System**

by Kuniyoshi Abumi, M.D. (Biomet Japan, Inc.)

## Hands-on Session 5

Hands-on Session  
Room ②

Chairperson Eiji Abe, M.D.

**Insertion technique of S2 (S1) Sacral-Ala-Iliac screw without X-ray fluoroscopy**

by Shigeo Sano, M.D. (Johnson & Johnson, K.K. DePuy Synthes Spine)

## Hands-on Session 6

Hands-on Session  
Room ③

Chairperson Yoichiro Hatta, M.D.

**The posterior spinal fusion by Illico SE system and The percutaneous vertebroplasty for the thoraco-lumbar vertebral fracture**

by Noburo Hashimoto, M.D. (ALPHATEC PACIFIC, INC.)