

The 40th Annual Research Meeting of the Japanese Orthopaedic Association

Congress President, Yasuyuki Ishibashi
Department of Orthopaedic Surgery,
Hirosaki University Graduate School of Medicine
Held in Aomori, October 16 and 17, 2025

1st Day October 16 Room 1

13 : 50 ~ 14 : 20	Congress President Lecture	Moderator H. Kawano
1-1-PL-1	Clinical and basic research by an orthopaedic surgeon <i>Yasuyuki Ishibashi</i> , Dept. of Orthop. Surg., Hirosaki Univ. Graduate School of Medicine...S1537	
14 : 30 ~ 16 : 00	Keynote lecture	Moderator S. Tanaka
1-1-KL-1	Kinesin superfamily molecular motors KIFs: Mechanism of intracellular transport, regulation of neuronal functions and their related diseases <i>Nobutaka Hirokawa</i> , Univ. of Tokyo, Graduate School of Medicine...S1537	
16 : 10 ~ 17 : 10	Cultural lecture	Moderator S. Imagama
1-1-CL-1	The reason to do anything gives you inspiration: What made Hayabusa and Hayabusa-2 projects accomplished <i>Junichiro Kawaguchi</i> , Australian National Univ...S1538	

1st Day October 16 Room 2

8 : 30 ~ 10 : 00	Symposium 1	Moderators K. Nakata, T. Matsushita
Frontiers of basic research to improve postoperative outcomes of ACL reconstruction		
1-2-S1-1	Maintenance mechanism of stress concentration preventing function in ACL femoral entheses <i>Hiromichi Fujie, et al.</i> , Medicine-Engineering Collaborative Research Center, Tokyo Metropolitan Univ...S1539	
1-2-S1-2	Basic research focusing on tendon growth <i>Junsuke Nakase, et al.</i> , Dept. of Orthop. Surg., Graduate School of Medical Sciences, Kanazawa Univ...S1539	
1-2-S1-3	Biomarker values before and after ACL reconstruction <i>Yohei Nishida, et al.</i> , Dept. of Orthop. Surg., Osaka City General Hosp...S1540	
1-2-S1-4	Therapeutic potential of remnant vascular-derived cells for anterior cruciate ligament reconstruction <i>Tomoyuki Matsumoto, et al.</i> , Dept. of Orthop. Surg., Kobe Univ. Graduate School of Medicine...S1540	
1-2-S1-5	A novel ACL reconstruction using tissue-regenerative ligament (Decellularized bovine tendon) <i>Masafumi Itoh, et al.</i> , Dept. of Orthop. Surg., Tokyo Women's Medical Univ...S1541	
1-2-S1-6	Lateral extra-articular tenodesis (LET) effects on quadriceps tendon (QT) autograft maturation and knee laxity following anterior cruciate ligament (ACL) reconstruction surgery <i>John Xerogeanes, et al.</i> , Emory Univ. School of Medicine, Atlanta, GA, USA...S1541	

10 : 10 ~ 12 : 10	Joint symposium 1 (AO Sports)	Moderators	James P. Stannard, Y. Kimura
Advances in patellofemoral joint treatment			

- 1-2-JS1-1 A new view of the patellofemoral morphology by novel 3D imaging
..... *Yuki Yoshi Toritsuka, et al.*, Mukogawa Women's Univ. ...S1542
- 1-2-JS1-2 Predicting J-sign on physical examination and radiographic parameters: Data from the JUPITER cohort
..... *Brady Munch Jacqueline, et al.*, Oregon Health & Science Univ., Portland, OR, USA ...S1542
- 1-2-JS1-3 First-time vs. recurrent patellofemoral instability: Differences in outcomes after medial patellofemoral ligament reconstruction without bony realignment
..... *Brady Munch Jacqueline, et al.*, Oregon Health & Science Univ., Portland, OR, USA ...S1543
- 1-2-JS1-4 Medial patellofemoral ligament reconstruction: Indications and techniques
..... *Takehiko Matsushita, et al.*, Dept. of Orthop. Surg., Meiwa Hosp. ...S1543
- 1-2-JS1-5 Indications for isolated MPFL reconstruction from a biomechanical perspective
..... *Keisuke Kita*, JCHO Osaka Hosp. ...S1544
- 1-2-JS1-6 Indication of osteotomy for patellar instability and recurrent patellar dislocation
..... *Shuhei Otsuki*, Dept. of Orthop. Surg., Osaka Medical and Pharmaceutical Univ. ...S1544
- 1-2-JS1-7 Fresh osteochondral allograft (OCA) transplant for full thickness cartilage loss at the patellofemoral joint: The state of the art in 2025
..... *James Patrick Stannard*, Univ. of Missouri, School of Medicine, Columbia, MO, USA ...S1545

12 : 30 ~ 13 : 30	Luncheon seminar 1	Moderator	T. Suzuki
Exploring quad tendon ACL reconstruction: From research to clinical: Multiple perspectives for the future			

- 1-2-LS1-1 Indications and potential problems in ACL reconstruction using the quadriceps tendon: Insights from basic research
..... *Junsuke Nakase*, Dept. of Orthop. Surg.,
Graduate School of Medical Sciences, Kanazawa Univ. ...S1546
- 1-2-LS1-2 ACL reconstruction using QT graft: Clinical experience and literature review
..... *John Xerogeanes*, Emory Univ. School of Medicine, Atlanta, GA, USA ...S1546

14 : 20 ~ 15 : 20	Invited lecture 1	Moderator	M. Ishijima
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- 1-2-IL1-1 Meniscus and early knee osteoarthritis
..... *Martin Englund*, Lund Univ., Dept. of Clinical Sciences Lund, Orthop., Lund, Sweden ...S1547

15 : 30 ~ 17 : 00	Joint symposium 2 (The Japanese Knee Society)	Moderators	Y. Uchio, H. Koga
Deep-mining Knee OA			

- 1-2-JS2-1 Risk factors of knee osteoarthritis identified by epidemiological study
..... *Eiji Sasaki, et al.*, Dept. of Orthop. Surg., Hirosaki Univ. Graduate School of Medicine ...S1548
- 1-2-JS2-2 Pathophysiology of knee osteoarthritis using biomarkers
..... *Koji Aso, et al.*, Dept. of Orthop. Surg., Kochi Medical School, Kochi Univ. ...S1548
- 1-2-JS2-3 Biomechanics of medial knee osteoarthritis
..... *Shinichi Kuriyama, et al.*, Dept. of Orthop. Surg.,
Graduate School of Medicine, Kyoto Univ. ...S1549
- 1-2-JS2-4 The concept of articular cartilage treatment in osteoarthritis of the knee
..... *Masakazu Ishikawa, et al.*, Kagawa Univ. ...S1549
- 1-2-JS2-5 Approach for meniscus pathology in knee osteoarthritis
..... *Nobutake Ozeki, et al.*, Center for Stem Cell and Regenerative Medicine,
Institute of Science Tokyo ...S1550

1st Day October 16 Room 3

8 : 30 ~ 9 : 30 Instructional lecture 1

Moderator S. Imai

- 1-3-EL1-1 Basic research for the upgrade of shoulder treatment
 Nobuyuki Yamamoto, *et al.*, Dept. of Sports Medicine and
 Reconstruction of Motion Function, Tohoku Univ. Graduate School of Medicine...S1550

9 : 30 ~ 10 : 30 Oral Spinal cord:
 Regeneration, treatments

Moderators H. Chikuda, K. Akeda

- 1-3-1 Piezo1 channel exaggerates ferroptosis of nucleus pulposus cells by mediating mechanical
 stress-induced iron influx Lianlei Wang, *et al.*, Dept. of Orthop., Qilu Hosp...S1551
- 1-3-2 Identification of axon regenerative astrocytes by single-cell transcriptome analysis
 Mami Sugano, *et al.*, Dept. of Orthop. Surg., Clinical Medicine,
 Graduate School of Medical Sciences, Kyushu Univ...S1551
- 1-3-3 Pathophysiology of thermal-induced spinal cord injury
 Arata Mashima, *et al.*, Dept. of Orthop. Surg.,
 Clinical Medicine, Graduate School of Medical Sciences, Kyushu Univ...S1552
- 1-3-4 Clinical-grade human iPSC-derived neural stem/progenitor cell transplantation for severe chronic
 cervical spinal cord Injury with *in vivo* single-nucleus RNA sequencing
 Ryo Ogaki, *et al.*, Dept. of Orthop. Surg., Keio Univ...S1552
- 1-3-5 Longitudinal changes in resting-state functional connectivity associated with motor recovery after
 cervical spinal cord injury in common marmosets
 Akira Toga, *et al.*, Dept. of Orthop. Surg., Keio Univ...S1553
- 1-3-6 Transient receptor potential vanilloid 4 activation by agonist promotes autophagy and extracellular
 matrix synthesis in rat intervertebral disc
 Kohei Kuroshima, *et al.*, Dept. of Orthop. Surg., Kobe Univ. Graduate School of Medicine...S1553
- 1-3-7 Thrombin induces degradation of murine intervertebral discs via M1-like
 polarization of macrophages Rikito Tatsuno, *et al.*, Dept. of Orthop. Surg.,
 Graduate School of Medical Science, Univ. of Yamanashi...S1554

10 : 30 ~ 11 : 20 Oral Imaging analysis: Spine

Moderators M. Nagae, N. Fujita

- 1-3-8 An algorithm for creating the imitate 3D MRI/CT fusion images from the plain CT of lumbar spine
 using generative adversarial networks Terufumi Kokabu, *et al.*, Dept. of Orthop. Surg.,
 Faculty of Medicine and Graduate School of Medicine, Hokkaido Univ...S1555
- 1-3-9 Development of an AI-based vertebral deformity analysis algorithm: Evaluation of vertebral
 identification rate and measurement error
 Shoutaro Arakawa, *et al.*, Dept. of Orthop. Surg., The Jikei Univ. School of Medicine...S1555
- 1-3-10 Prediction of diagnosis of Chiari malformation or syringomyelia in adolescent scoliosis using deep
 learning with convolutional neural networks
 Hiroyuki Tachi, *et al.*, Dept. of Orthop. Surg., Hokkaido Medical Center...S1556
- 1-3-11 Risk prediction of neurological symptoms in patients with spinal bone metastases using deep
 learning on imaging diagnostic data Shuntaro Yasunari, *et al.*, Dept. of Med. Eng.,
 Div. of Fund. Eng., Chiba Univ. Grad. Sch. of Sci. Eng...S1556
- 1-3-12 Improvement and accuracy evaluation of a nerve root region segmentation method for MRI
 diffusion tensor images of lumbar spine disease using deep learning
 Shuzo Tanaka, *et al.*, Dept. of Medical Engineering, Faculty of Engineering, Chiba Univ...S1557

- 1-3-13 Development and diagnostic accuracy evaluation of an ai-based detection model for fresh osteoporotic vertebral fractures using plain X-ray images
.....*Tomonori Morita, et al.*, Dept. of Orthop. Surg., Sapporo Medical Univ.··S1557

11 : 20 ~ 12 : 20 Oral Spine: Pathology

Moderators H. Haro, H. Murakami

- 1-3-14 A proteomic analysis for osteogenic factors concerning with ossification of the posterior longitudinal ligament in cervical spine
.....*Takafumi Yayama, et al.*, Dept. of Orthop. Surg., Shiga Univ. of Medical Science··S1558
- 1-3-15 Impact of lumbar ossification of the posterior longitudinal ligament on the spine: A localized lesion or a diffuse spinal ossification disease?*Yoshinao Koike, et al.*, Dept. of Orthop. Surg., Faculty of Medicine and Graduate School of Medicine, Hokkaido Univ.··S1558
- 1-3-16 Genome-wide association analysis of lumbar ligament hypertrophy
···*Yosuke Takeichi, et al.*, Dept. of Orthop. Surg., National Center for Geriatrics and Gerontology··S1559
- 1-3-17 Fibro-adipogenic progenitors (FAPs) are involved in occurrence of adolescent idiopathic scoliosis
.....*Takuro Iwami, et al.*, Dept. of Orthop. Surg., Keio Univ.··S1559
- 1-3-18 Genome-wide association study of lumbar degenerative kyphosis: A multicenter study by 6 universities in Tohoku district
.....*Ko Hashimoto, et al.*, Dept. of Orthop. Surg., Tohoku Univ. Graduate School of Medicine··S1560
- 1-3-19 A cross-sectional observational study on association between diffuse idiopathic skeletal hyperostosis and insulin resistance
.....*Yu Li, et al.*, Dept. of Orthop. Surg., Hirosaki Univ. Graduate School of Medicine··S1560
- 1-3-20 Evaluation of telomerase-specific oncolytic adenovirus infection to spinal tumors for therapeutic use*Ryo Takatori, et al.*, Dept. of Orthop. Surg., Science of Functional Recovery and Reconstruction, Faculty of Medicine, Dentistry, and Pharmaceutical Sciences, Okayama Univ.··S1561

12 : 30 ~ 13 : 30 Luncheon seminar 2

Moderator T. Miyamoto

- 1-3-LS2-1 From the development of novel knee joint treatments to health promotion
‘Vivid Health’: Surgical treatment, regenerative medicine, SaMD,
and the utilization of digital twin technology
.....*Ken Nakata*, Medicine for Sports and Performing Arts,
Dept. of Health and Sport Sciences, Graduate School of Medicine, Osaka Univ.··S1561

14 : 20 ~ 15 : 20 Oral Spine, Alignment

Moderators Y. Matsuyama, Y. Kudo

- 1-3-21 Evaluation of spinal alignment and thoracic extension mobility in lumbar spondylolysis
.....*Nobuaki Takeura, et al.*, Dept. of Orthop.,
Graduate School of Medical Science, Kyoto Prefectural Univ. of Medicine··S1562
- 1-3-22 Effect of baseball position on spinal alignment and lumbar disc degeneration
.....*Kyosuke Numaguchi, et al.*, Dept. of Orthop. Surg.,
Faculty of Medicine and Graduate School of Medicine, Hokkaido Univ.··S1562
- 1-3-23 Development of a correction index incorporating hip sagittal alignment in adult spinal deformity surgery
.....*Kohei Takahashi, et al.*, Dept. of Orthop. Surg., Tohoku Univ. Graduate School of Medicine··S1563
- 1-3-24 Association of lumbar multifidus atrophy and spino-pelvic alignment
.....*Katsuro Ura, et al.*, Dept. Orthop. Surg., Otaru General Hosp.··S1563
- 1-3-25 Pelvic kinematics during gait following long fusion surgery due to adult spinal deformity
.....*Masanari Takami, et al.*, Dept. of Orthop. Surg., Wakayama Medical Univ.··S1564
- 1-3-26 Morphological and functional differences between upper and lower lumbar lordosis in the standing sagittal plane*Kazuhiro Hasegawa, et al.*, Niigata Spine Surg. Center··S1564

- 1-3-27 The compensatory patterns of spinopelvic alignment vary depending on the magnitude of pelvic incidence
 *Yu Yamato, et al.*, Dept. of Orthop. Surg., Hamamatsu Univ. School of Medicine...S1565

15 : 20 ~ 16 : 20	Oral Spine: Surgery	Moderators T. Saito, S. Kawabata
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- 1-3-28 The emerging role of intraoperative neuromonitoring in lumbar degenerative spine surgery: Potential of early fEMG detection in preventing MEP deterioration
 *Yoshikazu Yanagisawa, et al.*, Dept. of Orthop. Surg., Fukuoka Mirai Hosp...S1566
- 1-3-29 Investigation of the reproducibility of spinal cord function evaluation using magnetoneurography
 *Satoshi Tamura, et al.*, Dept. of Orthop. and Spinal Surg., Graduate School of Medical and Dental Sciences, Institute of Science Tokyo...S1566
- 1-3-30 Ideal alarm point of intraoperative neuromonitoring during spinal surgeries: multicenter prospective study in JSSR monitoring working group
 *Go Yoshida, et al.*, Dept. of Orthop. Surg., Hamamatsu Univ. School of Medicine...S1567
- 1-3-31 Preventive effect of a new posterior dynamic stabilization system with polyethylene on screw loosening *Koji Matsumoto, et al.*, Dept. of Orthop. Surg., Nihon Univ...S1567
- 1-3-32 AI-driven prognostic visualization for proximal CSA: Can machine learning outperform electrophysiological examinations?
 *Yusuke Ichihara, et al.*, Dept. of Orthop. Surg., Yamaguchi Univ. Graduate School of Medicine...S1568
- 1-3-33 A machine learning based prediction model for postoperative survival of metastatic spinal tumors: JASA multicenter survey
 *Sadayuki Ito, et al.*, Dept. of Orthop./Rheumatology, Musculoskeletal and Cutaneous Surg., Program in Integrated Medicine, Graduate School of Medicine, Nagoya Univ...S1568
- 1-3-34 An anatomical study on the relationship between the crus of the diaphragm and segmental vessels to prevent injuries at the upper lumbar spine
 *Hiroo Shiraga, et al.*, Dept. of Orthop. Surg., Nagoya City Univ. East Medical Center...S1569

16 : 30 ~ 17 : 30	Afternoon seminar 1	Moderator H. Kanno
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- 1-3-AS1-1 Recent topics in osteoporosis treatment with PTH1 receptor agonists
 *Naohisa Miyakoshi*, Dept. of Orthop. Surg., Akita Univ. Graduate School of Medicine...S1569

1st Day October 16 Room 4

8 : 30 ~ 9 : 30	Oral Bone: Osteoporosis 1	Moderators K. Iba, S. Ohtori
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- 1-4-1 Damascenone inhibits osteoclastogenesis by epigenetically modulating Nrf2-mediated ROS scavenge and counteracts OVX-induced osteoporosis
 *Lianlei Wang, et al.*, Dept. of Orthop., Qilu Hosp...S1570
- 1-4-2 *In silico* examination of a novel therapeutic strategy for prevention of a rebound after anti-RANKL antibody cessation
 *Young Kwan Kim, et al.*, Institute for Life and Medical Sciences, Kyoto Univ...S1570
- 1-4-3 Transcriptional factor REST is involved the age-related suppression of osteoblast differentiation
 *Norizumi Imazu, et al.*, Dept. of Medicine for Orthop. and Motor Organ, Juntendo Univ...S1571
- 1-4-4 Genetic deletion of c4orf48 is associated with impaired bone strength and microstructure
 *Taiki Tokuhito, et al.*, Dept. of Orthop. Surg., Faculty of Medicine and Graduate School of Medicine, Hokkaido Univ...S1571
- 1-4-5 Cellular senescence by loss of Men1 in osteoblasts is critical for age-related osteoporosis
 *Yuichiro Ukon, et al.*, Dept. of Orthop. Surg., Graduate School of Medicine, Osaka Univ...S1572

- 1-4-6 The pivotal role of the Hes1/Piezo1 pathway in the pathophysiology of glucocorticoid-induced osteoporosis
 *Yuki Etani, et al.*, Dept. of Orthop. Surg., Graduate School of Medicine, Osaka Univ. ...S1572
- 1-4-7 The RANKL-derived peptide MHP1-AcN suppresses bone loss in ovariectomized mice via RANK on osteoclasts and TNFR1 on osteocytes
 *Takuya Kurihara, et al.*, Dept. of Orthop. Surg., Graduate School of Medicine, Osaka Univ. ...S1573

9 : 30 ~ 10 : 20	Oral Bone: Osteoporosis 2	Moderators Y. Kobayashi, S. Nozawa
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- 1-4-8 Dextran sodium sulfate-induced colitis promotes inflammatory response of osteal macrophages leading to pathological bone loss in mice *Ryota Suzuki, et al.*, Dept. of Orthop. Surg., Faculty of Medicine and Graduate School of Medicine, Hokkaido Univ. ...S1574
- 1-4-9 Rebound phenomenon after anti-RANKL antibody discontinuation: A new role of ITAM signaling and Syk
 *Hotaka Ishizu, et al.*, Dept. of Orthop. Surg., Hokkaido Univ. Graduate School of Medicine ...S1574
- 1-4-10 Effects of equol administration on pain-behaviour and bone micro-architecture in a mouse model of postmenopausal osteoporosis
 *Kenta Kiyomoto, et al.*, Dept. of Musculoskeletal Anti-aging Medicine, Sapporo Medical Univ. ...S1575
- 1-4-11 A novel regulatory mechanism of bone metabolism by Fam102a
 *Yu Yamashita, et al.*, Dept. of Orthop. Surg., The Jikei Univ. School of Medicine ...S1575
- 1-4-12 The combination of platelet-rich plasma and cotton-like b-tricalcium phosphate/ poly(lactic-co-glycolic acid) fibers promote bone repair in osteoporotic vertebral defects in rat models via macrophages *Yuichi Shimizu, et al.*, Dept. of Orthop., Graduate School of Medical Science, Kyoto Prefectural Univ. of Medicine ...S1576
- 1-4-13 Cyclin-dependent kinase inhibitor 1 (p21) deficient mice are susceptible to osteoporosis in mice arthritis model
 *Kensuke Wada, et al.*, Dept. of Orthop. Surg., Kobe Univ. Graduate School of Medicine ...S1576

10 : 20 ~ 11 : 20	Oral Cartilage: Pathology	Moderators J. Iwamoto, N. Kaku
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- 1-4-14 Osteocytes regulate osteoprotegerin expression via the p38-MAPK-CREB pathway in response to TNF-alpha stimulation *Keitaro Yasumoto, et al.*, Dept. of Orthop. Surg., Clinical Medicine, Graduate School of Medical Sciences, Kyushu Univ. ...S1577
- 1-4-15 Spinal canal development and alignment in a mouse model of achondroplasia
 *Hiroshi Asai, et al.*, Dept. of Orthop./Rheumatology, Musculoskeletal and Cutaneous Surg., Program in Integrated Medicine, Graduate School of Medicine, Nagoya Univ. ...S1577
- 1-4-16 Clinical characteristics and identification of associated factors in steroid-induced multifocal osteonecrosis using proteome analysis *Kosuke Arita, et al.*, Dept. of Orthop. Surg., Faculty of Medicine and Graduate School of Medicine, Hokkaido Univ. ...S1578
- 1-4-17 Visceral fat and obesity synergistically contribute to the pathogenesis of Japanese ossification of the posterior longitudinal ligament *Tomoya Sato, et al.*, Dept. of Orthop. Surg., Faculty of Medicine and Graduate School of Medicine, Hokkaido Univ. ...S1578
- 1-4-18 Stimulation by necrotic cells increases osteoclast resistance to bisphosphonate-induced apoptosis via macrophages
 *Kazuya Uehara, et al.*, Dept. of Orthop. Surg., Yamaguchi Univ. Graduate School of Medicine ...S1579
- 1-4-19 BMP-9 mediates fibroproliferation in fibrodysplasia ossificans progressiva through TGF- β signaling
 *Makoto Ikeya, et al.*, Center for iPS Cell Research and Application, Kyoto Univ. ...S1579

- 1-4-20 Administration of anti-sclerostin antibodies reduces bone osteolysis in a nanoparticle-induced osteolysis mouse model
*Hiroaki Ido, et al.*, Dept. of Orthop./Rheumatology, Musculoskeletal and Cutaneous Surg.,
 Program in Integrated Medicine, Graduate School of Medicine, Nagoya Univ.··S1580

11 : 20 ~ 12 : 20	Oral Cartilage: Regeneration	Moderators K. Nishida, K. Nakanishi
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- 1-4-21 NKG2D signaling induces IL-17A production by gamma delta T cells in the bone repair microenvironment and promotes bone repair
*Hitoshi Toyoda, et al.*, Dept. of Orthop. Surg., Showa Medical Univ.··S1581
- 1-4-22 Enpp1-intestinal VDR signal regulate ectopic calcification
*Makoto Tateyama, et al.*, Dept. of Orthop. Surg., Faculty of Life Sciences, Kumamoto Univ.··S1581
- 1-4-23 Development of a new treatment for osteoporotic vertebral fractures using adipose-derived stem cell spheroids*Yuta Sawada, et al.*, Dept. of Orthop. Surg.,
 Osaka Metropolitan Univ. Graduate School of Medicine··S1582
- 1-4-24 A comparative study of the dose-dependent osteogenic effects of platelet preparations derived from iPS cells and the effects of platelet-rich plasma using a rat lumbar vertebra bone graft model
*Michiaki Mukai, et al.*, Center for Advanced Joint Function and Reconstructive Spine Surg.,
 Graduate School of Medicine, Chiba Univ.··S1582
- 1-4-25 Nupr1 deficiency promotes bone defect healing by enhancing osteogenic potential of mesenchymal stem cells*Koichiro Kishikawa, et al.*, Dept. of Orthop. Surg., Saga Univ.··S1583
- 1-4-26 Age-related changes in bone resident macrophages and their effect on fracture healing
*Yu Shinyashiki, et al.*, Dept. of Orthop. Surg., Kindai Univ. Faculty of Medicine··S1583
- 1-4-27 Identification of juvenile periosteal stem cell-specific factors promoting bone formation
*Sataka Miyata, et al.*, Dept. of Orthop. Surg., Graduate School of Medicine, Osaka Univ.··S1584

12 : 30 ~ 13 : 30	Luncheon seminar 3	Moderator T. Morimoto
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- 1-4-LS3-1 Navigating the shifting landscape of infectious spondylitis diagnosis: Emerging pathogens and evolving strategies*Shinji Tanishima*, Dept. of Orthop. Surg., Tottori Univ. Hosp.··S1584

14 : 20 ~ 15 : 20	Oral Regenerative medicine	Moderators N. Kamei, S. Okada
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- 1-4-28 Imeglimin, a novel antidiabetic drug synthesized from metformin, attenuates knee osteoarthritis development and progression through activating AMPK and inhibiting NF- κ B signaling
*Yuki Hyodo, et al.*, Dept. of Orthop. Surg.,
 Clinical Medicine, Graduate School of Medical Sciences, Kyushu Univ.··S1585
- 1-4-29 Translating Tie2-enhanced NP cell transplantation for treatment of induced canine disc degeneration: A two-part preclinical evaluation
*Jordy Schol, et al.*, Tokai Univ. School of Medicine··S1585
- 1-4-30 PI3K/Akt signalling regulates Scx-lineage tenocytes and Tppp3-lineage tendon sheath synovial cells in neonatal tendon regeneration
*Atsushi Goto, et al.*, Dept. of Orthop. Surg., Div. of Disease Control,
 Research field of Medical Sciences, Graduate School of Medicine, Gifu Univ.··S1586
- 1-4-31 Single-cell RNA/GR sequencing revealed distinct stem cell populations within human bone marrow-derived mesenchymal stromal cells
*Takeshi Teramura, et al.*, Inst. Adv. Clin. Med., Kindai Univ. Hosp.··S1586
- 1-4-32 Innovative musculoskeletal regenerative therapy using universal artificial platelets derived from human iPS cells
*Yasuhiro Shiga, et al.*, Dept. of Orthop. Surg., Graduate School of Medicine, Chiba Univ.··S1587

- 1-4-33 Generation of bone-like constructs via co-culture of Scaffold-free cartilage constructs derived from rat adipose-derived mesenchymal stem cells and osteoclasts
.....*Shohei Kashimoto, et al.*, Cent. for Regen. Medic Res., Saga Univ....S1587
- 1-4-34 Senescent cell clearance from human synovial mesenchymal stem cells: A sorting approach using autofluorescence and cell size as indicators
.....*Kurea Sakuma, et al.*, Center for Stem Cell and Regenerative Medicine,
Institute of Science Tokyo....S1588

15 : 20 ~ 16 : 20	Oral Ankle joint, foot	Moderators N. Haraguchi, N. Kanzaki
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- 1-4-35 Location and incidence of sesamoid osteophyte formation in hallux rigidus
.....*Yasutaka Sotozono, et al.*, Dept. of Orthop.,
Graduate School of Medical Science, Kyoto Prefectural Univ. of Medicine....S1589
- 1-4-36 Evaluation of ankle instability in patients with chronic ankle instability syndrome before and after anesthesia: Using a capacitance-Type strain sensor device
.....*Tadashi Kimura, et al.*, Dept. of Orthop. Surg., The Jikei Univ. School of Medicine....S1589
- 1-4-37 Quantitative evaluation of the dynamic stabilization effect of distal tibial oblique osteotomy for osteoarthritis of the ankle*Hiroki Yonezu, et al.*, Dept. of Orthop. Surg.,
Nagoya City Univ., Graduate School of Medical Sciences....S1590
- 1-4-38 Impact of stance width on ankle and hindfoot alignment in varus knee osteoarthritis:
A radiographic analysis*Naoya Kikuchi, et al.*, Dept. of Orthop. Surg., Univ. of Tsukuba....S1590
- 1-4-39 Effect of lower-limb alignment of fibular osteotomy in closing wedge osteotomy for
knee osteoarthritis*Kenji Nakamura, et al.*, Dept. of Orthop., Juntendo Univ....S1591
- 1-4-40 3D morphology and alignment of the posterior tibialis muscle in flatfoot
.....*Takuma Miyamoto, et al.*, Dept. of Orthop. Surg., Nara Medical Univ....S1591
- 1-4-41 Evaluation of stresses on the plantar pressure by medial displacement calcaneal osteotomy using
finite element method*Yumiko Kobayashi, et al.*, Dept. of Orthop.,
Graduate School of Medical Science, Kyoto Prefectural Univ. of Medicine....S1592

16 : 30 ~ 17 : 30	Afternoon seminar 2	Moderator G. Kumagai
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- 1-4-AS2-1 Neural mechanisms of sleep-wake state transitions: Functional insights into orexin
.....*Takeshi Sakurai*, Univ. of Tsukuba....S1592

1st Day October 16 Room 5

8 : 30 ~ 10 : 00	Symposium 2	Moderators J. Takahashi, S. Demura
A guide to the pathophysiology and early detection of scoliosis		

- 1-5-S2-1 Epidemiology of early onset scoliosis
.....*Kanichiro Wada, et al.*, Dept. of Orthop. Surg., Hirosaki Univ. Graduate School of Medicine....S1593
- 1-5-S2-2 Spinal deformity in spinal muscular atrophy in the era of disease modifying therapy:
Building evidence through clinical research
.....*Hiroko Matsumoto*, Dept. of Orthop. Surg., Harvard Medical School....S1593
- 1-5-S2-3 The significance of screening for early detection of scoliosis
.....*Hiroshi Kuroki*, Dept. of Orthop. Surg., Miyazaki Higashi Hosp....S1594
- 1-5-S2-4 Development of the world's first automatic scoliosis angle estimation medical device
.....*Hideki Sudo*, Dept. of Orthop. Surg., Hokkaido Univ. Hosp....S1594
- 1-5-S2-5 Current status and future perspectives of genetic research on adolescent idiopathic scoliosis
.....*Kazuki Takeda*, Dept. of Orthop. Surg., Keio Univ....S1595

- 1-5-S2-6 Survey on the actual treatment practices for spinal deformity in non-ambulant disabled patients
 ... *Yuki Taniguchi, et al.*, Dept. of Orthop. Surg., The Univ. of Tokyo Hosp., The Univ. of Tokyo...S1595

10 : 10 ~ 11 : 10 **Invited lecture 2** **Moderator T. Aizawa**

- 1-5-IL2-1 Spinal pathoanatomy and clinical epidemiology
 *Hiroko Matsumoto*, Dept. of Orthop. Surg. and Sports Medicine,
 Boston Children's Hosp., Harvard Medical School, Boston, MA, USA...S1596

11 : 20 ~ 12 : 20 **Special program** **Moderator M. Matsumoto**

- 1-5-SP-1 Survival of university hospitals *Kiyotaka Hoshinaga, et al.*, Fujita Academy...S1596

12 : 30 ~ 13 : 30 **Luncheon seminar 4** **Moderator T. Asari**

- 1-5-LS4-1 Safety of medical professionals: New trends in occupational radiation exposure reduction to be
 practiced by medical staff *Kazuta Yamashita, et al.*, Dept. of Orthop.,
 Institute of Biomedical Sciences, Tokushima Univ. Graduate School...S1597

1st Day October 16 Room 6

9 : 00 ~ 10 : 30 **Symposium 3** **Moderators M. Osaki, K. Oe**
Frontiers in prosthetic design and biomaterials research

- 1-6-S3-1 Optimal alignment for enhancing initial fixation of short stem
 *Arata Kanaizumi, et al.*, Dept. of Orthop. Surg., Chitose City Hosp....S1598
- 1-6-S3-2 Is full HA stem the ultimate perfection in THA?
 *Yoko Miura, et al.*, Funabashi Orthop. Hosp....S1598
- 1-6-S3-3 Development of a cemented stem optimized for Japanese bone morphology
 *Tomohiro Shimizu, et al.*, Dept. of Orthop. Surg.,
 Faculty of Medicine and Graduate School of Medicine, Hokkaido Univ....S1599
- 1-6-S3-4 Development and clinical evaluation of silver-hydroxyapatite coated artificial hip joints
 *Masaya Ueno, et al.*, Dept. of Orthop. Surg., Saga Univ....S1599
- 1-6-S3-5 Development and clinical application of iodine coating
 *Toshiharu Shirai, et al.*, Yokohama Sakae Kyosai Hosp....S1600
- 1-6-S3-6 Biomechanical and biotribological properties of a zirconium nitride multilayer ceramic coating
 in combination with a vitamin E blended & moderately crosslinked polyethylene for total
 knee arthroplasty
 *T.M. Grupp, et al.*, Aesculap AG Research & Development, Tuttlingen, Germany...S1600

10 : 40 ~ 12 : 10 **Joint symposium 3** **Moderators S. Matsuda, M. Kyomoto**
(Japanese Society for Biomaterials)
Translating biomaterials research into clinical applications

- 1-6-JS3-1 Clinical application and long-term outcomes of artificial hip joints utilizing PMPC surface
 grafting technology with superior biocompatibility and lubrication
 *Toru Moro, et al.*, Div. of Science for Joint Reconstruction,
 Graduate School of Medicine, The Univ. of Tokyo...S1601
- 1-6-JS3-2 Frontiers of cartilage regenerative medicine using alginate gel: Minimally invasive approaches
 and clinical applications *Tomohiro Onodera, et al.*, Dept. of Orthop. Surg.,
 Faculty of Medicine and Graduate School of Medicine, Hokkaido Univ....S1601
- 1-6-JS3-3 Application and future perspectives of bioactive titanium spacer and patient-specific guide in
 spine surgery *Shunsuke Fujibayashi, et al.*, Yoshikawa Hosp....S1602

- 1-6-JS3-4 Research and development of spinal spacers by three-dimensional additive manufacturing focusing on preferential orientation of bone matrix
.....*Takayoshi Nakano*, Graduate School of Engineering, Osaka Univ.··S1602
- 1-6-JS3-5 Realization of treatment for osteoarthritis of the knee using chondrocyte sheets
.....*Masato Sato, et al.*, Dept. of Orthop. Surg., Surgical Science, Tokai Univ.··S1603

12 : 30 ~ 13 : 30	Luncheon seminar 5	Moderator N. Takahashi
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- 1-6-LS5-1 Treatment strategies for knee osteoarthritis based on pain mechanisms
.....*Koji Aso, et al.*, Dept. of Orthop. Surg., Kochi Medical School, Kochi Univ.··S1603

14 : 50 ~ 15 : 50	Best oral session	Moderators Y. Ishibashi, H. Akiyama
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- 1-6-BO-1 Spatiotemporal transcriptomic atlas of spinal cord regeneration in neonatal mice
.....*Kazuki Kitade, et al.*, Dept. of Orthop. Surg.,
Clinical Medicine, Graduate School of Medical Sciences, Kyushu Univ.··S1604
- 1-6-BO-2 Development of BinaryCre-RiboTag-based osteoclast omics technology without cell isolation
.....*Hideaki Sabe, et al.*, Dept. of Immunology and Cell Biology,
Graduate School of Medicine, Osaka Univ.··S1604
- 1-6-BO-3 The impact of lower limb coronal alignment on knee instability in ACL-injured patients
.....*Kensaku Abe, et al.*, Dept. of Orthop. Surg.,
Nagoya City Univ., Graduate School of Medical Sciences··S1605
- 1-6-BO-4 Evaluation of the joint stress on flat foot caused by medial displacement calcaneal osteotomy using finite element method-based surgical simulation
.....*Yumiko Kobayashi, et al.*, Dept. of Orthop.,
Graduate School of Medical Science, Kyoto Prefectural Univ. of Medicine··S1605
- 1-6-BO-5 Elucidating the mechanisms underlying the absence of scar formation by neonatal astrocytes following spinal cord injury*Jun Kishikawa, et al.*, Dept. of Orthop. Surg.,
Clinical Medicine, Graduate School of Medical Sciences, Kyushu Univ.··S1606
- 1-6-BO-6 Preclinical efficacy of nanomedicine for CSF-1/CSF-1R inhibitor targeting microenvironment of sarcomas and carcinomas*Tomohiro Fujiwara, et al.*, Dept. of Orthop. Surg.,
Science of Functional Recovery and Reconstruction, Faculty of Medicine, Dentistry,
and Pharmaceutical Sciences, Okayama Univ.··S1606

16 : 00 ~ 17 : 30	Symposium 4	Moderators Y. Kawaguchi, T. Yoshii
Frontiers in spinal ligament ossification research		

- 1-6-S4-1 Etiology of ossification of the spinal ligaments
.....*Takashi Hirai, et al.*, Dept. of Orthop. Surg., Institute of Science Tokyo··S1607
- 1-6-S4-2 Epidemiology of early phase diffuse idiopathic skeletal hyperostosis
.....*Kanichiro Wada, et al.*, Dept. of Orthop. Surg., Hirosaki Univ. Graduate School of Medicine··S1607
- 1-6-S4-3 A new perspective on the relationship between OPLL and obesity-related factors
.....*Tsutomu Endo, et al.*, Dept. of Orthop. Surg.,
Faculty of Medicine and Graduate School of Medicine, Hokkaido Univ.··S1608
- 1-6-S4-4 Analysis of cytokine profiles at the pathogenesis of ossification in patients with ossification of the spinal ligament
.....*Takafumi Yayama, et al.*, Dept. of Orthop. Surg., Shiga Univ. of Medical Science··S1608
- 1-6-S4-5 The mechanism by which genetic and environmental factors affect heterotopic ossification of ligament/tendon tissue
.....*Masahiko Takahata, et al.*, Dept. of Orthop. Surg., Dokkyo Medical Univ.··S1609

- 1-6-S4-6 The effects on osteogenic differentiation of exosomes from patients with ossification of the spinal ligament *Hideaki Nakajima, et al.*, Dept. of Orthop. and Rehabilitation Medicine, Faculty of Medical Sciences, Univ. of Fukui...S1609

1st Day October 16 Room 7

8 : 50 ~ 9 : 50 Oral Bone tumors: Pathology Moderators A. Kawai, K. Tanaka

- 1-7-1 Spatial transcriptomic analysis of osteosarcoma
..... *Yo Kimura, et al.*, Div. of Cellular Signaling, National Cancer Center Research Institute...S1610
- 1-7-2 Use of AI in the histopathological diagnosis of cartilaginous tumors
..... *Tsukasa Mizuno, et al.*, Dept. of Orthop. Surg., National Defense Medical College...S1610
- 1-7-3 Prognostic factors in chordoma: A clinical and pathological analysis
..... *Yukiko Komatsu, et al.*, Dept. of Orthop. Surg., Shinshu Univ...S1611
- 1-7-4 The effect of methionine restriction on parameters to improve immunotherapy of osteosarcoma
..... *Kohei Mizuta, et al.*, Orthop. Surg., Graduate School of Medicine, Univ. of the Ryukyus...S1611
- 1-7-5 Elucidation of the pathology of Giant cell tumor of bone and identification of novel therapeutic targets
..... *Masaki Shimada, et al.*, Dept. of Orthop. Surg., Faculty of Life Sciences, Kumamoto Univ...S1612
- 1-7-6 Functional analysis of COL6A1 in slow-cycling cells of Ewing sarcoma
..... *Yuta Nakamatsu, et al.*, Dept. of Orthop. Surg., Kobe Univ. Graduate School of Medicine...S1612
- 1-7-7 Analysis of exosomes derived from CD81-knockout osteosarcoma cells
..... *Julie Sugio, et al.*, Dept. of Orthop., Graduate School of Medical Science, Kyoto Prefectural Univ. of Medicine...S1613

10 : 00 ~ 11 : 00 Oral Soft tissue tumors: Treatments Moderators Y. Nishida, Y. Matsumoto

- 1-7-8 Development of a novel drug therapy targeting glutamine metabolism in synovial sarcoma
..... *Duc Thanh Tran, et al.*, Dept. of Orthop. Surg., Osaka Metropolitan Univ. Graduate School of Medicine...S1614
- 1-7-9 Genetic background analysis of patient-derived organoid models in malignant bone and soft tissue tumors *Hirokazu Tanaka, et al.*, Dept. of Orthop., Juntendo Univ...S1614
- 1-7-10 Antitumor effects of proteasome inhibitors on myxofibrosarcoma
..... *Makoto Emori, et al.*, Dept. of Orthop. Surg., Sapporo Medical Univ...S1615
- 1-7-11 Therapeutic development of hypoxia-responsive doxorubicin prodrug for soft tissue sarcoma
..... *Akihiro Oda, et al.*, Dept. of Orthop. Surg., Graduate School of Biomedical and Health Sciences, Hiroshima Univ...S1615
- 1-7-12 Development of novel therapeutic agents targeting redox regulation in rhabdomyosarcoma
..... *Hideyuki Kinoshita, et al.*, Dept. of Orthop. Surg., Chiba Cancer Center...S1616
- 1-7-13 MYLK2 and 4 phosphorylate CDKAL1 T43 and promote the maintenance of cancer stem-like cells
..... *Takuto Itano, et al.*, Dept. of Orthop. Surg., Science of Functional Recovery and Reconstruction, Faculty of Medicine, Dentistry, and Pharmaceutical Sciences, Okayama Univ...S1616
- 1-7-14 Spatial transcriptomic analysis of synovial sarcoma
..... *Satoshi Kamio, et al.*, Div. of Cell. Signal., National Cancer Center Research Institute...S1617

11 : 10 ~ 12 : 10 Instructional lecture 2 Moderator H. Kawano

- 1-7-EL2-1 Cancer genomic medicine and bone and soft tissue tumors
..... *Akira Kawai*, Dept. of Musculoskeletal Oncology and Rehabilitation, National Cancer Center Hosp...S1618

12 : 30 ~ 13 : 30	Luncheon seminar 6	Moderator N. Yamamoto
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- 1-7-LS6-1 Treatment strategies for shoulder periarthritis and scaffold-based rotator cuff repair:
From bench to bedside *Taku Hatta*, Joint Surg., Sports Clinic Ishinomaki...S1618

14 : 20 ~ 15 : 50	Joint symposium 4 (The Japanese Association of Rehabilitation Medicine) "Mariage" of basic-science in orthopaedic surgery and rehabilitation medicine	Moderators T. Miyamoto, T. Ogata
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- 1-7-JS4-1 Perspective for regenerative rehabilitation in chronic spinal cord injury
..... *Syoichi Tashiro*, Dept. of Rehabilitation Medicine, Kyorin Univ. Faculty of Medicine...S1619
- 1-7-JS4-2 Brain-machine interface training for upper limb motor dysfunction after spinal cord injury
..... *Junichi Ushiba*, Faculty of Science and Technology, Keio Univ....S1619
- 1-7-JS4-3 Potential for robot-assisted rehabilitation in musculoskeletal disorders
..... *Satoshi Kamada*, Dept. of Rehabilitation Fukuoka Univ. Hosp....S1620
- 1-7-JS4-4 Rehabilitation robot and motion analysis using IMU
..... *Ryota Kimura, et al.*, Dept. of Orthop. Surg., Akita Univ. Graduate School of Medicine...S1620
- 1-7-JS4-5 Nerve regeneration using a bio-3D printer for peripheral nerve injury
..... *Ryosuke Ikeguchi, et al.*, Rehabilitation Units, Kyoto Univ. Hosp....S1621

16 : 00 ~ 17 : 00	Afternoon seminar 3	Moderator E. Itoi
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- 1-7-AS3-1 The evolution of the shoulder prosthesis from aTSA to RSA
..... *Alessandro Castagna*, The Shoulder Unit, Humanitas Research Hosp., Milan, Italy...S1621

1st Day October 16 Room 8

8 : 30 ~ 10 : 00	Symposium 5 Regenerative therapy of peripheral nerves in hand surgery	Moderators S. Ichihara, H. Tanaka
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- 1-8-S5-1 A characteristic and adaptation of the artificial nerve
..... *Akimasa Morita, et al.*, Dept. of Orthop. Surg., Suzukakaisei Hosp....S1622
- 1-8-S5-2 Peripheral nerve repair using an artificial nerve conduit
..... *Toshiyuki Ishiko, et al.*, Ishiko Orthop. Clinic...S1622
- 1-8-S5-3 Novel strategies with artificial nerve: From challenge to implementation
..... *Masao Suzuki, et al.*, Dept. of Orthop. Surg., Juntendo Univ. Urayasu Hosp....S1623
- 1-8-S5-4 Application of adipose derived stem cells in artificial nerve conduits
..... *Kaoru Tada, et al.*, School of Health Sciences,
College of Medical, Pharmaceutical and Health Sciences, Kanazawa Univ....S1623
- 1-8-S5-5 Basic research of peripheral nerve regeneration using nerve conduit: Tissue engineering nerve
conduit in combination with growth factors and iPS cells
..... *Takuya Uemura, et al.*, Dept. of Orthop. Surg.,
Osaka General Hosp. of West Japan Railway Company...S1624
- 1-8-S5-6 The enhanced regeneration with the transplantation of NCAM positive neural crest like cells
derived human iPS cells *Tsuyoshi Amemiya*, Dept. of Orthop., Shizuoka Red Cross Hosp....S1624

10 : 20 ~ 11 : 20	Oral Peripheral nerve 1	Moderators N. Terada, N. Iwakura
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- 1-8-1 Imeglimin improves mitochondrial function of subsynovial connective tissue within the carpal
tunnel in carpal tunnel syndrome patients
..... *Yutaka Ehara, et al.*, Dept. of Orthop. Surg., Kobe Univ. Graduate School of Medicine...S1625

- 1-8-2 Retrospective study for factors related to the improvement of CTSI-JSSH score after surgery in patients with carpal tunnel syndrome
..... *Yoshiaki Tomizuka, et al.*, Dept. of Orthop. Surg., Nihon Univ.··S1625
- 1-8-3 Nintedanib suppresses the proliferation of fibroblasts derived from the transverse carpal ligament
..... *Yusuke Hattori, et al.*, Dept. of Orthop. Surg.,
Nagoya City Univ., Graduate School of Medical Sciences··S1626
- 1-8-4 Utility of supercharge end-to-side (SETS) nerve transfer in different severity of neuropathy models in rat
..... *Masaru Munemori, et al.*, Dept. of Orthop. Surg.,
Graduate School of Biomedical and Health Sciences, Hiroshima Univ.··S1626
- 1-8-5 The survey of ulnar neuritis around the elbow in adolescent baseball players: Focusing on the ulnar nerve subluxation
..... *Yoshihiro Kotoura, et al.*, Dept. of Orthop. Surg., Kyoto Chubu Medical Center··S1627
- 1-8-6 Effect of wild-type transthyretin amyloid on patients with idiopathic carpal tunnel syndrome
..... *Yoshiaki Yamanaka, et al.*, Dept. of Orthop. Surg.,
School of Medicine, Univ. of Occupational and Environmental Health··S1627
- 1-8-7 Connexin expression changes in neurons and glial cells of the dorsal root ganglion after peripheral nerve injury in mice
..... *Chen Su, et al.*, Institute of Science Tokyo··S1628

11 : 20 ~ 12 : 20	Oral Peripheral nerve 2	Moderators M. Yamamoto, S. Ichihara
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- 1-8-8 Clinical results of artificial nerve using Schwann cell spheroid
..... *Yuichiro Nakayama, et al.*, Dept. of Musculoskeletal Surg.,
Dept. of Multimodality Therapy for Cancer, Mie Univ. Graduate School of Medicine··S1629
- 1-8-9 Artificial nerve wrapping for peripheral nerve injury in rat model
..... *Nana Ito, et al.*, Dept. of Orthop. Surg., Juntendo Univ. Urayasu Hosp.··S1629
- 1-8-10 High-dose methylcobalamin promotes angiogenesis during the regeneration process following peripheral nerve injury
..... *Toru Iwahashi, et al.*, Dept. of Orthop. Surg., Graduate School of Medicine, Osaka Univ.··S1630
- 1-8-11 Effects of mirogabalin on peripheral nerve regeneration of the transcription factor REST over expression cell lines
..... *Kenjiro Kawamura, et al.*, Dept. of Medicine for Orthop. and Motor Organ, Juntendo Univ.··S1630
- 1-8-12 Regulation of transcription factor REST nuclear transport promotes axon regeneration in peripheral nerves
..... *Takamaru Suzuki, et al.*, Dept. of Med. for Orthop. and Motor Org,
Juntendo Univ. Graduate School of Medicine··S1631
- 1-8-13 Efficacy of nerve wrapping with nerve conduit after nerve repair: Proposal of a novel histological assessment method
..... *Yusuke Miyashima, et al.*, Dept. of Orthop. Surg.,
Osaka Metropolitan Univ. Graduate School of Medicine··S1631
- 1-8-14 Deep learning-based gait analysis in a micro mini pig model of common peroneal nerve injury
..... *Junpei Nakayama, et al.*, Div. of Microscopic Anatomy,
Niigata Univ. Graduate School of Medical and Dental Sciences··S1632

12 : 30 ~ 13 : 30	Luncheon seminar 7	Moderator S. Otsuki
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- 1-8-LS7-1 Pre-clinical, clinical & registry data of a zirconium nitride multilayer ceramic coating on an advanced mobile bearing posterior stabilised design for total knee arthroplasty
..... *Wolfram Mittelmeier*, Univ. of Rostock, Dept. of Orthop., Rostock, Germany··S1632

14 : 20 ~ 15 : 20	Instructional lecture 3	Moderator A. Teramoto
Encouragement for studying abroad		

- 1-8-EL3-1 The evolving landscape of studying abroad: How the COVID-19 pandemic and global changes have redefined international education
 *Sumihisa Orita*, Center for Frontier Medical Engineering, Chiba Univ. ...S1633
- 1-8-EL3-2 An encouragement of studying abroad: Experiences of studying abroad for basic research
 *Hiroyasu Ogawa*, Dept. of Orthop. Surg., Div. of Disease Control,
 Research field of Medical Sciences, Graduate School of Medicine, Gifu Univ. ...S1633

15 : 30 ~ 16 : 30	Instructional lecture 4	Moderator M. Takagi
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- 1-8-EL4-1 Fostering a culture of patient safety and the role of orthopaedic surgeons
 ... *Katsufumi Uchiyama*, Dept. of Patient Safety and Healthcare Administration, Kitasato Univ. ...S1634

16 : 30 ~ 17 : 30	Oral Artificial joints: Upper limb	Moderators K. Yamakado, D. Morikawa
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- 1-8-15 3D motion analysis of total wrist prosthesis during dart-throwing motion: A cadaveric investigation
 *Yuichiro Matsui, et al.*, Faculty of Dental Medicine, Hokkaido Univ. ...S1635
- 1-8-16 Shoulder geometry after reverse total shoulder arthroplasty predicts acromial or scapular spine fractures
 *Itaru Kawashima, et al.*, Dept. of Orthop. Surg. and Sports Med., Univ. of Florida ...S1635
- 1-8-17 Correlation of lateralization and distalization in reverse total shoulder arthroplasty with body size
 *Takuro Kanda, et al.*, Dept. of Orthop. Surg., Kyoto Kujo hosp. ...S1636
- 1-8-18 Primary stability in abduction and flexion of reverse shoulder arthroplasty
 *Haruto Chikaraishi, et al.*, Kitasato Univ. Graduate School of Medical Sciences ...S1636
- 1-8-19 3D comparison of scapular neck impingement in inlay vs. semi-inlay reverse shoulder arthroplasty during external rotation *Itaru Kawashima, et al.*, Dept. of Orthop. Surg., Yachiyo Hosp. ...S1637
- 1-8-20 Statin use increased perioperative blood loss in reverse total shoulder arthroplasty
 *Kotaro Yamakado, et al.*, Sports Medicine Center, Kansai Medical Univ. ...S1637
- 1-8-21 Creation of a novel shoulder joint contracture model and molecular biological changes in the joint capsule
 *Daiji Nakabayashi, et al.*, Dept. of Orthop. Surg., Kobe Univ. Graduate School of Medicine ...S1638

1st Day October 16 Poster 1

14 : 20 ~ 14 : 50	Poster Cartilage 1	Moderators K. Ikoma, K. Nagira
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- 1-Po-1 Humeral capitellar cartilage thickness in youth baseball players
 *Yoshikazu Kida, et al.*, Dept. of Orthop.,
 Graduate School of Medical Science, Kyoto Prefectural Univ. of Medicine ...S1639
- 1-Po-2 Chondrocyte protective effects of SIRT1 on thermal stress
 *Kentaro Hayashi, et al.*, Dept. of Orthop.,
 Graduate School of Medical Science, Kyoto Prefectural Univ. of Medicine ...S1639
- 1-Po-3 Influence of different fixation devices for artificial collagen membranes on clinical outcomes and anchor hole enlargement in autologous chondrocyte implantation
 *Akira Kawai, et al.*, Dept. of Orthop. Surg., Hyogo Medical Univ. ...S1640
- 1-Po-4 Effect of VEGFA-targeting miRNA cocktail on the expression of cartilage-related genes
 *Eriko Toyoda, et al.*, Dept. of Orthop. Surg., Surgical Science, Tokai Univ. ...S1640

- 1-Po-5 Effects of novel thermal stimulation techniques on chondrocytes and articular cartilage
 *Ryota Cha, et al.*, Dept. of Orthop.,
 Graduate School of Medical Science, Kyoto Prefectural Univ. of Medicine...S1641
- 1-Po-6 Quantitative evaluation of early cartilage lesions using 17O-labeled water contrast MRI in a Beagle
 dog model of osteoarthritis *Keizumi Matsugasaki, et al.*, Dept. of Orthop. Surg.,
 Graduate School of Medicine, Hokkaido Univ....S1641

14 : 50 ~ 15 : 20	Poster	Cartilage 2	Moderators	K. Sato, M. Hasegawa
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- 1-Po-7 Polydactyly bone marrow-derived mesenchymal stem cell-conditioned medium suppresses
 cartilage degeneration and alleviates pain in a rat knee osteoarthritis model
 *Shunsuke Akai, et al.*, Dept. of Orthop. Surg., Hyogo Medical Univ....S1642
- 1-Po-8 Effects of intermittent hypoxia on cultured chondrocytes and rat osteoarthritis models
 *Ryota Cha, et al.*, Dept. of Orthop.,
 Graduate School of Medical Science, Kyoto Prefectural Univ. of Medicine...S1642
- 1-Po-9 Single-cell analysis reveals a novel chondrocyte cluster with increased cholesterol metabolism
 and ER stress in knee osteoarthritis cartilage
 *Yu Kobori, et al.*, Dept. of Orthop. Surg., Graduate School of Medicine, Kyoto Univ....S1643
- 1-Po-10 Comprehensive analysis of the pathogenic mechanism of X-linked hypophosphatemia
 and osteomalacia *Takuya Ogawa, et al.*, Dept. of Orthop. Surg.,
 Faculty of Medicine and Graduate School of Medicine, Hokkaido Univ....S1643
- 1-Po-11 Cartilage-specific KLF-15 knockout mice develop osteoarthritis through interaction
 with beta-catenin
 *Akira Saitoh, et al.*, Dept. of Orthop. Surg., Kobe Univ. Graduate School of Medicine...S1644
- 1-Po-12 SIRT1 antisense long noncoding RNA attenuates interleukin-1B-induced osteoarthritic gene
 expression in human chondrocytes
 *Takeo Tokura, et al.*, Dept. of Orthop. Surg., Kobe Univ. Graduate School of Medicine...S1644

15 : 20 ~ 15 : 50	Poster	Bone: Fracture	Moderators	N. Takahira, K. Kawamura
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- 1-Po-13 Hyperbaric oxygen therapy promotes fracture healing
 *Ryota Akazawa, et al.*, School of Medicine, Institute of Science Tokyo...S1645
- 1-Po-14 Corrective osteotomy for malunion after distal radius fracture normalizes bone density
 distribution in the subchondral radius
 *Tasuku Miyake, et al.*, Dept. of Orthop. Surg., Graduate School of Medicine, Osaka Univ....S1645
- 1-Po-15 Biomechanical evaluation of anterior fixation stability for fragility fractures of the pelvis
 (FFP Type IIIa) using three-dimensional finite element analysis
 *Masahiro Kawagishi, et al.*, Dept. of Orthop. Surg., Oita Univ....S1646
- 1-Po-16 Role of shear stress in the development of femoral head subchondral insufficiency fracture:
 A finite element study *Kenichiro Doi, et al.*, Dept. of Orthop. Surg., Fukuoka Univ....S1646
- 1-Po-17 Regulation of intramedullary nail micromovement in trochanteric femoral fractures:
 A biomechanical study *Takuya Usami, et al.*, Dept. of Orthop. Surg.,
 Nagoya City Univ., Graduate School of Medical Sciences...S1647
- 1-Po-18 *In vitro* functional assay of efferocytosis-based biomimetic apoptotic signals
 *Liyile Chen, et al.*, Dept. of Orthop. Surg.,
 Faculty of Medicine and Graduate School of Medicine, Hokkaido Univ....S1647

15 : 50 ~ 16 : 20	Poster	Bone: Fracture, others	Moderator	K. Tsuihiji
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- 1-Po-19 Biomechanical evaluation of a middle-length nail for unstable pertrochanteric femoral fractures
 (AO/OTA 31A2) using finite element analysis
 *Shozo Kanezaki, et al.*, Dept. of Orthop. Surg., Oita Univ....S1648

- 1-Po-20 Relationship between pre- and postoperative prealbumin levels and days away from bed after operation in patients with proximal femur fractures
.....*Kanji Goto, et al.*, Hiroshima Prefectural Hosp.···S1648
- 1-Po-21 Quantitative assessment of cortical bone porosity in the femoral diaphysis using clinical CT images*Toshiyuki Tsurumoto, et al.*, Dept. of Macroscopic Anatomy, Nagasaki Univ. Graduate School of Biomedical Sciences···S1649
- 1-Po-22 Effect of repeated administration of platelet-rich plasma (PRP) on fracture healing in a tibial nonunion rat model
.....*Tokito Tatsuo, et al.*, Dept. of Physiol., Showa Medical Univ. Graduate School of Medicine···S1649
- 1-Po-23 The relationship between pull-out strength and bone metabolism around 2.4 mm screws in rabbits*Yuya Miyanaga, et al.*, DMC···S1650
- 1-Po-24 Comparison of cellular uptake of nanomaterials as DDS carriers in the MC3T3-E1 preosteoblast cell line*Hidehiko Nobuoka, et al.*, Dept. of Orthop. Surg., Shinshu Univ.···S1650

16 : 20 ~ 16 : 50	Best poster award session	Moderators H. Niki, H. Akiyama
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- 1-BP-1 Uhrf1 determines osteophyte fate by regulating proliferation and differentiation of synovial mesenchymal progenitor cells
.....*Akihiro Jono, et al.*, Dept. of Orthop. Surg., Ehime Univ. Graduate School of Medicine···S1651
- 1-BP-2 Establishment of a new time-dependent animal model for sarcoma and development of novel drugs targeting fusion-proteins*Takanao Kurozumi, et al.*, Dept. of Orthop. Surg., Science of Functional Recovery and Reconstruction, Faculty of Medicine, Dentistry, and Pharmaceutical Sciences, Okayama Univ.···S1651
- 1-BP-3 Laminin 511 regulates beneficial effects on cultured human nucleus pulposus cells through MYC/p38 signaling ···*Hazuki Soma, et al.*, Dept. of Orthop. Surg., Surgical Science, Tokai Univ.···S1652
- 1-BP-4 Effects of iPS cell-derived megakaryocyte and platelet freeze-dried preparation for knee osteoarthritis
.....*Noritaka Suzuki, et al.*, Dept. of Orthop. Surg., Graduate School of Medicine, Chiba Univ.···S1652
- 1-BP-5 Generation of jawbone organoids from human iPS cells and fundamental research for their medical applications
.....*Souta Motoike, et al.*, Center for iPS Cell Research and Application, Kyoto Univ.···S1653
- 1-BP-6 Visualization of three-dimensional microstructure of human fascia and investigation of pathological changes*Hiroyuki Imazato, et al.*, Div. of Orthop. Surg., Dept. of Medicine of Sensory and Motor Organs, Faculty of Medicine, Univ. of Miyazaki···S1653

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14 : 20 ~ 14 : 50	Poster Bone: Others	Moderators A. Mogami, Y. Yukawa
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- 1-Po-25 Analysis of microRNA expression in synovial fluid and intra-articular tissues of osteonecrosis of the femoral head*Hideki Shoen, et al.*, Dept. of Orthop. Surg., Graduate School of Biomedical and Health Sciences, Hiroshima Univ.···S1654
- 1-Po-26 Anatomical relationship between the profunda femoris artery and femur
.....*Hironobu Konishi, et al.*, Dept. of Emergency and Critical Care Medicine, Nara Medical Univ. Hosp.···S1654
- 1-Po-27 Longitudinal Intravital Imaging of mouse bone by two photon microscopy
.....*Kei Shinyashiki, et al.*, Dept. of Orthop. Surg., Graduate School of Medicine, Osaka Univ.···S1655
- 1-Po-28 Regulatory mechanisms of bone regeneration through periosteal vasculature-stem cell interactions*Toshiyuki Ogata, et al.*, Dept. of Orthop. Surg., Keio Univ.···S1655

- 1-Po-29 Effects of high-concentration antibiotics on the biological environment in the rat iMAP model
 *Yuya Yamamoto, et al.*, Dept. of Orthop. Surg., Kobe Univ. Graduate School of Medicine...S1656
- 1-Po-30 Enhanced osteogenic differentiation and vascular formation in a three-dimensional bone model
 co-cultured with human mesenchymal stem cells and human umbilical vein endothelial cells
 *Masato Nakamura, et al.*, Dept. of Orthop. Surg., Graduate School of Medicine, Osaka Univ....S1656

14 : 50 ~ 15 : 20	Poster	Bone tumors: Treatments	Moderators	T. Akiyama, H. Hara
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- 1-Po-31 The effect of tetraspanin for osteosarcoma cell line *Naoki Mizoshiri, et al.*, Dept. of Orthop.,
 Graduate School of Medical Science, Kyoto Prefectural Univ. of Medicine...S1657
- 1-Po-32 Time-course analysis of cryoablation-induced immune responses in a metastatic bone tumor
 mouse model *Yuji Ishino, et al.*, Dept. of Orthop. Surg.,
 Graduate School of Medical Sciences, Kanazawa Univ....S1657
- 1-Po-33 Analysis of the impact of PLK1 expression and Fbxw7 instability on proliferation in Ewing's
 sarcoma cells *Masanori Kawano, et al.*, Dept. of Orthop. Surg., Oita Univ....S1658
- 1-Po-34 Synergistic effects of HDAC inhibitor OBP-801 and CDK4/6 inhibitor palbociclib in
 osteosarcoma cells *Haruki Takimoto, et al.*, Dept. of Orthop.,
 Graduate School of Medical Science, Kyoto Prefectural Univ. of Medicine...S1658
- 1-Po-35 Antitumor effect of the fluorescent L-glucose derivative CLG in a human osteosarcoma cell
 ... *Takahiro Tanabu, et al.*, Dept. of Orthop. Surg., Hirosaki Univ. Graduate School of Medicine...S1659
- 1-Po-36 Investigation of drugs that increase the efficacy of anticancer drugs for osteosarcoma
 *Yuki Mori, et al.*, Dept. of Orthop.,
 Graduate School of Medical Science, Kyoto Prefectural Univ. of Medicine...S1659

15 : 20 ~ 15 : 50	Poster	Bone tumors: Others	Moderators	T. Torigoe, K. Hayashi
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- 1-Po-37 Enhancing safety of intraoperative cryoablation for radioresistant spinal metastasis:
 Neuroprotective effect of separation surgery *Takaaki Uto, et al.*, Dept. of Orthop. Surg.,
 Graduate School of Medical Sciences, Kanazawa Univ....S1660
- 1-Po-38 Pulmonary metastatic-related microRNA in osteosarcoma
 *Ryo Katsuki, et al.*, Orthop. Surg., Graduate School of Medicine, Univ. of the Ryukyus...S1660
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- 1-Po-111 Pre- and postoperative sagittal alignment changes in congenital muscular torticollis in older children
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- 1-Po-114 Total knee arthroplasty and arteriosclerosis progression in osteoarthritis patients: A CAVI-based evaluation ······ *Yoshinori Ishii, et al.*, Ishii Orthop. & Rehab. Clinic···S1698
- 1-Po-115 Changes in FADS2 expression in satellite glial cells of the mouse dorsal root ganglion after neuropathic pain and its association with inflammatory responses
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- 1-Po-116 Investigation of pain-related sensory innervation in lumbar vertebrae of ovariectomy-induced osteoporotic rats using CUBIC clearing reagent
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- 1-Po-119 A biomechanical study of a bridging technique using artificial nerve conduits without relying on the weak material property
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- 1-Po-120 Elucidation of proliferation and CCR2 expression changes in macrophages of the dorsal root ganglion after peripheral nerve injury in mice
 *Mengmeng Yan, et al.*, Institute of Science Tokyo··S1701
- 1-Po-121 Analysis of adhesion molecules between Schwann cells and endothelial cells involved in peripheral nerve regeneration
 *Mai Konishi, et al.*, Dept. of Orthop. Surg., Graduate School of Medicine, Osaka Univ.··S1702
- 1-Po-122 Peripheral nerve axon regeneration by LFA1-ICAM1 signaling and identification of its molecular mechanism *Masahiro Miyano, et al.*, Dept. of Orthop. Surg., Faculty of Medicine and Graduate School of Medicine, Hokkaido Univ.··S1702

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- 1-Po-124 Patterns of injury and treatment for distal radius fractures at a major trauma centre
 *Jonathan Francis, et al.*, Imperial College Healthcare NHS Trust, London, United Kingdom··S1703
- 1-Po-125 NIR-responsive thermosensitive magnetic liposome containing WNT10b for rotator cuff tear repair: Design, characterization, and therapeutic applications
 *Zhijun Li, et al.*, Tianjin Medical Univ. General Hosp., Tianjin, China··S1704
- 1-Po-126 The management of posterior sternoclavicular injuries in the paediatric population: 10 years of experience in a tertiary referral paediatric hospital
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- 1-Po-127 Identification of an important radiological finding in children with radial head dislocations
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- 1-Po-129 Single-nucleus multi-omics analysis of molecular mechanisms in TSPCs (tendon stem/progenitor cells) of maturing mouse Achilles tendon
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1-Po-131	Analysis of the uneven distribution of HU values in the Achilles tendon with osteochondral lesion of talus <i>Shingo Kawabata, et al.</i> , Dept. of Orthop. Surg., Graduate School of Biomedical and Health Sciences, Hiroshima Univ.···S1707
1-Po-132	Role of autophagy in Achilles tendon repair and inhibitory mechanism <i>Koki Yamazaki, et al.</i> , Dept. of Musculoskeletal Surg., Dept. of Multimodality Therapy for Cancer, Mie Univ. Graduate School of Medicine···S1707
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1-Po-135	Effect of subacromial bursa resection on rotator cuff repair process in a rat model <i>Shuntaro Tanimura, et al.</i> , Dept. of Orthop. Surg., Faculty of Life Sciences, Kumamoto Univ.···S1709
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1-Po-138	Dysfunction of anticipatory postural adjustments in patients with rotator cuff tears ··· <i>Fukuhisa Ino, et al.</i> , Dept. of Orthop. Surg., Gunma Univ. Graduate School of Medicine···S1710
1-Po-139	The effect of anti-RANKL antibody treatment on a newly established modified rotator cuff tear arthropathy mouse model <i>Yusuke Masuda, et al.</i> , Dept. of Orthop. Surg., Graduate School of Medical and Dental Sciences, Kagoshima Univ.···S1711

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1-Po-141	Autologous patellar tendon reconstruction for massive rotator cuff tears in a porcine model: An experimental study <i>Hideyuki Sasanuma, et al.</i> , TMC Shimotsuga···S1712
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1-Po-144	Prevalence and related factors of a lesion of the long head of biceps tendon in the elderly <i>Minoru Takeshima, et al.</i> , Dept. of Orthop., Graduate School of Medical Science, Kyoto Prefectural Univ. of Medicine···S1713
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1-Po-151	Epidemiology and risk factors for subscapularis tear in older adults <i>Hiromi Kondo, et al.</i> , Ijinkai Takeda General Hosp....S1717	
1-Po-152	Factors predicting falls in Community-Dwelling elderly individuals <i>Yuki Murakami, et al.</i> , Dept. of Orthop. Surg., Hamamatsu Univ. School of Medicine...S1717	
1-Po-153	Association of phase angle and its change with all-cause mortality in a Japanese older adult population: The Hisayama Study <i>Ei Teshima, et al.</i> , Dept. of Orthop. Surg., Clinical Medicine, Graduate School of Medical Sciences, Kyushu Univ....S1718	
1-Po-154	Changes in osteokines, myokines, and markers of bone metabolism after aerobic exercise <i>Yuji Maki, et al.</i> , Dept. of Orthop. Surg., Kurume Univ....S1718	
1-Po-155	Cross-sectional study of the relationship between locomotive syndrome and catastrophizing of pain in a community-dwelling population <i>Takaaki Nakano, et al.</i> , Dept. of Orthop. Surg., Hirosaki Univ. Graduate School of Medicine...S1719	
1-Po-156	Regional disparities in shoulder surgery related to distribution of specialists: National database analysis <i>Masataka Minami, et al.</i> , Dept. of Orthop., Graduate School of Medical Science, Kyoto Prefectural Univ. of Medicine...S1719	

14 : 50 ~ 15 : 20	Poster OA: Knee treatments others	Moderators H. Nakayama, H. Nakamura
1-Po-157	Correlation between alteration of distribution pattern of subchondral bone density across knee joint and clinical outcome after high tibial osteotomy for medial knee osteoarthritis <i>Taku Ebata, et al.</i> , Dept. of Orthop. Surg., Faculty of Medicine and Graduate School of Medicine, Hokkaido Univ....S1720	
1-Po-158	Effect of tibial tuberosity-trochlear groove distance on outcomes of autologous cartilage implantation combined with Maquet procedure for patellofemoral cartilage injuries <i>Junya Tsukisaka, et al.</i> , Dept. of Orthop. Surg., Graduate School of Biomedical and Health Sciences, Hiroshima Univ....S1720	

- 1-Po-159 Evaluation of the effect of nerve block for knee osteoarthritis (OA): Is lateral genicular nerve block necessary for medial knee OA?
 *Shuhei Nagai, et al.*, Dept. of Orthop. Surg., Kochi Medical School, Kochi Univ. ...S1721
- 1-Po-160 Associations between synovial biomarkers and knee contracture in patients with advanced knee osteoarthritis
 *Kazuki Ozaki, et al.*, Dept. of Orthop. Surg., Kochi Medical School, Kochi Univ. ...S1721
- 1-Po-161 The design and development of a 3D short plate for open-wedge high tibial osteotomy and examination of its effectiveness through finite element analysis
 *Nozomi Aoki, et al.*, Dept. of Orthop. Surg., Ota Hosp. ...S1722
- 1-Po-162 Effects of timing of PRP administration on ACI using JACC
 *Yuki Kato, et al.*, Dept. of Sports Med., Kameda Medical Center ...S1722

15 : 20 ~ 15 : 50	Poster Upper limb: Others	Moderators K. Furushima, A. Urita
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- 1-Po-163 Improvement and correlations between thumb function and joint compatibility in osteotomy for carpometacarpal joint of the thumb
 *Yoshiaki Yamada, et al.*, Dept. of Orthop. Surg., Kagawa Univ. ...S1723
- 1-Po-164 Dose intramedullary perfusion of lunare vary with the stage of Kienböck disease?: Evaluation of gadolinium enhanced dynamic MRI *Takeshi Ogawa, et al.*, NHO Mito Medical Center ...S1723
- 1-Po-165 Influencing factors in humeral head CT values *Tatsuto Otojima, et al.*, Ayabe City Hosp. ...S1724
- 1-Po-166 Morphology of the humeral head and glenoid measured using CT data in the Japanese population *Kenta Sato, et al.*, Dept. of Orthop., Graduate School of Medical Science, Kyoto Prefectural Univ. of Medicine ...S1724
- 1-Po-167 Intraoperative zero position and glenohumeral joint mobility in reverse total shoulder arthroplasty *Ryo Tazawa, et al.*, Dept. of Orthop. Surg., Kitasato Univ. ...S1725
- 1-Po-168 Better scapulohumeral rhythm after reverse total shoulder arthroplasty is associated with superior patient-reported outcomes
 *Itaru Kawashima, et al.*, Dept. of Orthop. Surg., Yachiyo Hosp. ...S1725

15 : 50 ~ 16 : 20	Poster Upper limb	Moderators Y. Nakashima, T. Iwamoto
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- 1-Po-169 Index finger extension test: A new quantitative screening test for carpal tunnel syndrome
 *Naoya Goto, et al.*, Dept. of Rehabilitation, Hiroshima Univ. Hosp. ...S1726
- 1-Po-170 Quantitative evaluation of tendon gliding in carpal tunnel syndrome using a digital stethoscope
 *Daiji Nakabayashi, et al.*, Dept. of Orthop. Surg., Kobe Univ. Graduate School of Medicine ...S1726
- 1-Po-171 Gene X is a high glucose-induced fibrotic factor in Dupuytren's contracture
 *Koki Kato, et al.*, Dept. of Orthop. Surg., Div. of Disease Control, Research field of Medical Sciences, Graduate School of Medicine, Gifu Univ. ...S1727
- 1-Po-172 Development of silk fibroin-based anti-adhesion materials for orthopaedic surgery
 *Hironori Hayashi, et al.*, Dept. of Orthop. Surg., Keio Univ. ...S1727
- 1-Po-173 Protective effect of N-Acetyl-L-Cysteine against limb ischemia reperfusion injury in rats
 *Hideto Matsunaga, et al.*, Dept. of Orthop. Surg., Faculty of Life Sciences, Kumamoto Univ. ...S1728
- 1-Po-174 Establishment of a large decellularized skeletal muscle for soft-tissue defects aiming functional limb reconstruction *Tsubasa Hasegawa, et al.*, Dept. of Orthop. Surg., Sect. of Med., Div. of Med., Dent. & Pharm. Sci., Grad. Sch. of Med., Dent. & Pharm. Sci., Okayama Univ. ...S1728

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14 : 20 ~ 14 : 50	Poster	OA: Animal model	Moderators	M. Sekiguchi, Y. Nakagawa
1-Po-175	Toll-like receptor 4 antagonist Eritoran suppresses inflammatory responses in osteonecrosis <i>Keiji Otaka, et al.</i> , Dept. of Orthop./Rheumatology, Musculoskeletal and Cutaneous Surg., Program in Integrated Medicine, Graduate School of Medicine, Nagoya Univ.S1729			
1-Po-176	A BMP signaling inhibitor suppresses progression of the cuff tear arthropathy model <i>Tomohiro Iuchi, et al.</i> , Dept. of Orthop. Surg., Graduate School of Medical and Dental Sciences, Kagoshima Univ.S1729			
1-Po-177	Establishment of an ankle posttraumatic osteoarthritis model in rats and evaluation of associated pain <i>Shotaro Kamijo, et al.</i> , Div. of Physio., Graduate School of Pharmacy, Showa Medical Univ.S1730			
1-Po-178	Establishment of pullout repair of medial meniscus posterior root tear in rats <i>Toyohiro Katsumata, et al.</i> , Dept. of Joint Surg. and Sports Medicine, Graduate School of Medical and Dental Sciences, Institute of Science TokyoS1730			
1-Po-179	Examination of pain mechanisms in rapidly destructive coxarthrosis animal model <i>Yasuhiro Furihata, et al.</i> , Dept. of Orthop. Surg., Graduate School of Medicine, Chiba Univ.S1731			
1-Po-180	The effect of adiponectin on fibrosis in knee joint capsule of mice <i>Naohito Sato, et al.</i> , Dept. of Orthop. Surg., School of Medicine, Univ. of Occupational and Environmental HealthS1731			

14 : 50 ~ 15 : 20	Poster	OA: Treatments	Moderators	T. Soejima, Y. Saita
1-Po-181	Chondroprotective functions of platelet-derived extracellular vesicles by promoting anti-inflammatory signaling pathways in chondrocytes <i>Yuki Fujie, et al.</i> , Dept. of Orthop. Surg., Faculty of Medicine and Graduate School of Medicine, Hokkaido Univ.S1732			
1-Po-182	Is duloxetine effective for thumb carpometacarpal osteoarthritis? Findings from large-scale database analysis <i>Yoshiaki Yamada, et al.</i> , Dept. of Orthop. Surg., Kagawa Univ.S1732			
1-Po-183	A randomized controlled trial of teriparatide in the prevention of progression of knee osteoarthritis <i>Kazuki Ichiyanagi, et al.</i> , Dept. of Orthop. Surg., Graduate School of Medicine, Kyoto Univ.S1733			
1-Po-184	The relationship between clinical outcomes and cartilage evaluation using MRI three-dimensional analysis software in APS therapy for knee osteoarthritis <i>Hideyuki Kawabata, et al.</i> , Dept. of Orthop. Surg., Nanpuh Hosp.S1733			
1-Po-185	Proteomic analysis of platelet-rich plasma and its association with therapeutic efficacy in knee osteoarthritis <i>Kohei Iio, et al.</i> , Dept. of Orthop. Surg., Hirosaki Univ. Graduate School of MedicineS1734			
1-Po-186	Investigating differences in biomarkers associated with the efficacy of platelet-rich plasma therapy <i>Ryoka Uchiyama, et al.</i> , Dept. of Orthop. Surg., Surgical Science, Tokai Univ.S1734			

15 : 20 ~ 15 : 50	Poster	OA: Others	Moderators	S. Nagamine, S. Ishizuka
1-Po-187	Netrin-4 is involved in the production of inflammatory mediators in synovial fibroblasts <i>Ayumi Tsukada, et al.</i> , Dept. of Orthop. Surg., Kitasato Univ.S1735			
1-Po-188	Phenotypic characteristics of CD90+ and CD90- fibroblasts in synovial tissue and their association with pain in osteoarthritis <i>Yoji Toyomura, et al.</i> , Dept. of Orthop. Surg., Kitasato Univ.S1735			

- 1-Po-189 Joint fluid total SOD activity correlates with synovial total SOD activity in end-stage knee osteoarthritis *Masato Koike, et al.*, Dept. of Orthop. Surg., Juntendo Univ. Tokyo Koto Geriatric Medical Center...S1736
- 1-Po-190 Relationship between decreased IGF2 levels in the synovial tissue of patients with end-stage hip *Akira Norisugi, et al.*, Dept. of Orthop. Surg., Kitasato Univ....S1736
- 1-Po-191 Blockade of osteocyte pyroptosis drives OA cartilage degeneration promoting remodeling of subchondral bone *Yuki Ogawa, et al.*, Dept. of Orthop. Surg., Faculty of Medicine and Graduate School of Medicine, Hokkaido Univ....S1737
- 1-Po-192 Investigation of anabolic factor induced by hypoxia-inducible factor prolyl hydroxylase inhibitors in chondrocytes *Kei Nakamura, et al.*, Dept. of Orthop., Graduate School of Medical Science, Kyoto Prefectural Univ. of Medicine...S1737

15 : 50 ~ 16 : 20

Poster ACL

Moderators T. Tajima, A. Suzuki

- 1-Po-193 Effectiveness of double-bundle anterior cruciate ligament (ACL) reconstruction for ACL injury with irreparable meniscal tear: Biomechanical study using a cadaver *Atsuki Tanaka, et al.*, Dept. of Orthop. Surg., Kobe Univ. Graduate School of Medicine...S1738
- 1-Po-194 Morphologic risk factors for secondary anterior cruciate ligament injury *Lin Cheng, et al.*, Dept. of Orthop. Surg., Hirosaki Univ. Graduate School of Medicine...S1738
- 1-Po-195 Factors affecting apprehension grade of the pivot shift test in ACL injured knee *Atsuo Nakamae, et al.*, Dept. of Orthop. Surg., Graduate School of Biomedical and Health Sciences, Hiroshima Univ....S1739
- 1-Po-196 Measurement of anterior tibial translation under internal rotation and valgus torque in anterior cruciate ligament reconstructed knees *Tatsuo Mae, et al.*, Dept. of Phy. Ther., Osaka Yukioka Medical College...S1739
- 1-Po-197 Comparison of muscle strength changes after anterior cruciate ligament reconstruction using between quadriceps tendon and hamstring tendon *Kengo Sugitani, et al.*, Dept. of Orthop., Juntendo Univ....S1740
- 1-Po-198 Evaluation of the healing promotion effect of tendon-gel containing hyaluronic acid on medial collateral ligament injury *Yoshihiro Ishida, et al.*, Dept. of Orthop. Surg., Graduate School of Medical Sciences, Kanazawa Univ....S1740

2nd Day October 17 Room 1

8 : 30 ~ 10 : 00

Joint symposium 5

Moderators M. Watanabe, M. Koda

(The Japanese Society for Spine Surgery and Related Research)

Recent advances in spine and spinal cord regeneration therapies

- 2-1-JS5-1 Current status and challenges of regenerative medicine for spinal cord injury *Narihito Nagoshi, et al.*, Dept. of Orthop. Surg., Keio Univ....S1741
- 2-1-JS5-2 Development of ultra-purified bioresorbable biomaterial and allogenic bone marrow mesenchymal stem cells for intervertebral disc regeneration *Hideki Sudo, et al.*, Dept. of Orthop. Surg., Hokkaido Univ. Hosp....S1741
- 2-1-JS5-3 Mechanism analysis of systemic inflammation and multilineage-differentiating stress-enduring cell therapy after spinal cord injury *Gentaro Kumagai, et al.*, Dept. of Orthop. Surg., Hirosaki Univ. Graduate School of Medicine...S1742
- 2-1-JS5-4 Therapeutic mechanism of mesenchymal stem cell therapy for spinal cord injury *Ryunosuke Fukushi, et al.*, Dept. of Orthop. Surg., Sapporo Medical Univ....S1742
- 2-1-JS5-5 Advances in basic research and clinical translation in the treatment of disc disease *Daisuke Sakai, et al.*, Dept. of Orthop. Surg., Surgical Science, Tokai Univ....S1743

10 : 10 ~ 11 : 10	Invited lecture 3	Moderator H. Ozawa
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- 2-1-IL3-1 Unleashing the therapeutic potential of cell transplantation for spinal cord repair
 *Martin Oudega*, Northwestern Univ./Shirley Ryan AbilityLab, Chicago, IL, USA...S1743

11 : 20 ~ 12 : 20	Special lecture 1	Moderator H. Yamada
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- 2-1-SL1-1 Global strategy for Muse cell therapy: Intravenous injection of donor Muse cells without the need for HLA matching or immunosuppressants
 *Mari Dezawa*, Dept. of Stem Cell Biology and Histology,
 Tohoku Univ. Graduate School of Medicine...S1744

13 : 40 ~ 14 : 40	Special lecture 2	Moderator M. Nakamura
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- 2-1-SL2-1 Human PSC-derived organoids odyssey: Charting new frontiers in biomedical research
 *Hidenori Akutsu*, National Center for Child Health and Development...S1744

14 : 50 ~ 16 : 20	Symposium 6	Moderators N. Tsumaki, M. Ishikawa
Advances in musculoskeletal omics analysis: Current topics and challenges		

- 2-1-S6-1 Omics analysis of molecules interacting with specific genomic regions
 *Hodaka Fujii*, Dept. of Biochemistry Genome Biol.,
 Hirosaki Univ. Graduate School of Medicine...S1745
- 2-1-S6-2 Diversity of pathophysiology in osteoarthritis and mechanism of action of adipose-derived stem cell therapy *Taku Saito*, Dept. of Orthop. Surg., The Univ. of Tokyo...S1745
- 2-1-S6-3 Single-cell transcriptome analysis of intra- and extra articular ligaments
 *Kyota Ishibashi, et al.*, Dept. of Orthop. Surg., Hirosaki Univ. Graduate School of Medicine...S1746
- 2-1-S6-4 Analysis of tendon cell lineages in development and repair for exploring tendon regeneration strategies
 ... *Ryo Nakamichi*, Dept. of Orthop. Surg., Science of Functional Recovery and Reconstruction,
 Faculty of Medicine, Dentistry, and Pharmaceutical Sciences, Okayama Univ...S1746
- 2-1-S6-5 Exploring enthesis-related progenitor cells involved in rotator cuff repair by single-cell RNA seq for the development of repair-promoting therapy
 *Takuya Tokunaga, et al.*, Dept. of Orthop. Surg., Faculty of Life Sciences, Kumamoto Univ...S1747
- 2-1-S6-6 Spatial genomic analysis of bone and soft tissue sarcoma
 *Yoshiyuki Suehara, et al.*, Div. of Cellular Signaling,
 National Cancer Center Research Institute...S1747

2nd Day October 17 Room 2

8 : 30 ~ 9 : 30	Instructional lecture 5 Approaches to upper limb trauma	Moderator S. Toh
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- 2-2-EL5-1 Orthopaedics and traumatology in a changing world
 *Dietmar Pennig*, St. Vinzenz-Hosp., Cologne, Germany...S1748
- 2-2-EL5-2 Microsurgical reconstruction for the treatment of sever damaged upper extremities
 *Toru Sunagawa*, Dept. of Analysis and Control of Upper Extremity Function,
 Graduate School of Biomedical and Health Science, Hiroshima Univ...S1748

9 : 40 ~ 10 : 40	Instructional lecture 6	Moderator T. Noda
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- 2-2-EL6-1 Atrophic nonunion basic science and surgical treatment: What does biological activity mean in fracture healing? *Yoshinobu Watanabe*, Dept. of Orthop. Surg., Teikyo Univ...S1749

10 : 50 ~ 12 : 20	Joint symposium 6 (Japanese Orthopaedic Trauma Association) The science of atypical fractures: Epidemiology and analysis of the mechanism of onset	Moderators T. Noda, T. Sawaguchi
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- 2-2-JS6-1 Epidemiology and risk factors of atypical femoral fracture
..... *Takahiro Niikura*, Dept. of Orthop. Surg., Hyogo Prefectural Nishinomiya Hosp. ...S1750
- 2-2-JS6-2 Epidemiology of “atypical periprosthetic” femoral fractures
..... *Takumi Kaku, et al.*, Dept. of Orthop. and Spinal Surg.,
Graduate School of Medical and Dental Sciences, Institute of Science Tokyo ...S1750
- 2-2-JS6-3 Quantitative analysis of the interaction between morphology and function in the femoral diaphysis based on CT images for individual fragile fracture risk assessment
..... *Daisuke Endo, et al.*, Dept. of Macroscopic Anatomy,
Nagasaki Univ. Graduate School of Biomedical Sciences ...S1751
- 2-2-JS6-4 Risk factors of atypical femur fracture by subtype classification in the general population
..... *Kazuki Oishi, et al.*, Dept. of Orthop. Surg., Hirosaki Univ. Graduate School of Medicine ...S1751
- 2-2-JS6-5 Anatomical and mechanical analysis of atypical ulnar fractures using finite element method
..... *Shunji Okita, et al.*, Dept. of Orthop. Surg., Okayama Saiseikai General Hosp. ...S1752

12 : 30 ~ 13 : 30	Luncheon seminar 8	Moderator H. Nagashima
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- 2-2-LS8-1 Pharmacological management of neuropathic pain in lumbar spinal stenosis: Evidence-based role of mirogabalin from MiroTAS and post hoc analyses
..... *Takuya Nikaido*, Dept. of Orthop. Surg., Fukushima Medical Univ. ...S1752

13 : 40 ~ 14 : 40	Instructional lecture 7	Moderator N. Iwasaki
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- 2-2-EL7-1 Practical medical statistics for orthopaedic surgeons: Enhancing evidence-based practice and research writing *Hiroyuki Oka*, Div. of Musculoskeletal AI System Development,
Faculty of Medicine, The Univ. of Tokyo ...S1753

14 : 50 ~ 16 : 20	Joint symposium 7 (Japanese Society For Bone Morphometry) Practice and significance of bone histomorphometry in the future orthopedic research. From animal experiments to clinical trials	Moderators A. Sakai, M. Takahata
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- 2-2-JS7-1 Bone histomorphometry: Past and future
..... *Noriaki Yamamoto*, Dept. of Orthop. Surg., Niigata Rehabilitation Hosp. ...S1754
- 2-2-JS7-2 Significance of bone tissue evaluation in animal experiments: Proof of RANKL reverse signal hypothesis, etc *Kazuhiro Aoki*, Dept. Basic Oral Health Engin.,
Grad. Sch. Med & Dent. Sci., Science Tokyo ...S1754
- 2-2-JS7-3 Prospects of bone morphometrics, having contributed on clinical practice
..... *Shinya Tanaka*, Dept. of Orthop. Surg., Toto Kasukabe Hosp. ...S1755
- 2-2-JS7-4 Expanding the world of bone morphometry with high-resolution CT
..... *Ko Chiba, et al.*, Dept. of Orthop. Surg.,
Nagasaki Univ. Graduate School of Biomedical Sciences ...S1755

16 : 30 ~ 17 : 30	Oral Bone: Fracture	Moderators H. Okazaki, K. Oae
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- 2-2-1 Factors influencing trabecular bone score in middle-aged and older female patients with distal radius fractures *Yusuke Kubo, et al.*, Dept. of Orthop. Surg., Aso Iizuka Hosp. ...S1756
- 2-2-2 Does lateral wall fracture line of femoral trochanteric fractures affects stability of intramedullary nail? *Naoya Takada, et al.*, Dept. of Orthop. Surg., Kainan Hosp. ...S1756

- 2-2-3 Evaluation of bony factors that affect range of forearm rotation in malunions after Smith fractures
 *Hiroki Kondo, et al.*, Dept. of Orthop. Surg., Graduate School of Medicine, Osaka Univ.··S1757
- 2-2-4 Development of an automated system for predicting functional prognosis in patients with proximal femoral fractures using machine learning *Issei Tanaka, et al.*, Dept. of Med Eng., Chiba Univ.··S1757
- 2-2-5 Finite element analysis of stress distribution changes based on plate fixation methods for distal femoral fractures
 *Yoshinori Satake, et al.*, Dept. of Orthop. Surg., Kochi Medical School, Kochi Univ.··S1758
- 2-2-6 Developmental dysplasia of the hip affected the Pauwels' classification in patients with femoral neck fracture *Yoshio Nishida, et al.*, Dept. of Orthop. Surg.,
 Faculty of Medicine and Graduate School of Medicine, Hokkaido Univ.··S1758
- 2-2-7 Effects of transcutaneous CO2 application on fracture healing in a rat with disuse osteoporosis
 *Hyuma Kondo, et al.*, Dept. of Orthop. Surg., Kobe Univ. Graduate School of Medicine··S1759

2nd Day October 17 Room 3

8 : 30 ~ 9 : 30 Oral Muscle		Moderators E. Tsuda, H. Horiuchi
2-3-1	Association between sarcopenia and oxidative stress in medical check program <i>Taisuke Seki, et al.</i> , Dept. of Orthop. Surg., Aichi Medical Univ. Medical Center··S1760	
2-3-2	The inhibitory effect of belt electrode-skeletal muscle electrical stimulation (B-SES) on muscle atrophy in collagen-induced arthritis rats <i>Kazufumi Hisamoto, et al.</i> , Dept. of Orthop., Graduate School of Medical Science, Kyoto Prefectural Univ. of Medicine··S1760	
2-3-3	Effect of sustained hypoxia with treadmill exercise on muscle in a rat model of rheumatoid arthritis <i>Keisuke Sugie, et al.</i> , Dept. of Orthop., Graduate School of Medical Science, Kyoto Prefectural Univ. of Medicine··S1761	
2-3-4	Mitochondrial acid-5 enhances muscle regeneration on skeletal muscle injury model mice <i>Naoto Shibasaki, et al.</i> , Dept. of Orthop. Surg., Tohoku Univ. Graduate School of Medicine··S1761	
2-3-5	Pathophysiological mechanisms of sarcopenia induced by chronic circadian misalignment <i>Takashi Seya, et al.</i> , Dept. of Physiology and Systems Bioscience, Kyoto Prefectural Univ. of Medicine··S1762	
2-3-6	Effects of exercise and teriparatide on skeletal muscle in diabetic model mice <i>Yasuhiro Asaka, et al.</i> , Dept. of Rehabilitation Medicine, Akita Univ. Hosp.··S1762	
2-3-7	Doxorubicin irreversibly impairs skeletal muscle regeneration by inhibiting inflammatory cell infiltration following muscle injury <i>Shinya Kondo, et al.</i> , Dept. of Orthop. Surg., National Defense Medical College··S1763	

9 : 30 ~ 10 : 10 Oral Hip		Moderators H. Ito, H. Ike
2-3-8	Patients receiving regional anesthesia for intertrochanteric fractures may have a lower risk of complications and mortality: A retrospective cohort study <i>Samer Mahmoud, et al.</i> , Dept. of Orthop. Surg., SUNY Downstate Health Sciences Univ., Brooklyn, NY, United States··S1764	
2-3-9	Impact of standardised care protocols on hip fracture outcomes: Mitigating socioeconomic and racial disparities in a universal healthcare system. A cohort study <i>Vijay Badial, et al.</i> , Imperial College Healthcare NHS Trust, London, United Kingdom··S1764	
2-3-10	Influence of implant on DAA revision rates during learning curve and surgeon differing experience levels <i>Edward Peter O'Bryan, et al.</i> , Monash Univ., Victoria, Australia··S1765	
2-3-11	Revision rates via DAA THR depending on implant design <i>Edward Peter O'Bryan, et al.</i> , Monash Univ., Victoria, Australia··S1765	

- 2-3-12 Management of 30 years old post traumatic pseudoarthrosis of left tibia with varus deformity in 36 yr old female: A case report
*Kuldeep Kumar, et al.*, Maharani Laxmi Bai Medical College and Hosp., Uttar Pradesh, India...S1766

10 : 10 ~ 11 : 10	Oral Biomaterials	Moderators A. Myoui, S. Kawano
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- 2-3-13 *In vivo* evaluation of biodegradable high-purity magnesium implant
*Ryo Maekawa, et al.*, Dept. of Orthop.,
 Graduate School of Medical Science, Kyoto Prefectural Univ. of Medicine...S1767
- 2-3-14 Bone formation induced by polymer coating on metal surfaces based on the intermediate water concept ...*Taku Ikegami, et al.*, Dept. of Orthop. Surg., The Jikei Univ. School of Medicine...S1767
- 2-3-15 Evaluation of biodegradability metal bone graft material *in vivo*
*Jumpei Natsui, et al.*, Dept. of Orthop.,
 Graduate School of Medical Science, Kyoto Prefectural Univ. of Medicine...S1768
- 2-3-16 Evaluation of bone fusion enhancement in Ti-PEEK spinal cages coated with CP-FGF: A rat caudal vertebral interbody fusion model study
*Hiroshi Noguchi, et al.*, Dept. of Orthop. Surg., Univ. of Tsukuba...S1768
- 2-3-17 Development of bioabsorbable implants using poorly soluble metals
*Yoshinobu Oka, et al.*, Dept. of Pediatric Orthop.,
 Graduate School of Medical Science, Kyoto Prefectural Univ. of Medicine...S1769
- 2-3-18 Bone formation around titanium screws coated with fibroblast growth factor-2 :Calcium phosphate composite layers with enhanced biological activity
*Yukei Matsumoto, et al.*, Ibaraki Seinan Medical Center Hosp...S1769
- 2-3-19 Investigation of the usefulness of a novel method to promote bone formation using collagen-bound C-type Na-diuretic peptide*Hiroki Saito, et al.*, Dept. of Orthop. Surg., Kitasato Univ...S1770

11 : 10 ~ 12 : 10	Oral Infection	Moderators Y. Inaba, T. Morii
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- 2-3-20 Enhanced antibiotic susceptibility of biofilm cells induced by prolonged cultivation
*Keiichiro Hara, et al.*, Dept. of Orthop. Surg., The Jikei Univ. School of Medicine...S1771
- 2-3-21 PCR/LAMP primers for detection of coagulase-negative Staphylococci for diagnosis and treatment of osteo-articular infections
*Narumi Ueda, et al.*, Dept. of Orthop. Surg., Japanese Red Cross Wakayama Medical Center...S1771
- 2-3-22 Safety and bactericidal effect of 222 nm ultraviolet C irradiation to rabbit lumbar surgical site
*Yu Inoue, et al.*, Dept. of Orthop. Surg., Kobe Univ. Graduate School of Medicine...S1772
- 2-3-23 Possibility of continuous local antibiotics perfusion (CLAP) against MRSA with aminoglycoside-modifying enzyme genes*Shuhei Hanada, et al.*, Dept. of Orthop. Surg.,
 School of Medicine, Univ. of Occupational and Environmental Health...S1772
- 2-3-24 Effects of high antibiotic concentrations applied in a continuous local antibiotic perfusion therapy on human umbilical vein endothelial cells
*Genta Fukumoto, et al.*, Dept. of Orthop. Surg., Kobe Univ. Graduate School of Medicine...S1773
- 2-3-25 Utility of the BioFire infection bone and joint infection panel in hand infections
*Takeyasu Toyama, et al.*, Dept. of Orthop. Surg., Kansai Medical Univ. Hosp...S1773
- 2-3-26 Influences of high-dose gentamicin exposure on human articular chondrocyte
*Jonathan Jonathan, et al.*, Dept. of Orthop. Surg., Graduate School of Medicine, Kobe Univ...S1774

12 : 30 ~ 13 : 30	Luncheon seminar 9	Moderator H. Takagi
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- 2-3-LS9-1 Replicating native knee motion: How pivot patterns shape TKA design and clinical outcomes
*Masayuki Kamimura*, Dept. of Orthop. Surg., Tohoku Univ...S1774

13 : 40 ~ 14 : 30	Oral Bone tumors: Treatments	Moderators K. Honoki, K. Horiuchi
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- 2-3-27 Investigation of the treatment effects and mechanisms of immune checkpoint inhibitors combined with hyperthermia for osteosarcoma
..... *Yuya Izubuchi, et al.*, Dept. of Orthop. and Rehabilitation Medicine,
Faculty of Medical Sciences, Univ. of Fukui...S1775
- 2-3-28 Effect of different timing of zoledronic acid administration on metastatic bone tumors
..... *Manabu Watanabe, et al.*, Dept. of Orthop. Surg., Akita Univ. Graduate School of Medicine...S1775
- 2-3-29 Photodynamic and radiodynamic therapy using 5-aminolevulinic acid have a synergistic effect in osteosarcoma *Yuki Tanemura, et al.*, Dept. of Musculoskeletal Surg.,
Dept. of Multimodality Therapy for Cancer, Mie Univ. Graduate School of Medicine...S1776
- 2-3-30 Possibility of novel LED-based phototherapy for chordoma treatment
..... *Shunsuke Tamaki, et al.*, Dept. of Orthop.,
Institute of Biomedical Sciences, Tokushima Univ. Graduate School...S1776
- 2-3-31 A detoxified TLR4 agonist inhibits tumor growth and lung metastasis of osteosarcoma by promoting CD8+ T cell infiltration *Akira Nabeshima, et al.*, Dept. of Orthop. Surg.,
Clinical Medicine, Graduate School of Medical Sciences, Kyushu Univ...S1777
- 2-3-32 Comparison of tumor-specific immunoenhancing effects (abscopal effect) of cryoablation, radiofrequency ablation and radiotherapy in mice with metastatic bone tumors
..... *Masafumi Kawai, et al.*, Dept. of Orthop. Surg.,
Graduate School of Medical Sciences, Kanazawa Univ...S1777

14 : 30 ~ 15 : 30	Oral Osteoarthritis: Pathology	Moderators N. Fukui, K. Hayakawa
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- 2-3-33 Voluntary running improves synaptic degeneration of the anterior cingulate cortex in knee osteoarthritis *Ryo Miyake, et al.*, Kishigawa Rehabilitation Hosp...S1778
- 2-3-34 Significance of angiogenesis in an osteoarthritis model
..... *Hideki Kise, et al.*, Dept. of Orthop. Surg., Keio Univ...S1778
- 2-3-35 Investigation of the inhibitory effect if IkB kinase (IKK) epsilon knockout mice on cartilage degeneration and pain in osteoarthritis of the knee
..... *Mamiko Sakai, et al.*, Dept. of Orthop. Surg., Kyushu Univ. Graduate School of Medicine...S1779
- 2-3-36 Discovery and mechanistic analysis of novel osteoarthritis therapeutic seeds derived from actinomycetes *Kentaro Uchida, et al.*, Dept. of Orthop. Surg., Kitasato Univ...S1779
- 2-3-37 Analgesic and progression inhibitory effects of ginger-derived extracellular vesicles in osteoarthritis *Dan Moriwaki, et al.*, Dept. of Orthop. Surg.,
Graduate School of Biomedical and Health Sciences, Hiroshima Univ...S1780
- 2-3-38 The effects of inflammation and joint destruction in experimental arthritis with silencing the expression of connexin 43 *Shinji Tsuchida, et al.*, Dept. of Orthop.,
Graduate School of Medical Science, Kyoto Prefectural Univ. of Medicine...S1780
- 2-3-39 Senescence induction in rat synovial fibroblasts and generation of senescent synovial organoids
..... *Sunghyun Lee, et al.*, Center for Stem Cell and Regenerative Medicine,
Institute of Science Tokyo...S1781

15 : 30 ~ 16 : 30	Oral Hip joint	Moderators T. Yamamoto, T. Sakai
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- 2-3-40 The effect of preserving the pelvic attachment of the iliotibial ligament on soft tissue balance in the posterior approach to THA *Toshihiko Hara, et al.*, Iizuka Hosp...S1782
- 2-3-41 Quantitative evaluation of hip joint stability before and after vertical bundle resection of the iliofemoral ligament during total hip arthroplasty
..... *Yusuke Okanoue, et al.*, Dept. of Orthop. Surg., Kochi Medical School, Kochi Univ...S1782

- 2-3-42 Relationship between alignment and vector changes of hip joint contact force and hip disease after lumbar spinal fusion
 *Hiroaki Kijima, et al.*, Dept. of Orthop. Surg., Akita Univ. Graduate School of Medicine...S1783
- 2-3-43 Does periacetabular osteotomy shift the hip center in the anterior-posterior direction?
 Three-dimensional analysis using image-matching methods
 *Kenji Kitamura, et al.*, Dept. of Orthop. Surg.,
 Clinical Medicine, Graduate School of Medical Sciences, Kyushu Univ....S1783
- 2-3-44 Labral tears in developmental dysplasia of the hip: Load distribution and outcomes of joint-preserving surgery *Yuki Ogawa, et al.*, Dept. of Orthop. Surg.,
 Faculty of Medicine and Graduate School of Medicine, Hokkaido Univ....S1784
- 2-3-45 The effect of anterior femoral displacement due to hip external rotation on contact pressure changes in the anterior region of the labrum
 *Fumiya Kizawa, et al.*, Div. of Reha., Hokkaido Univ. Hosp....S1784
- 2-3-46 Influence of periacetabular osteotomy with or without quadrilateral surface preservation
 *Masashi Ishida, et al.*, Dept. of Orthop.,
 Graduate School of Medical Science, Kyoto Prefectural Univ. of Medicine...S1785

16 : 30 ~ 17 : 30	Oral Imaging analysis: Hip joint	Moderators M. Ito, G. Motomura
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- 2-3-47 Development of an automatic configuration program for three dimensional MRI models of hip joints using a deep learning system
 *Ryuichi Sato, et al.*, Dept. of Orthop. Surg., Kanagawa Rehabilitation Hosp....S1786
- 2-3-48 Development of an automatic femoral implant stem size estimation system based on 2D non-rigid image registration and a small data set *Kohta Ito, et al.*, AIST...S1786
- 2-3-49 Finite element analysis of femoral strength after reamer irrigator aspirator (RIA)
 *Ryota Nishida, et al.*, Dept. of Orthop. Surg., Kobe Univ. Graduate School of Medicine...S1787
- 2-3-50 Developing artificial intelligence for diagnostic assistance in surgical method selection for proximal femur fractures *Yutaro Sugawara, et al.*, Dept. of Orthop. Surg.,
 Faculty of Medicine and Graduate School of Medicine, Hokkaido Univ....S1787
- 2-3-51 Development and accuracy validation of a real-time AI-assisted ultrasound diagnostic system for developmental dysplasia of the hip *Yusuke Ohashi, et al.*, Dept. of Orthop. Surg.,
 Faculty of Medicine and Graduate School of Medicine, Hokkaido Univ....S1788
- 2-3-52 Establishment of an intraoperative fluorescence imaging system for femoral head perfusion: A pilot study using an osteonecrosis model *Chinatsu Ohira, et al.*, Dept. of Orthop. Surg.,
 Osaka Metropolitan Univ. Graduate School of Medicine...S1788
- 2-3-53 Image analysis using 3D-CT: preoperative planning and treatment outcomes of percutaneous screw fixation for pelvic ring fractures *Naoyuki Horie, et al.*, Dept. of Orthop.,
 Graduate School of Medical Science, Kyoto Prefectural Univ. of Medicine...S1789

2nd Day October 17 Room 4

8 : 30 ~ 9 : 30	Oral ACL · MCL	Moderators A. Nakamae, S. Taketomi
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- 2-4-1 Racial comparison of the superficial medial collateral ligament distal tibial attachment of the knee
 *Keishiro Kikuchi, et al.*, Dept. of Orthop. Surg., Kurume Univ....S1790
- 2-4-2 Comparison of the effects on the external rotational stability of knee joint tissue: Using fresh cadavers and a robotic system
 *Rikiya Itagaki, et al.*, Dept. of Orthop. Surg., Sapporo Medical Univ....S1790
- 2-4-3 ACL remnant is associated with preoperative rotational instability of the knee: Chiba LEAF study
 *Nobuaki Hayashi, et al.*, Dept. of Orthop. Surg., Graduate School of Medicine, Chiba Univ....S1791

- 2-4-4 Effects of tendon gel intra-tunnel application on tendon-bone healing in a rabbit ACL reconstruction model *Yusuke Yanatori, et al.*, Dept. of Orthop. Surg., Graduate School of Medical Sciences, Kanazawa Univ. ...S1791
- 2-4-5 Improved tendon-bone interface healing by moderate treadmill exercise following an anterior cruciate ligament reconstruction in a murine model
... *Yuki Okazaki, et al.*, Dept. of Orthop. Surg., Science of Functional Recovery and Reconstruction, Faculty of Medicine, Dentistry, and Pharmaceutical Sciences, Okayama Univ. ...S1792
- 2-4-6 Association of bone tunnel shape and temporal changes in bone tunnel enlargement in a rabbit ACL reconstruction model using quadriceps tendon as a graft
..... *Naoki Takemoto, et al.*, Dept. of Orthop. Surg., Kanazawa Univ. Graduate School of Medicine ...S1792
- 2-4-7 Efficacy of PMEA elastomer augmentation to the autograft in anterior cruciate ligament reconstruction (ACLR)
..... *Shuto Yamashita, et al.*, Dept. of Orthop. Surg., Graduate School of Medicine, Osaka Univ. ...S1793

9 : 30 ~ 10 : 30	Oral Meniscus	Moderators R. Kuroda, E. Kondo
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- 2-4-8 Analysis of subchondral insufficiency fracture of the knee associated with meniscal tear using a mouse osteoporotic model
..... *Naosuke Nagata, et al.*, Dept. of Orthop. Surg., Kobe Univ. Graduate School of Medicine ...S1794
- 2-4-9 Changes in meniscal extrusion and image findings in 4-years after non-surgical treatment of medial meniscal posterior root injury
..... *Satoshi Nonaka, et al.*, Center of Knee, Sports, Arthroplasty, JCHO Gunma Central Hosp. ...S1794
- 2-4-10 Association between medial meniscus extrusion progression, proximal tibial morphology, and knee osteoarthritis onset: A 5-year longitudinal study
..... *Hikaru Ishibashi, et al.*, Dept. of Orthop. Surg., Hirosaki Univ. Graduate School of Medicine ...S1795
- 2-4-11 Relation between medial meniscus extrusion and meniscal tear type
..... *Mamiko Nashiki, et al.*, Dept. of Orthop. Surg., Hyogo Medical Univ. ...S1795
- 2-4-12 Worsening of night pain and clinical symptoms were associated with knee osteoarthritis progression: A longitudinal study of Bunkyo Health Study
..... *Takahiro Sasahara, et al.*, Dept. of Orthop., Juntendo Univ. ...S1796
- 2-4-13 Osteofytes on plain X-rays can be a biomarker for knee osteoarthritis 4 years later: A prospective longitudinal cohort study
..... *Junnosuke Arima, et al.*, Dept. of Orthop. Surg., Graduate School of Medicine, Chiba Univ. ...S1796
- 2-4-14 Association between coronal plane lower limb alignment, and body components
..... *Ryo Tomita, et al.*, Dept. of Orthop. Surg., Hirosaki Univ. Graduate School of Medicine ...S1797

10 : 30 ~ 11 : 30	Oral Motion analysis: Lower limb	Moderators T. Jinno, H. Kaneko
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- 2-4-15 Differences in coronal lower extremity alignment and joint space openness between standing and stance phase during gait in advanced medial knee osteoarthritis
..... *Tatsuya Soeno, et al.*, Dept. of Orthop., Niigata Medical Center ...S1798
- 2-4-16 Factors associated with persistent gait abnormality after total hip arthroplasty
..... *Junpei Dan, et al.*, Dept. of Orthop. Surg., Kochi Medical School, Kochi Univ. ...S1798
- 2-4-17 Can sit-to stand movement parameters predict the severity of locomotive syndrome
..... *Takashi Seya, et al.*, Dept. of Orthop., Graduate School of Medical Science, Kyoto Prefectural Univ. of Medicine ...S1799
- 2-4-18 Characteristics of muscle activity patterns during gait in patients with knee osteoarthritis: A study using classification by ranking of EMG integrated values
..... *Kyosuke Ohgiya, et al.*, Dept. of Rehabilitation, Hakodate Orthop. Clinic ...S1799
- 2-4-19 Factors associated with the knee acceleration parameter in patients with knee osteoarthritis
..... *Hiroshi Koyama, et al.*, Dept. of Orthop. Surg., Jyuzen Memorial Hosp. ...S1800

- 2-4-20 Coronal plane alignment of the knee (CPAK) type III valgus knee exhibits lateral pivot motion during squatting*Junya Itou, et al.*, Dept. of Orthop. Surg., Tokyo Women's Medical Univ.··S1800
- 2-4-21 Coordination pattern of lower limb intersegmental movements during gait initiation in patients with knee osteoarthritis*Kiyotaka Hada, et al.*, Dept. of Rehab., Kawashima Clinic··S1801

11 : 30 ~ 12 : 10	Oral Spine	Moderators S. Kaneko, M. Yagi
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- 2-4-22 IL-17A promotes ossification of the posterior longitudinal ligament via R-spondin 3-mediated vascularization: Mechanistic insights into pathological bone formation*Zhongyuan He, et al.*, Dept. of Orthop., The Second Affiliated Hosp. of Chongqing Medical Univ., Chongqing, China··S1802
- 2-4-23 Development of a new histopathology scoring system for cartilage endplate and intervertebral disc of C57BL/6 mice during maturation and degeneration*Fadlyansyah Farid, et al.*, Dept. of Orthop. Surg., Graduate School of Biomedical and Health Sciences, Hiroshima Univ.··S1802
- 2-4-24 Impact of obesity and type 2 diabetes on intervertebral disc degeneration progression on a NPC and AT-CM co-culture system*Clara Ruiz-Fernandez, et al.*, Tokai Univ. School of Medicine··S1803
- 2-4-25 (Withdrawn)
- 2-4-26 The improvised pelvic splint: From the laboratory into pre-hospital practice*Thomas John Howe, et al.*, NHS, London, United Kingdom··S1804

12 : 30 ~ 13 : 30	Luncheon seminar 10	Moderator H. Ishikawa
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- 2-4-LS10-1 Treatment strategies for meniscal injuries: From basic research to clinical*Takayuki Furumatsu*, Japanese Red Cross Okayama Hosp.··S1804

13 : 40 ~ 14 : 40	Oral Knee: Biomechanics	Moderators G. Tajima, Y. Hashimoto
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- 2-4-27 Tensile force on repaired sutures in complete lateral meniscus radial tears*Kodai Hamaoka, et al.*, Dept. of Orthop. Surg., Sapporo Medical Univ.··S1805
- 2-4-28 Biomechanical comparison of inside-out and all-inside meniscal repair in controlling the peripheral gap and extrusion of the lateral meniscus with a complete radial tear*Kousuke Shiawaku, et al.*, KKR Sapporo Medical Center··S1805
- 2-4-29 Effect of concomitant meniscal injury on knee joint instability in ACL-deficient knees: A biomechanical analysis using cadaveric whole lower legs*Shin Yoshida, et al.*, Dept. of Orthop. Surg., Kobe Univ. Graduate School of Medicine··S1806
- 2-4-30 The relationship between tibial articular surface inclination and tibial articular surface loading using musculoskeletal simulation*Shinya Dobashi, et al.*, Dept. of Orthop. Surg., Faculty of Medicine and Graduate School of Medicine, Hokkaido Univ.··S1806
- 2-4-31 Dyslipidemic changes in strength of rat meniscus root by tensile tests*Ryota Seki, et al.*, Dept. of Joint Surg. and Sports Medicine, Graduate School of Medical and Dental Sciences, Institute of Science Tokyo··S1807
- 2-4-32 Biomechanical tensile test for capsule repair comparing suturing methods including interrupted, continuous, and barbed sutures*Kenta Kato, et al.*, Dept. of Orthop. Surg., Nagoya City Univ., Graduate School of Medical Sciences··S1807
- 2-4-33 (Withdrawn)

14 : 40 ~ 15 : 40	Oral Cartilage: Regeneration	Moderators H. Tohyama, K. Nishida
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- 2-4-34 Depletion of Chemokine receptor CCR7 enhances meniscus regeneration in mice*Ryuichi Fukuda, et al.*, Dept. of Orthop. Surg., Hokkaido Univ. Graduate School of Medicine··S1809

- 2-4-35 Expression of CEMIP in human normal chondrocytes induced by mechanical and its suppression by igratimod *Noriyuki Shimizu, et al.*, Dept. of Orthop. Surg., Science of Functional Recovery and Reconstruction, Faculty of Medicine, Dentistry, and Pharmaceutical Sciences, Okayama Univ.··S1809
- 2-4-36 Effect of cell density and chondrogenic induction medium on cartilage-related gene expression in human polydactyly chondrocytes cultured with Atelocollagen scaffold for meniscus regeneration *Renyan Huang, et al.*, Medicine for Sports and Performing Arts, Dept. of Health and Sport Science, Graduate School of Medicine, Osaka Univ.··S1810
- 2-4-37 Senescent macrophage promote the expression of catabolic factors in chondrocyte *Masaya Nakajo, et al.*, Dept. of Orthop. Surg., Faculty of Medicine and Graduate School of Medicine, Hokkaido Univ.··S1810
- 2-4-38 Development of a drug delivery system for osteoarthritis treatment with sustained drug concentration, controlled release, and convenience *Katsuhiro Ichikawa, et al.*, Dept. of Orthop. Surg., Div. of Disease Control, Research field of Medical Sciences, Graduate School of Medicine, Gifu Univ.··S1811
- 2-4-39 Exploration of skeletal stem/progenitor cells by cell lineage analysis using Cre^{ERT}-tdTomato and Cre^{ERT}-tdTomato-DTR mice *Satoru Sakurai, et al.*, Dept. of Orthop. Surg., Graduate School of Biomedical and Health Sciences, Hiroshima Univ.··S1811
- 2-4-40 Investigation of the effects of adipose-derived stem cell therapy on the articular cartilage of osteoarthritis of the knee *Yuji Arai, et al.*, Dept. of Sports and Para-Sports Medicine, Graduate School of Medical Science, Kyoto Prefectural Univ. of Medicine··S1812

15 : 40 ~ 16 : 40

Oral Cartilage 1

Moderators N. Nakamura, T. Nakasa

- 2-4-41 Nrf2/ARE signaling directly regulates the chondrocyte differentiation transcription factor SOX9 and influences age-dependent cartilage degeneration *Yusuke Kubo, et al.*, Dept. of ANATZ., Uniklinik RWTH Aachen, Dept. of ortho. surg., Iizuka Hosp.··S1813
- 2-4-42 Chondroprotective role of AMPK activation via metabolic changes *Toshifumi Sato, et al.*, Dept. of Orthop./Rheumatology, Musculoskeletal and Cutaneous Surg., Program in Integrated Medicine, Graduate School of Medicine, Nagoya Univ.··S1813
- 2-4-43 Morphological and gene expression changes in human synovial mesenchymal stem cells after the adhesion to porcine meniscus *Tomoko Meguro, et al.*, Center for Stem Cell and Regenerative Medicine, Institute of Science Tokyo··S1814
- 2-4-44 Effects of lunar gravity on osteocytes and chondrocytes of the osteochondral unit *Keita Nagira, et al.*, Dept. of Orthop. Surg., Tottori Univ.··S1814
- 2-4-45 Functional analysis of Semaphorin7a in fibrocartilage formation *Ryosuke Hatada, et al.*, Dept. of Tissue Biochemistry, Osaka Univ.··S1815
- 2-4-46 Decreased expression of frizzled-related B is associated with increased beta catenin expression in the calcification of degenerated menisci *Yusuke Inoue, et al.*, Musculoskeletal Science, Yokohama City Univ. Graduate School of Medicine··S1815
- 2-4-47 Reconstruction of damaged articular cartilage by hydroxycitric acid via modifying the metabolic cascade *Junya Toguchida, et al.*, Center for iPS Cell Research and Application, Kyoto Univ.··S1816

16 : 40 ~ 17 : 30

Oral Cartilage 2

Moderators M. Hirao, H. Ogawa

- 2-4-48 Development of osteochondral unit using iPS cell-derived cartilage tissue/artificial bone composite *Akihiko Ezaki, et al.*, Dept. of Orthop. Surg., Graduate School of Medicine, Osaka Univ.··S1817

- 2-4-49 Screening and identification of Sox9-upregulating compounds for osteoarthritis therapy
..... *Takahiro Morita, et al.*, Dept. Systems BioMedicine, Institute of Science Tokyo...S1817
- 2-4-50 Evaluation of cartilage repair with novel cartilage Scaffold
..... *Chuji Hirota, et al.*, Dept. of Orthop. Surg., Osaka Medical and Pharmaceutical Univ...S1818
- 2-4-51 Evaluation of the cartilage-protective effects of Epigallocatechin gallate on osteoarthritis of the knee
..... *Yuki Saito, et al.*, Dept. of Orthop./Rheumatology, Musculoskeletal and Cutaneous Surg.,
Program in Integrated Medicine, Graduate School of Medicine, Nagoya Univ...S1818
- 2-4-52 Intra-articular dynamics of DFAT cells in an immunodeficient rat model of osteoarthritis:
Investigation of administration methods using *in vivo* imaging
..... *Yosuke Sano, et al.*, Dept. of Orthop. Surg., Nihon Univ...S1819
- 2-4-53 Effect of sustained hypoxia with treadmill exercise on destruction of articular cartilage in a rat
model of rheumatoid arthritis *Keisuke Sugie, et al.*, Dept. of Orthop.,
Graduate School of Medical Science, Kyoto Prefectural Univ. of Medicine...S1819

2nd Day October 17 Room 5

8 : 30 ~ 10 : 00 Symposium 7	Moderators Y. Nakashima, K. Takahashi
Frontiers of translational research in bone and joint regeneration	

- 2-5-S7-1 Development of OA treatment by an inhibitor (Amlexanox) against novel targets of NF-κB
signaling (GRK5 and IKKε) *Yukio Akasaki, et al.*, Dept. of Orthop. Surg., Kyushu Univ...S1820
- 2-5-S7-2 Autologous concentrated bone marrow injection for idiopathic osteonecrosis of the
femoral head *Yasuhiro Homma, et al.*, Dept. of Orthop. Surg.,
Juntendo Univ. Tokyo Koto Geriatric Medical Center...S1820
- 2-5-S7-3 Regenerative medicine for idiopathic femoral head necrosis using basic fibroblast growth factor
(bFGF)-containing gelatin gel
..... *Haruhiko Akiyama*, Dept. of Orthop. Surg., Div. of Disease Control,
Research field of Medical Sciences, Graduate School of Medicine, Gifu Univ...S1821
- 2-5-S7-4 Development of novel meniscal scaffold and short-term outcome
..... *Shuhei Otsuki*, Dept. of Orthop. Surg., Osaka Medical and Pharmaceutical Univ...S1821
- 2-5-S7-5 Cartilage regeneration using a scaffold-free tissue-engineered construct derived from
allogeneic synovial mesenchymal stem cells
..... *Kazunori Shimomura, et al.*, Dept. of Rehabilitation, Kansai Univ. of Welfare Sciences...S1822
- 2-5-S7-6 CD34-positive cell transplantation and bone morphogenetic protein-2 to treat fracture nonunion
..... *Takahiro Niikura, et al.*, Dept. of Orthop. Surg., Hyogo Prefectural Nishinomiya Hosp...S1822

10 : 10 ~ 11 : 10 Invited lecture 4	Moderator N. Nakamura
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- 2-5-IL4-1 Updates in the regenerative medicine for osteoarthritis treatment
..... *Gun-Il Im*, Dongguk Univ., Seoul, Korea...S1823

11 : 20 ~ 12 : 20 Invited lecture 5	Moderator S. Ohtori
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- 2-5-IL5-1 Multi-dimensional analysis of the human knee as an organ to discover mechanisms of tissue
damage and pain in osteoarthritis
..... *Martin Lotz*, Scripps Research Institute, La Jolla, CA, USA...S1823

12 : 30 ~ 13 : 30 Luncheon seminar 11	Moderator S. Matsuda
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- 2-5-LS11-1 The significance and potential of CT-based robotic system in lower limb arthroplasty
..... *Masaki Mizushima*, Yonemori Hosp...S1824

13 : 40 ~ 14 : 40	Instructional lecture 8	Moderator N. Adachi
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- 2-5-EL8-1 The past, present, and future of intra-articular treatment using mesenchymal stem cells
 *Ichiro Sekiya, et al.*, Center for Stem Cell and Regenerative Medicine,
 Institute of Science Tokyo...S1824

14 : 50 ~ 16 : 20	Symposium 8	Moderators T. Moro, K. Fujita
Clinical application of artificial technology in the field orthopaedics: A new era of diagnosis and treatment		

- 2-5-S8-1 Disease estimation using LLM and Its challenges *Koji Fujita, et al.*, Medical Design Div.,
 Center for Medical Innovation, Institute of Science Tokyo...S1825
- 2-5-S8-2 Development of algorithms for synthetic data generation in the area of spinal diseases using
 generative adversarial networks
 *Terufumi Kokabu, et al.*, Dept. of Orthop. Surg., Eniwa Hosp....S1825
- 2-5-S8-3 Advancing AI pathology in bone and soft tissue sarcomas: Application of machine learning for
 prognostic prediction *Kengo Kawaguchi, et al.*, Dept. of Orthop. Surg.,
 Graduate School of Medical Sciences, Kyushu Univ....S1826
- 2-5-S8-4 Establishment of a quantitative evaluation method for skeletal muscle index using AI analysis of
 skeletal muscle ultrasound images
 *Hiroyuki Oka, et al.*, Div. of Musculoskeletal AI System Development,
 Faculty of Medicine, The Univ. of Tokyo...S1826
- 2-5-S8-5 Can artificial Intelligence predict the progression of osteoarthritis of the hip?
 *Ryo Hidaka, et al.*, Dept. of Orthop. Surg., Teikyo Univ....S1827
- 2-5-S8-6 The future of hip replacement surgery utilizing generative AI
 *Akira Fujita, et al.*, Dept. of Orthop. Surg., Graduate School of Medicine, Kyoto Univ....S1827
- 2-5-S8-7 Toward clinical application of AI technology enabling early intervention for osteoporosis:
 An AI-assisted diagnostic system for osteoporosis that estimates bone
 *Toru Moro, et al.*, Div. of Science for Joint Reconstruction,
 Graduate School of Medicine, The Univ. of Tokyo...S1828

16 : 30 ~ 17 : 30	Oral Imaging analysis: Knee	Moderators T. Sasho, M. Saito
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- 2-5-1 Effect of preoperative MRI-based qualitative evaluation on clinical outcomes 2 years after high tibial
 osteotomy *Dai Sato, et al.*, Dept. of Orthop. Surg.,
 Faculty of Medicine and Graduate School of Medicine, Hokkaido Univ....S1829
- 2-5-2 Diagnosis of early knee osteoarthritis and analysis of imaging features using artificial intelligence
 *Kei Yokogawa, et al.*, Dept. of Orthop. Surg., Tottori Univ....S1829
- 2-5-3 3D-MRI evaluation reveals cartilage thickness decrease on the medial patellofemoral joint after
 opening wedge high tibial osteotomy
 *Nobutake Ozeki, et al.*, Center for Stem Cell and Regenerative Medicine,
 Institute of Science Tokyo...S1830
- 2-5-4 Diagnostic accuracy of 3-T MRI in the flexed knee position for assessing healing after ramp
 lesion repair *Kazuhisa Hatayama, et al.*, Dept. of Orthop. Surg., JCHO Gunma Central Hosp....S1830
- 2-5-5 Changes in meniscus compression due to different posterior tibial slope angles before and after
 high tibial osteotomy: Analysis using finite element method using MRI images
 *Yukiko Sakamoto, et al.*, Dept. of Orthop. Surg., Hirosaki Univ. Graduate School of Medicine...S1831
- 2-5-6 Evaluation of the knee osteoarthritis using dual energy computed tomography
 *Yuki Maeda, et al.*, Dept. of Orthop. Surg., Kawanishi City Medical Hosp....S1831
- 2-5-7 Evaluation to patellar instability of knee joint rotational alignment using 3D-CT image
 *Yuichi Shibairi, et al.*, Dept. of Orthop. Surg., Tokyo Medical Univ....S1832

2nd Day October 17 Room 6

8 : 30 ~ 10 : 00 Symposium 9

Moderators K. Okazaki, M. Takao

Advances of robotic and navigation technology in joint surgery

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| 2-6-S9-1 | Application of computer simulation in surgery for osteoarthritis of the knee
... <i>Shinichi Kuriyama, et al.</i> , Dept. of Orthop. Surg., Graduate School of Medicine, Kyoto Univ. ... | S1833 |
| 2-6-S9-2 | Knee arthroplasty using Mako® robotic arm-assisted system
..... <i>Kazunari Ishida, et al.</i> , Dept. of Orthop. Surg., Kobe Kaisei Hosp. ... | S1833 |
| 2-6-S9-3 | The role of portable navigation system in lower limb arthroplasty
..... <i>Yukihide Minoda</i> , Dept. of Orthop. Surg.,
Osaka Metropolitan Univ. Graduate School of Medicine ... | S1834 |
| 2-6-S9-4 | Rotational acetabular osteotomy using 3D planning and CT-based navigation system
..... <i>Hyonmin Choe, et al.</i> , Dept. of Orthop. Surg., Yokohama City Univ. ... | S1834 |
| 2-6-S9-5 | Mako robotic-arm assisted THA <i>Atsuko Sato, et al.</i> , Nissan Tamagawa Hosp. ... | S1835 |
| 2-6-S9-6 | The forefront of augmented reality-based navigation
..... <i>Hirovuki Ogawa, et al.</i> , Dept. of Orthop. Surg., Hokusuikai Kinen Hosp. ... | S1835 |

10 : 10 ~ 11 : 10 **Instructional lecture 9**

Moderator S. Matsuda

Advancing research on artificial joints

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| 2-6-EL9-1 | <p>Would you want to perform the same surgical procedures in 5 years?: Changing the future with minimal effort</p> <p>.....<i>Hiroshi Inui</i>, Dept. of Orthop. Surg., Saitama Medical Center, Saitama Medical Univ.··S1836</p> |
| 2-6-EL9-2 | <p>Proposals from a research supervisor for revitalizing research on artificial joints</p> <p>.....<i>Tamon Kabata</i>, Dept. of Orthop. Surg.,
Graduate School of Medical Sciences, Kanazawa Univ.··S1836</p> |

11 : 20 ~ 12 : 20 Instructional lecture 10

Moderator K. Yamada

- 2-6-EL10-1 Topics of antimicrobial stewardship including orthopaedic area
*Hideki Kawamura*, Dept. of Practical Education and
 Field Research for Infection Control and Prevention,
 Graduate School of Medical and Dental Sciences, Kagoshima Univ.S1837

12 : 30 ~ 13 : 30 Luncheon seminar 12

Moderator T. Matsuura

- 2-6-LS12-1 Development of novel cartilage repair technique based on soft-material research
Norimasa Iwasaki, Dept. of Orthop. Surg.,
 Faculty of Medicine and Graduate School of Medicine, Hokkaido Univ. S1838

13 : 40 ~ 14 : 40 Instructional lecture 11

Moderator N. Miyakoshi

Advancing research in spine and spinal cord surgery

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| 2-6-EL11-1 | The struggles on the path to becoming an academic spine surgeon: Ideals and realities of a spine surgeon..... <i>Hiroaki Nakashima</i> , Dept. of Orthop./Rheumatology, Musculoskeletal and Cutaneous Surg., Program in Integrated Medicine, Graduate School of Medicine, Nagoya Univ....S1838 |
| 2-6-EL11-2 | Tips and essentials for excellent research on spinal diseases
..... <i>Haruo Kanno</i> , Dept. of Orthop. Surg., Tohoku Medical and Pharmaceutical Univ....S1839 |

14 : 50 ~ 15 : 50	Instructional lecture 12	Moderator N. Hosogane
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- 2-6-EL12-1 Implementation of artificial intelligence in spine care
 *Takahito Fujimori*, Dept. of Orthop. Surg., Graduate School of Medicine, Osaka Univ. ...S1839

16 : 00 ~ 17 : 30	Joint symposium 8 (The Japanese Pediatric Orthopaedic Association) Use of artificial intelligence and current research in paediatric orthopaedic hip joints	Moderators Y. Inaba, Y. Segawa
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- 2-5-JS8-1 Development of an AI-assisted system for infant hip X-ray interpretation using deep learning
 *Masatoshi Oba*, *et al.*, Kanagawa Children's Medical Center ...S1840
- 2-5-JS8-2 Artificial intelligence automatically detects developmental dysplasia of the hip in
 ultrasound screening *Maki Kinugasa*, *et al.*, Kobe Children's Hosp. ...S1840
- 2-5-JS8-3 Development of an ultrasound image analysis and measurement algorithm for developmental
 dysplasia of the hip diagnosis support
 *Tomohiro Shimizu*, *et al.*, Dept. of Orthop. Surg.,
 Faculty of Medicine and Graduate School of Medicine, Hokkaido Univ. ...S1841
- 2-5-JS8-4 Therapeutic strategy targeting interleukin-6 in Perthes disease
 *Gen Kuroyanagi*, *et al.*, Dept. of Orthop. Surg.,
 Nagoya City Univ., Graduate School of Medical Sciences ...S1841
- 2-5-JS8-5 The effect of aging on bone repair against ischemic osteonecrosis in a mouse model
 *Ryosuke Yamaguchi*, *et al.*, Dept. of Rehabilitation Medicine, Kyushu Univ. Hosp. ...S1842

2nd Day October 17 Room 7

9 : 00 ~ 10 : 30	Symposium 10 Advances in imaging technology for bone and soft tissue tumors and clinical applications	Moderators H. Kawashima, A. Matsumine
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- 2-7-S10-1 Development and clinical implementation strategy of an artificial intelligence system for
 radiographic detection of osteosarcoma and Ewing sarcoma
 *Joe Hasei*, *et al.*, Dept. of Medical Information and Assistive Technology Development,
 Faculty of Medicine, Dentistry, and Pharmaceutical Sciences, Okayama Univ. ...S1843
- 2-7-S10-2 MR imaging of myxofibrosarcoma: Key findings in preoperative planning for wide resection
 *Takeshi Morii*, *et al.*, Dept. of Orthop. Surg., Kyorin Univ. ...S1843
- 2-7-S10-3 Efficacy of PET/MRI for bone and soft tissue tumors
 ... *Michiyuki Hakozaiki*, *et al.*, Higashi-Shirakawa Orthop. Academy, Fukushima Medical Univ. ...S1844
- 2-7-S10-4 Development of a CT-based pathological fracture risk assessment for lower limb bone
 metastases using the finite element method
 *Yusuke Shinoda*, *et al.*, Dept. of Rehabilitation Medicine, Saitama Medical Univ. ...S1844
- 2-7-S10-5 Development of the treatment for the musculoskeletal sarcoma using photo-
 and radiosensitizer *Tomoki Nakamura*, *et al.*, Dept. of Musculoskeletal Surg.,
 Dept. of Multimodality Therapy for Cancer, Mie Univ. Graduate School of Medicine ...S1845
- 2-7-S10-6 Development of novel diagnostic and therapeutic methods for sarcoma using fluorescent
 L-glucose derivatives *Shusa Ohshika*, *et al.*, Dept. of Orthop. Surg., Hirosaki Univ. ...S1845

10 : 40 ~ 12 : 10	Joint symposium 9	Moderators T. Yonemoto, H. Kobayashi
	(Bone and Soft Tissue Tumor Committee (JOA))	
	Progress in the clinical management of bone and soft tissue tumors with genetic testing	

- 2-7-JS9-1 Construction of medical system for effective use of comprehensive genomic profiling
..... *Eiji Nakata, et al.*, Dept. of Orthop. Surg.,
Science of Functional Recovery and Reconstruction, Faculty of Medicine, Dentistry,
and Pharmaceutical Sciences, Okayama Univ. ...S1846
- 2-7-JS9-2 Cancer predisposition syndromes associated with bone and soft-tissue sarcomas and
genetic counseling *Makoto Hirata*, National Cancer Center Hosp. ...S1846
- 2-7-JS9-3 Utilization and application of CGP data in bone and soft tissue sarcoma
..... *Koichi Ogura, et al.*, Dept. of Musculoskeletal Oncology and Rehabilitation,
National Cancer Center Hosp. ...S1847
- 2-7-JS9-4 Integrating genomic medicine real world data into clinical practice
..... *Masachika Ikegami*, Div. of Cellular Signaling, National Cancer Center Research Institute ...S1847
- 2-7-JS9-5 Nano-RAPID: Integrated diagnosis for sarcomas using nanopore sequencer
..... *Naohiro Makise*, Div. of Surgical Pathology, Chiba Cancer Center ...S1848
- 2-7-JS9-6 Development of therapeutic strategies based on genetic analysis utilizing sarcoma organoids
..... *Toru Wakamatsu, et al.*, Osaka International Cancer Institute ...S1848

12 : 30 ~ 13 : 30	Luncheon seminar 13	Moderator T. Yamamoto
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- 2-7-LS13-1 Next-generation recovery monitoring after total hip arthroplasty using wearable technology
..... *Satoshi Hamai, et al.*, Dept. of Artificial Joints and Biomaterials,
Graduate School of Medical Sciences, Kyushu Univ. ...S1849

13 : 40 ~ 15 : 10	Joint symposium 10	Moderators Y. Watanabe, N. Shiota
	(Japanese Orthopaedic Trauma Association)	
	Analyze the treatment methods of trauma using finite element analysis	

- 2-7-JS10-1 Mechanical evaluation of the injured limb position of the fragility fracture of the pelvis using
finite element analysis *Kunihiko Arakawa, et al.*, Dept. of Orthop. Surg., Teikyo Univ. ...S1850
- 2-7-JS10-2 The finite element analysis of the impact of reaming on the mechanical strength of the femur
..... *Yohei Kumabe, et al.*, Dept. of Orthop. Surg., Kobe Univ. Graduate School of Medicine ...S1850
- 2-7-JS10-3 CT-based finite element analysis for verifying the effect of shock-absorbing floors on fragility
hip fracture prevention: An industry-academia-government collaboration
..... *Yoto Oh, et al.*, Dept. of Orthop. and Trauma Research,
Graduate School of Medical and Dental Sciences, Institute of Science Tokyo ...S1851
- 2-7-JS10-4 Consideration of the application and limitations of osteosynthesis in non-displaced femoral
neck fractures: Biomechanical study using the finite element analysis
..... *Sakura Kuniyoshi, et al.*, Orthop. Surg.,
Graduate School of Medicine, Univ. of the Ryukyus ...S1851
- 2-7-JS10-5 Is gap acceptable in plate fixation for diaphyseal fractures of the forearm bones?: A finite
element analysis study
... *Yusuke Matsuura, et al.*, Dept. of Orthop. Surg., Graduate School of Medicine, Chiba Univ. ...S1852

15 : 30 ~ 17 : 00 **Joint symposium 11**
(Japan Shoulder Society)

Moderators **N. Nishinaka, N. Taniguchi**

Basic research on the enhancement of rotator cuff healing

- 2-7-JS11-1 Parathyroid hormone ameliorates fatty infiltration and muscle atrophy following rotator cuff tear via browning of fibro-adipogenic progenitors
.....*Ryosuke Iio, et al.*, Dept. of Orthop. Surg.,
Osaka Metropolitan Univ. Graduate School of Medicine...S1853
- 2-7-JS11-2 Enhancing rotator cuff repair: Adjuvant therapy using platelet-rich fibrin
.....*Tomohiro Uno, et al.*, Dept. of Orthop. Surg., Yamagata Univ...S1853
- 2-7-JS11-3 Results of arthroscopic rotator cuff repair combined with granulocyte colony-stimulating factor administration*Ryosuke Miyamoto, et al.*, Dept. of Orthop. Surg.,
Gunma Univ. Graduate School of Medicine...S1854
- 2-7-JS11-4 Extracorporeal shock wave therapy (ESWT) as an augmentation to promote rotator cuff repair: From animal model to clinical application
.....*Hitoshi Shitara, et al.*, Dept. of Orthop. Surg., Gunma Univ. Graduate School of Medicine...S1854
- 2-7-JS11-5 Inhibitory effect of glycyrrhizin on fatty infiltration after rotator cuff tear
.....*Takumi Nakamura, et al.*, Dept. of Orthop. Surg., Keio Univ...S1855

2nd Day October 17 Room 8

8 : 30 ~ 9 : 20 **Oral Pain**

Moderators **S. Yabuki, M. Ikeuchi**

- 2-8-1 Efficacy and safety of mirogabalin add-on to NSAIDs in patients with neuropathic pain due to lumbar disc herniation: The Miro-Hers
.....*Hidehiko Suzuki, et al.*, Dept. of Orthop. Surg., Yamaguchi Univ. Graduate School of Medicine...S1856
- 2-8-2 Investigation of factors affecting acute pain after manipulation for frozen shoulder
.....*Yohei Harada, et al.*, Dept. of Orthop. Surg., Hiroshima Univ. Graduate School of Medicine...S1856
- 2-8-3 3-Nitrotyrosine enhances pain perception by modulating nociceptive transmission in the spinal dorsal horn*Yuta Kaimochi, et al.*, Dept. of Orthop. Surg., Wakayama Medical Univ...S1857
- 2-8-4 Evaluation of low back pain through surface electromyographic analysis of erector spinae muscles across various postures*Takato Hoshino, et al.*, Dept. of Medical Engineering,
Graduate School of Science and Engineering, Chiba Univ...S1857
- 2-8-5 Damage to A β fibers is involved in microglial activation in the spinal dorsal horn after peripheral nerve injury*Yuki Matsumoto, et al.*, Dept. of Orthop. Surg.,
Clinical Medicine, Graduate School of Medical Sciences, Kyushu Univ...S1858
- 2-8-6 Factors associated with spontaneous pain at rest in patients with shoulder contracture
.....*Masashi Izumi, et al.*, Rehabilitation Center, Kochi Medical School Hosp...S1858

9 : 20 ~ 10 : 20 **Oral RA**

Moderators **K. Ikari, N. Takahashi**

- 2-8-7 Single-cell RNA-seq analysis of synovial CD4⁺ T cells identifies a novel therapeutic target in human rheumatoid arthritis
.....*Akinori Murakami, et al.*, Dept. of Orthop. Surg., Graduate School of Medicine, Kyoto Univ...S1859
- 2-8-8 Using AI software to evaluate vertebral fractures in patients with rheumatoid arthritis
.....*Asami Zenitani, et al.*, Dept. of Orthop. Surg., The Jikei Univ. School of Medicine...S1859
- 2-8-9 Association between synovial fluid resolvin D1 levels and blood test markers in patients with rheumatoid arthritis of the knee*Yutaka Sano, et al.*, Dept. of Orthop. Surg., Nihon Univ...S1860

- 2-8-10 Expression of connexin 43 in synovial tissue of patients with rheumatoid arthritis
.....*Shinji Tsuchida, et al.*, Dept. of Orthop.,
Graduate School of Medical Science, Kyoto Prefectural Univ. of Medicine...S1860
- 2-8-11 The involvement of Tripartite motif-containing 22 in the Toll-like receptor 3-mediated
inflammatory pathway in rheumatoid arthritis synovitis
.....*Kairo Wada, et al.*, Dept. of Orthop. Surg., Hirosaki Univ. Graduate School of Medicine...S1861
- 2-8-12 Clonal hematopoiesis in elderly-onset rheumatoid arthritis: An *in vivo* analysis using
TET2-deficient mice
.....*Yuma Saito, et al.*, Dept. of Orthop./Rheumatology, Musculoskeletal and Cutaneous Surg.,
Program in Integrated Medicine, Graduate School of Medicine, Nagoya Univ....S1861
- 2-8-13 Role of cyclin D kinases in mice synovial hyperplasia and proliferation of human rheumatoid
arthritis fibroblast like synoviocytes
.....*Ryoji Fujii, et al.*, Inst. of Medical Science, St. Marianna Univ. School of Medicine...S1862

10 : 20 ~ 11 : 20	Oral Motion analysis: Upper limb	Moderators A. Nimura, H. Sasaki
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- 2-8-14 Onset of finger pinch force decline observed after 60 pitches in high school baseball pitchers
.....*Keisuke Tsukada, et al.*, Dept. of Orthop. Surg., Teikyo Univ....S1863
- 2-8-15 The effect of forearm pronation on radiocapitellar joint during elbow extension
.....*Masataka Minami, et al.*, Dept. of Orthop. Surg., Mayo Clinic, Rochester, NE, USA...S1863
- 2-8-16 The effect of forearm flexor on radiocapitellar joint during elbow extension
.....*Masataka Minami, et al.*, Dept. of Orthop. Surg., Mayo Clinic, Rochester, NE, USA...S1864
- 2-8-17 Ulnar nerve displacement occurs frequently beyond 90 degree elbow flexion in children,
especially in females*Tomoo Nakagawa, et al.*, Dept. of Orthop. Surg., Teikyo Univ....S1864
- 2-8-18 Consistency between optical 3D motion analysis and 3D-CT kinematic analysis in
trapeziometacarpal osteoarthritis*Akira Kodama, et al.*, Dept. of Orthop. Surg.,
Graduate School of Biomedical and Health Sciences, Hiroshima Univ....S1865
- 2-8-19 The effect of elbow valgus stress on radiocapitellar joint during elbow extension
.....*Masataka Minami, et al.*, Dept. of Orthop. Surg., Mayo Clinic, Rochester, NE, USA...S1865
- 2-8-20 Can motion capture glove measuring range of motion of finger joints be useful tool in
clinical practice?*Koji Tanimoto, et al.*, Dept. of Orthop. Surg., Nihon Univ....S1866

11 : 20 ~ 12 : 20	Oral Imaging analysis: Upper limb	Moderators Y. Tajiri, H. Minehara
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- 2-8-21 Investigation of joint stability in an elbow dislocation model using fresh frozen cadavers
.....*Megumi Yoshikawa, et al.*, Dept. of Orthop. Surg., Graduate School of Medicine, Chiba Univ....S1867
- 2-8-22 Development of a deep learning model for scaphoid fracture detection from radiographs with a
limited dataset*Tomohiko Waki, et al.*, Dept. of Orthop. and Spinal Surg.,
Graduate School of Medical and Dental Sciences, Institute of Science Tokyo...S1867
- 2-8-23 Development of a deep learning model for measuring the medial elbow joint space length using
ultrasound imaging and its accuracy evaluation
.....*Shotaro Teruya, et al.*, Dept. of Orthop. Surg., Univ. of Tsukuba...S1868
- 2-8-24 Dynamic analysis of nerves around the elbow using MRI-derived 3D modeling
.....*Takenori Saeki, et al.*, Div. of Human Enhancement & Hand Surg.,
Program in Integrated Medicine, Graduate School of Medicine, Nagoya Univ....S1868
- 2-8-25 The relationship between trunk and pelvic angles during throwing and Kerlan-Jobe Orthopaedic
Clinic score in American football quarterbacks
.....*Naoya Nishinaka, et al.*, Graduate School, Showa Medical Univ....S1869
- 2-8-26 Detection of the medial epicondyle of the humerus in youth baseball players using an object
detection model*Kenta Takatsuji, et al.*, Dept. of Orthop.,
Graduate School of Medical Science, Kyoto Prefectural Univ. of Medicine...S1869

- 2-8-27 Utility of quantitative evaluation of rotator cuff muscle fatty infiltration using binarization of MR images with free software *Ryota Kojima, et al.*, Dept. of Orthop.,
Graduate School of Medical Science, Kyoto Prefectural Univ. of Medicine...S1870

12 : 30 ~ 13 : 30 Luncheon seminar 14

Moderator Y. Nakamura

- 2-8-LS14-1 Clinical application and 15-year outcomes of a biocompatible PMPC-grafted hip prosthesis inspired by the lubrication mechanism of articular cartilage
..... *Toru Moro*, Div. of Science for Joint Reconstruction,
Graduate School of Medicine, The Univ. of Tokyo...S1870

13 : 40 ~ 14 : 40 GJSOT international symposium 1

Moderators D. Pennig, T. Ozaki

New technology in joint surgery 1

- 2-8-IS1-1 Weather sensitivity in knee osteoarthritis patients
..... *Naoya Kikuchi*, Dept. of Orthop. Surg., Univ. of Tsukuba...S1871
- 2-8-IS1-2 Intraoperative knee kinematics of PS-fixed bearing and PS-mobile bearing
..... *Takuya Iseki, et al.*, Dept. of Orthop. Surg., Hyogo Medical Univ...S1871
- 2-8-IS1-3 Progression of osteoarthritis at long-term follow-up in patients treated for symptomatic femoroacetabular impingement with hip arthroscopy compared with nonsurgically treated patients *Martin Husen, et al.*, Univ. Hosp. Heidelberg, Germany...S1872
- 2-8-IS1-4 Risk factors for delayed bone union after OWHTO
..... *Kuniaki Ikeda*, Osaka Medical and Pharmaceutical Univ...S1872
- 2-8-IS1-5 EndoCert and Joint register EPRD - the German way to improve joint replacement results - under consideration of knee arthroplasty
..... *Wolfram Mittelmeier*, Rostock Univ., Rostock, Germany...S1873

14 : 50 ~ 15 : 50 GJSOT international symposium 2

Moderators W. Mittelmeier, K. Hiraoka

New technology in joint surgery 2

- 2-8-IS2-1 Long-term results of total hip arthroplasty using fit & fill stem over 10 years
..... *Ryoichi Izumida*, Keiyu Artificial Joint Center, Edogawa Hosp...S1874
- 2-8-IS2-2 Does the femoral cementing quality of cemented stems impact on the PROMs at the mid-term follow-up?
..... *Hitoshi Wakama*, Dept. of Orthop. Surg., Osaka Medical and Pharmaceutical Univ...S1874
- 2-8-IS2-3 A regression model for predicting forearm bone mineral density from radiological indices of the proximal femur
..... *Aoi Kudo, et al.*, Dept. of Orthop. Surg., Hirosaki Univ. Graduate School of Medicine...S1875
- 2-8-IS2-4 Outcomes and return-to-sports rates in patients with borderline hip dysplasia after periacetabular osteotomy: A case series with 5-year follow-up
..... *Vincent Justus Leopold, et al.*, Dept. of Orthop. Surg. and Traumatology,
Charité-Universitätsmedizin Berlin, Berlin, Germany...S1875
- 2-8-IS2-5 A simple predictor for rapid progression of hip arthrosis: The sacro-femoral-pubic angle in the coronal plane *Takafumi Saika*, Osaka Medical and Pharmaceutical Univ...S1876

16 : 00 ~ 17 : 00 GJSOT international symposium 3

Moderators M. Rauschmann, M. Yamazaki

New technology in spine surgery

- 2-8-IS3-1 Potential applications of extended reality technology in exoscopic spinal surgery
..... *Kentaro Yamane, et al.*, Dept. of Orthop. Surg., NHO Okayama Medical Center...S1877
- 2-8-IS3-2 Gene expression profile in thalamus in spinal cord injury after Intravenous infusion of mesenchymal stem cells
..... *Ryunosuke Fukushi*, Dept. of Orthop. Surg., Sapporo Medical Univ...S1877

- 2-8-IS3-3 Optimal surgical intervention of spinopelvic dissociation associated with fragility fracture of the pelvis *Shuichi Naniwa*, Dept. of Orthop. Surg., Okayama Univ. ...S1878
- 2-8-IS3-4 A prospective comparative study using synchronized 3D gait analysis and electromyography: Postural changes and muscle activities in patients with adult spinal deformity and lumbar spinal canal stenosis *Takahiro Sunami*, Dept. of Orthop. Surg., Univ. of Tsukuba ...S1878
- 2-8-IS3-5 Effect of runoff contrast (RC) on the long-term outcomes of trans-sacral spinal canal plasty (TSCP) using steerable catheters: A single-center observational study *Kimiaiki Yokosuka*, Dept. of Orthop. Surg., Kurume Univ. ...S1879

2nd Day October 17 Poster 1

13 : 40 ~ 14 : 10	Poster Bone: Osteoporosis 1	Moderators K. Inokuchi, A. Kanda
2-Po-1	Preoperative osteoporosis screening in patients with hip osteoarthritis: Evaluation with X-ray indicators and patient factors <i>Ryo Higuchi, et al.</i> , Dept. of Orthop. Surg., Graduate School of Medicine, Osaka Univ. ...S1879	
2-Po-2	Effect of fragility vertebral fracture on intravertebral and intraskeletal fat mass and bone mineral density in elderly women <i>Yuji Kasukawa, et al.</i> , Dept. of Rehabilitation Medicine, Akita Univ. Hosp. ...S1880	
2-Po-3	(Withdrawn)	
2-Po-4	Identifying patients with optimal indications for denosumab: Predicting efficacy based on the level of activity of bone metabolic turnover ... <i>Yusuke Yamamoto, et al.</i> , Dept. of Orthop., Univ. of Fukui ...S1881	
2-Po-5	The relationship between sacral Hounsfield unit and T-score, and the risk assessment of fragility fractures of the pelvis <i>Yoshimichi Onose, et al.</i> , Dept. of Orthop. Surg., St. Marianna Univ. School of Medicine ...S1881	
2-Po-6	Histological evaluation of cortical bone changes in diabetic rats <i>Masataka Minami, et al.</i> , Dept. of Orthop., Graduate School of Medical Science, Kyoto Prefectural Univ. of Medicine ...S1882	

14 : 10 ~ 14 : 40	Poster Bone: Osteoporosis 2	Moderators S. Demura, C. Minamitani
2-Po-7	Association between hepatic steatosis and decreased vertebral bone quality in young adults: A new perspective on lifestyle-related disease risk <i>Yoshinao Koike, et al.</i> , Dept. of Orthop. Surg., Faculty of Medicine and Graduate School of Medicine, Hokkaido Univ. ...S1882	
2-Po-8	ALP as a surrogate marker for estimating bone turnover in hemodialysis patients <i>Hitoshi Tanigawa, et al.</i> , Univ. of Connecticut Health ...S1883	
2-Po-9	The relationship between myokine and sarcopenia in patients with osteoporosis <i>Ryuki Hashida, et al.</i> , Dept. of Orthop. Surg., Kurume Univ. ...S1883	
2-Po-10	Where do the BMD increase in the lumbar vertebra <i>Masahiro Kashima, et al.</i> , Anan Medical Center ...S1884	
2-Po-11	Perioperative treatment status and postoperative outcomes in osteoporotic patients with vertebral fractures: A retrospective longitudinal study of administrative claims data <i>Ruriko Koto, et al.</i> , Medical Science Dept., Teijin Pharma Limited ...S1884	
2-Po-12	The bone quality evaluation of vertebral body at the site of the bridging osteophyte in patients with diffuse idiopathic skeletal hyperostosis and thoracolumbar junction injury <i>Atsushi Suzuki, et al.</i> , Dept. of Orthop. Surg., Hirosaki Univ. Graduate School of Medicine ...S1885	

14 : 40 ~ 15 : 10	Poster	Bone: Regeneration, treatments	Moderators	N. Takenaka, T. Niikura
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- 2-Po-13 Differentiation of VEGF-producing osteoblast using direct reprogramming
..... *Yusei Katsuyama, et al.*, Dept. of Orthop.,
Graduate School of Medical Science, Kyoto Prefectural Univ. of Medicine...S1885
- 2-Po-14 The effect of promoting bone fusion by combining the implantation of MSC-captured non-woven
fabric with spinal surgery
..... *Kazuki Hayakawa, et al.*, Dept. of Orthop. Surg., Fujita Health Univ...S1886
- 2-Po-15 The novel osteoporosis treatment MPMBP prevents bone microstructure deterioration in
COPD mice *Daisuke Arakawa, et al.*, Dept. of Orthop. Surg.,
School of Medicine, Univ. of Occupational and Environmental Health...S1886
- 2-Po-16 Kielin chordin like protein promotes induction of osteoblast differentiation by bone
morphogenetic protein 2 *Kei Nagasaki, et al.*, Dept. of Orthop. Surg., Showa Medical Univ...S1887
- 2-Po-17 microRNA-31/210 promotes bone healing in a rat femur giant bone defect model
..... *Yosuke Kozuma, et al.*, Dept. of Orthop. Surg.,
Graduate School of Biomedical and Health Sciences, Hiroshima Univ...S1887
- 2-Po-18 Study on the repair capacity of SDF-1-loaded octacalcium phosphate/PLGA in rat long
bone defects
..... *Yasuaki Kuriyama, et al.*, Dept. of Orthop. Surg., Tohoku Univ. Graduate School of Medicine...S1888

15 : 10 ~ 15 : 40	Poster		Moderators	M. Deie, K. Nishitani
		Bone: Regeneration, treatments, others		

- 2-Po-19 Vascularization enables step-wise differentiation from chondrogenic to osteogenic cells in
the epiphysis *Yuki Matsumoto, et al.*, Dept. of Orthop. Surg., Keio Univ...S1888
- 2-Po-20 Nano powdering of beta tricalcium phosphate enhances osteoinduction
..... *Kentaro Sakaeda, et al.*, Dept. of Orthop. and Spinal Surg.,
Graduate School of Medical and Dental Sciences, Institute of Science Tokyo...S1889
- 2-Po-21 The effect of local administration of microRNA on the fixation strength of HA-coating titanium
implants and peri-implant bone in an ovariectomized rat model of osteoporosis
..... *Shinichi Ueki, et al.*, Dept. of Orthop. Surg.,
Graduate School of Biomedical and Health Sciences, Hiroshima Univ...S1889
- 2-Po-22 Direct Injection of microRNA-31/210 for bone regeneration in a rat model of femoral
head osteonecrosis *Hiroyuki Morita, et al.*, Dept. of Orthop. Surg.,
Graduate School of Biomedical and Health Sciences, Hiroshima Univ...S1890
- 2-Po-23 A study to develop a new therapy for bone defects with scaffold-free cartilage constructs
..... *Hiromu Yoshizato, et al.*, Dept. of Orthop. Surg., Saga Univ...S1890
- 2-Po-24 Anti-oxidative stress factor NRF2 enhances mineralization in human bone marrow-derived
mesenchymal stromal cells
..... *Takahiro Onoki, et al.*, Dept. of Orthop. Surg., Tohoku Univ. Graduate School of Medicine...S1891

2nd Day	October 17	Poster 2
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13 : 40 ~ 14 : 10	Poster	Ossification of spinal ligaments	Moderators	K. Mori, H. Nojiri
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- 2-Po-25 Regulation of angiogenetic factor by epigenetics in patients with ossification of the
ligamentous flavum
..... *Yuya Chosei, et al.*, Dept. of Orthop. Surg., Shiga Univ. of Medical Science...S1891

- 2-Po-26 Metabolic dysfunction-associated fatty liver disease (MASLD) is associated with the development of spinal ligament ossification *Shotaro Fukada, et al.*, Dept. of Orthop. Surg., Faculty of Medicine and Graduate School of Medicine, Hokkaido Univ. ...S1892
- 2-Po-27 Establishing cutoff values for obesity-related indices aimed at obesity treatment interventions for ossification of the posterior longitudinal ligament *Ryo Fujita, et al.*, Dept. of Orthop. Surg., Faculty of Medicine and Graduate School of Medicine, Hokkaido Univ. ...S1892
- 2-Po-28 Association between metabolic dysfunction-associated steatotic liver disease and ossification of the posterior longitudinal ligament *Huohuo Xue, et al.*, Dept. of Orthop. Surg., Faculty of Medicine and Graduate School of Medicine, Hokkaido Univ. ...S1893
- 2-Po-29 Relationship between aging-related factors and ossification progression in the cervical OPLL *Hideki Saito, et al.*, Dept. of Orthop. Surg., Shiga Univ. of Medical Science ...S1893
- 2-Po-30 Prevalence and risk factors of diffuse idiopathic skeletal hyperostosis (DISH) in community-dwelling elderly: The second report of the Bunkyo Health Study *Yuta Sugawara, et al.*, Dept. of Orthop. Surg., Juntendo Univ. ...S1894

14 : 10 ~ 14 : 40	Poster	Bone and soft tissue tumors	Moderators	A. Ogose, E. Kobayashi
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- 2-Po-31 A study of effectiveness of cryo-chemotherapy for bone metastasis of lung cancer *Toru Udaka, et al.*, Dept. of Orthop. Surg., Kyorin Univ. ...S1894
- 2-Po-32 Mechanical strength of high hydrostatic pressure-treated bone: A comparison with liquid nitrogen-treated bone *Satoshi Nagatani, et al.*, Dept. of Orthop. Surg., Graduate School of Medical Sciences, Kanazawa Univ. ...S1895
- 2-Po-33 Examination of the antitumor effects of pristimerin: Focusing on comparisons between tumors *Daichi Hayashi, et al.*, Dept. of Orthop., Graduate School of Medical Science, Kyoto Prefectural Univ. of Medicine ...S1895
- 2-Po-34 Effect of Japanese traditional medicine on necrosis prevention after flap surgery: A study using a rat model *Akari Mori, et al.*, Dept. of Orthop. Surg., Graduate School of Medical Sciences, Kanazawa Univ. ...S1896
- 2-Po-35 Preoperative thallium scintigraphy for prognostic prediction in undifferentiated pleomorphic sarcoma *Ryosuke Nishi, et al.*, Dept. of Orthop., Graduate School of Medical Science, Kyoto Prefectural Univ. of Medicine ...S1896
- 2-Po-36 Analysis of immune cell dynamics in a soft tissue sarcoma case with tumor cell elimination following COVID-19 infection *Hiroya Kondo, et al.*, Dept. of Musculoskeletal Oncology and Rehabilitation, National Cancer Center Hosp. ...S1897

14 : 40 ~ 15 : 10	Poster	Pelvis, hip joint	Moderators	S. Hamai, H. Kijima
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- 2-Po-37 Analysis of fracture progression mechanism in fragility fractures of the pelvic using the finite element method *Satoshi Nakasone, et al.*, Dept. of Orthop. Surg., Ryukyu Univ. Graduate School of Medicine ...S1897
- 2-Po-38 High accuracy of CR alignment of pelvis using three-dimensional software *Yuki Komuta, et al.*, Div. of Orthop. Surg., Dept. of Regenerative and Transplant Medicine, Niigata Univ. Graduate School of Medical and Dental Sciences ...S1898
- 2-Po-39 Finite element analysis of a post-operative spherical periacetabular osteotomy (SPO) patient *Soshi Hirata, et al.*, Dept. of Orthop., Graduate School of Medical Science, Kyoto Prefectural Univ. of Medicine ...S1898
- 2-Po-40 Evaluation of the protective effect of silicone rubber single-use retractor on wound edges *Shigeki Hayashi, et al.*, Dept. of Orthop., Graduate School of Medical Science, Kyoto Prefectural Univ. of Medicine ...S1899

- 2-Po-41 The effectiveness of preoperative planning using 3D-CT for percutaneous screw fixation of acetabular fractures *Hiroataka Matsuura, et al.*, Dept. of Orthop.,
Graduate School of Medical Science, Kyoto Prefectural Univ. of Medicine...S1899

15 : 10 ~ 15 : 40	Poster Others 3	Moderator H. Takagi
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- 2-Po-42 The articular capsule ligament complex is more important than the biceps long head tendon in the rotator cuff tear rat model *Kohei Uekama, et al.*, Dept. of Orthop. Surg.,
Graduate School of Medical and Dental Sciences, Kagoshima Univ...S1900
- 2-Po-43 Identification of p21-positive immature osteoblasts in the long bone of growing mice *Masato Saito, et al.*, Dept. of Orthop. Surg., Keio Univ...S1900
- 2-Po-44 Effects of treadmill exercise-derived PRP on gene expression in chondrocytes *Yuichiro Oka, et al.*, Dept. of Rehabilitation Science,
Faculty of Health Sciences, Hokkaido Univ...S1901
- 2-Po-45 Effect of surface texture on u-HA/PLLA to fixation strength *in vivo* *Shinji Imade, et al.*, Dept. of Orthop., Shimane Univ...S1901
- 2-Po-46 Development of forelimb strength training mice using operant conditioning and analysis of neural activity in the primary motor cortex during the training process *Yuya Okada, et al.*, Dept. of Orthop./Rheumatology, Musculoskeletal and Cutaneous Surg.,
Program in Integrated Medicine, Graduate School of Medicine, Nagoya Univ...S1902
- 2-Po-47 Mechanical evaluation of a repair method for meniscal radial tears using PMMA-based 4-META/MMA-TBB resin dental adhesive *Toshitaka Tsunematsu, et al.*, Dept. of Orthop. Surg.,
Graduate School of Medicine, Osaka Univ...S1902

2nd Day October 17 Poster 3

13 : 40 ~ 14 : 10	Poster Foot	Moderators K. Nozaka, Y. Yasui
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- 2-Po-48 Normal and pathologic function of the windlass mechanism during dorsiflexion of the hallux *Takumi Kihara, et al.*, Dept. of Orthop. Surg., The Jikei Univ. School of Medicine...S1903
- 2-Po-49 Outcome of ligament reconstruction for Lisfranc joint dislocation fractures: Comparison of clinical assessment methods for fresh and chronic cases *Shota Ichikawa, et al.*, Dept. of Orthop. Surg., St. Marianna Univ. School of Medicine...S1903
- 2-Po-50 Outcome of ligament reconstruction for Lisfranc joint dislocation fractures: Comparative study of different injury categories by clinical assessment method *Shota Ichikawa, et al.*, Dept. of Orthop. Surg., St. Marianna Univ. School of Medicine...S1904
- 2-Po-51 Relationship between severity of hallux valgus and degenerative change of the sesamoid metatarsal joint *Tomoko Karube, et al.*, Dept. of Orthop. Surg., St. Marianna Univ. School of Medicine...S1904
- 2-Po-52 Investigation of the relationship between metatarsal primus elevatus and hallux rigidus using weight-bearing CT *Hiroataka Fukushima, et al.*, Dept. of Orthop. Surg., The Jikei Univ. School of Medicine...S1905
- 2-Po-53 Anatomical technique for creating a Lisfranc ligament injury model using fresh-frozen cadavers *Norihiro Tsujimoto, et al.*, Dept. of Orthop. Surg., Nara Medical Univ...S1905

14 : 10 ~ 14 : 40	Poster Ankle joint, foot	Moderators I. Yoshimura, S. Yamaguchi
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- 2-Po-54 Postural stability in patients with severe ankle osteoarthritis: A comparison of bilateral and unilateral patients *Ken Tanaka, et al.*, Dept. of Orthop. Surg., Osaka Medical and Pharmaceutical Univ...S1906

- 2-Po-55 Should we be careful about elderly ankle fractures with Ilizarov external fixation as they are fragility fractures?
 *Koji Nozaka, et al.*, Dept. of Orthop. Surg., Akita Univ. Graduate School of Medicine...S1906
- 2-Po-56 Does lateral column lengthening correct hindfoot valgus in adults with flat feet?
 *Natsuki Maruyama, et al.*, Hitsujigaoka Hosp...S1907
- 2-Po-57 Histological findings of the medial joint capsule at the first metatarsophalangeal joint in hallux valgus *Saori Ishibashi, et al.*, Dept. of Orthop. Surg.,
 Graduate School of Biomedical and Health Sciences, Hiroshima Univ...S1907
- 2-Po-58 Postural stability in patients with hallux valgus: Relation with the complication of hammer toe
 *Ken Tanaka, et al.*, Dept. of Orthop. Surg., Osaka Medical and Pharmaceutical Univ...S1908
- 2-Po-59 Association of osteoporosis in patients with painful callosities of the hallux valgus
 *Koji Nozaka, et al.*, Dept. of Orthop. Surg., Akita Univ. Graduate School of Medicine...S1908

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Poster THA

Moderators Y. Maeda, K. Fukushima

- 2-Po-60 Can the anterior line in cross section of femoral neck osteotomy be an indicator of the stem anteversion in total hip arthroplasty
 *Kazuhiko Sonoda, et al.*, Dept. of Orthop. Surg., Iizuka Hosp...S1909
- 2-Po-61 Evaluation of periprosthetic bone reaction of POLARSTEM using digital tomosynthesis
 *Shota Yasunaga, et al.*, Dept. of Orthop. Surg., Tsukuba Univ...S1909
- 2-Po-62 Image analysis of dual mobility polyethylene using by tomosynthesis
 *Takahiro Iyobe, et al.*, Dept. of Orthop. Surg.,
 Graduate School of Medical Sciences, Kanazawa Univ...S1910
- 2-Po-63 Lower limb alignment changes after total hip arthroplasty: Five-year prospective study
 *Yugo Morita, et al.*, Dept. of Orthop. Surg., Graduate School of Medicine, Kyoto Univ...S1910
- 2-Po-64 Evaluation of cup placement accuracy and measurement of leg length and offset change of the ROSA Hip System
 *Yusuke Ozaki, et al.*, Dept. of Orthop. Surg., St. Marianna Univ. School of Medicine...S1911

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Poster

Moderators A. Kanamori, K. Watanabe

Tendons and ligaments regeneration treatments

- 2-Po-65 Investigation of the optimal timing for initiating mobilization after enthesis repair surgery
 *Takuma Naka, et al.*, Musculoskeletal Science,
 Yokohama City Univ. Graduate School of Medicine...S1911
- 2-Po-66 Effective treatment order of extracorporeal shock wave and platelet rich plasma therapy in a rat acute Achilles tendon inflammation model
 *Nanako Yamakawa, et al.*, Dept. of Orthop. Surg., Graduate School of Medicine, Chiba Univ...S1912
- 2-Po-67 Effects of extracorporeal shock wave and platelet rich plasma therapy in a rat acute Achilles tendon inflammation model
 *Fumihide Terakawa, et al.*, Dept. of Orthop. Surg., Graduate School of Medicine, Chiba Univ...S1912
- 2-Po-68 The effect of exercise workload in mouse models of Imiquimod-induced psoriasis
 *Tomoki Furutani, et al.*, Dept. of Orthop. Surg.,
 Science of Functional Recovery and Reconstruction, Faculty of Medicine, Dentistry,
 and Pharmaceutical Sciences, Okayama Univ...S1913
- 2-Po-69 Ultrasound is useful for diagnosing muscle belly and myotendinous injuries in hamstring strain
 *Yusuke Hirahata, et al.*, Teikyo Univ. Institute of Sports Sciences & Medicine...S1913
- 2-Po-70 Pain of femoral nonunion with different mechanical stability in rats
 *Shuhei Mizobuchi, et al.*, Dept. of Orthop. Surg., Kochi Medical School, Kochi Univ...S1914

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13 : 40 ~ 14 : 10		Poster TKA	Moderators S. Kuriyama, S. Asai
2-Po-71	Comparison of clinical outcomes and laxity between functional aligned total knee arthroplasty and mechanical aligned total knee arthroplasty <i>Yohei Naito, et al.</i> , Dept. of Orthop. Surg., Mie Univ. Graduate School of Medicine...S1914		
2-Po-72	Association between lateral laxity and anteroposterior instability in mid-flexion after robot-assisted BCS total knee arthroplasty <i>Yutaka Fujita, et al.</i> , Div. of Orthop. Surg., Dept. of Regenerative and Transplant Medicine, Niigata Univ. Graduate School of Medical and Dental Sciences...S1915		
2-Po-73	Long-term outcomes of total knee arthroplasty using PFC sigma mobile-bearing prosthesis: A 14-year average and minimum 10-year follow-up <i>Teruhiko Ando, et al.</i> , Dept. of Orthop. Surg., Science of Functional Recovery and Reconstruction, Faculty of Medicine, Dentistry, and Pharmaceutical Sciences, Okayama Univ...S1915		
2-Po-74	Comparison of topical hemostatic effects between oxidized regenerated cellulose and gelatin-thrombin-based hemostatic matrix during total knee arthroplasty <i>Mitsuru Hanada, et al.</i> , Dept. of Orthop. Surg., Hamamatsu Univ. School of Medicine...S1916		
2-Po-75	Safety and efficacy of the modified iPACK method using the intercondylar approach: A cadaveric knee study..... <i>Munehiro Ogawa, et al.</i> , Dept. of Sports Medicine, Nara Medical Univ...S1916		
2-Po-76	Evaluation of arteriosclerosis risk before total knee arthroplasty for osteoarthritis patients <i>Yoshinori Ishii, et al.</i> , Ishii Orthop. & Rehab. Clinic...S1917		
14 : 10 ~ 14 : 40		Poster HTO・TKA	Moderators T. Majima, A. Yonekura
2-Po-77	Effect of plate position on screw fixation and conformity in medial open wedge high tibial osteotomy..... <i>Shunta Hanaki, et al.</i> , Dept. of Orthop. Surg., Nagoya city Univ. Graduate School of Medicine...S1917		
2-Po-78	The effect of high tibial osteotomy in cartilage regeneration <i>Akinori Nekomoto, et al.</i> , Dept. of Artificial Joints and Biomaterials, Graduate School of Biomedical and Health Sciences, Hiroshima Univ...S1918		
2-Po-79	Correlation between plate position and the risk of lateral vascular nerve bundle injury in medial open wedge high tibial osteotomy <i>Umuto Kuwashima, et al.</i> , Dept. of Orthop. Surg., Tokyo Women's Medical Univ...S1918		
2-Po-80	Change of CPAK classification in robotic-assisted total knee arthroplasty <i>Akemi Suzuki, et al.</i> , Dept. of Orthop. Surg., Yamagata Univ...S1919		
2-Po-81	Increase of lateral bowing of the femur and progression of varus limb alignment over ten-years after TKA <i>Kohei Nishitani, et al.</i> , Dept. of Orthop. Surg., Graduate School of Medicine, Kyoto Univ...S1919		
2-Po-82	The dynamics of perioperative serum albumin before and after total knee arthroplasty <i>Ryo Ishii, et al.</i> , Matsumoto Medical Center...S1920		
14 : 40 ~ 15 : 10		Poster Motion analysis	Moderators N. Nishinaka, H. Shitara
2-Po-83	Analysis of scapula morphology to clarify the pathology of unstable painful shoulder: Comparison with normal and anterior shoulder instability <i>Yasutaka Yoshimura, et al.</i> , Dept. of Orthop., Juntendo Univ...S1920		
2-Po-84	The effect of wrist flexion/extension on radiocapitellar joint during elbow extension <i>Masataka Minami, et al.</i> , Dept. of Orthop., Mayo Clinic, Rochester, NE, USA...S1921		

- 2-Po-85 Effect of long-toss throwing on elbow injuries in high school baseball pitchers
.....*Masataka Minami, et al.*, Dept. of Orthop.,
Graduate School of Medical Science, Kyoto Prefectural Univ. of Medicine...S1921
- 2-Po-86 Validity of 2D scapulohumeral rhythm measurement in shoulders with reverse total
shoulder arthroplasty*Itaru Kawashima, et al.*, Dept. of Orthop. Surg., Yachiyo Hosp...S1922
- 2-Po-87 PRP therapy for ulnar collateral ligament injuries: Exploring its potential as a
conservative treatment*Kozo Furushima, et al.*, Keiyu Orthop. Hosp...S1922

15 : 10 ~ 15 : 40	Poster	Motion analysis, others	Moderators	T. Nagura, H. Ike
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- 2-Po-88 The relationship between locomotive syndrome and motivation for exercise in elderly residents
of the community*Satoshi Aoyagi, et al.*, Dept. of Rehabilitation, Kyoto Kujo Hosp...S1923
- 2-Po-89 Investigation of the correlation between AI-derived muscle mass estimation from preoperative
X-rays and activity time in total hip arthroplasty
.....*Ryosuke Nishimura, et al.*, Dept. of Orthop. Surg., Ehime Univ. Graduate School of Medicine...S1923
- 2-Po-90 Analysis of cerebral cortex activation during shoulder movement using HAL in healthy subjects
.....*Hideki Kadone, et al.*, Univ. of Tsukuba...S1924
- 2-Po-91 Bioelectrical impedance analysis may be a useful tool for the simple assessment of muscle
strength and gait performance before and after total hip arthroplasty
.....*Kei Sasaki, et al.*, Dept. of Orthop. Surg., Yamaguchi Univ. Graduate School of Medicine...S1924
- 2-Po-92 Examination of the relationship between each region phase angle and locomotive syndrome,
physical function, and QOL in Lumbar spinal stenosis patients
.....*Suguto Futami, et al.*, Dept. of Orthop. Surg., Kurume Univ...S1925
- 2-Po-93 Evaluation of muscle function after exercise load using mechanomyography
.....*Shin Osawa, et al.*, Dept. of Orthop. Surg., Kobe Univ. Graduate School of Medicine...S1925

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13 : 40 ~ 14 : 10	Poster	Knee: Others 1	Moderators	Y. Fujimaki, N. Yamaguchi
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- 2-Po-94 Evaluation of bone foramen position after ACL reconstruction using high-resolution
3D-T1-weighted MRI: Comparison with CT
.....*Chisa Ishihata, et al.*, Dept. of Joint Surg. and Sports Medicine,
Graduate School of Medical and Dental Sciences, Institute of Science Tokyo...S1926
- 2-Po-95 The effect of remnant preservation in ACL reconstruction
.....*Kyohei Ota, et al.*, Dept. of Orthop. Surg.,
Nagoya City Univ., Graduate School of Medical Sciences...S1926
- 2-Po-96 The effect of intra-articular administration of PTH(1-34) on the healing of radial tear in the
medial meniscus of rabbit model*Shuko Tsumoto, et al.*, Dept. of Orthop. Surg.,
Osaka Metropolitan Univ. Graduate School of Medicine...S1927
- 2-Po-97 Establishment of an AI-based lower limb alignment measurement system
.....*Masaya Nakajo, et al.*, Dept. of Orthop. Surg.,
Faculty of Medicine and Graduate School of Medicine, Hokkaido Univ...S1927
- 2-Po-98 An optimal data augmentation method for improving the performance of an AI model for
automatic segmentation of the tibia from X-ray images
.....*Shuya Takahashi, et al.*, Dept. of Orthop. Surg., Teikyo Univ...S1928
- 2-Po-99 Osteophytes in the femoral intercondylar notch appear earliest in osteoarthritis of the knee
.....*Satoshi Chiba, et al.*, Musculoskeletal Pain and Diseases,
Center for Preventive Medical Sciences, Chiba Univ...S1928

14 : 10 ~ 14 : 40		Poster Knee: Others 2	Moderators Y. Hoshino, T. Kamiya
2-Po-100	The role of the transverse ligament in anterior knee stability <i>Nanami Ueda, et al.</i> , Dept. of Orthop. Surg., Sapporo Medical Univ.··S1929		
2-Po-101	The effect of tibial intercondylar eminence morphological characteristics and knee flexion angle on stress distribution in the medial condyle of the femur <i>Akihiro Yamashita, et al.</i> , Dept. of Orthop. Surg., Hyogo Medical Univ.··S1929		
2-Po-102	The effect of self-assembling peptide hydrogel and bone marrow aspirate concentrate on the dynamics of growth factors after anterior cruciate ligament reconstruction in mice <i>Keitaro Fujino, et al.</i> , Dept. of Orthop. Surg., Osaka Medical and Pharmaceutical Univ.··S1930		
2-Po-103	Load distribution of the fiber bundles of the deltoid ligament in ankle dorsiflexion: A biomechanical study <i>Yuta Mori, et al.</i> , Dept. of Orthop. Surg., Sapporo Medical Univ.··S1930		
2-Po-104	Subchondral bone conditions influence pain in patients with osteochondral lesion of the talus <i>Tomoyuki Nakasa, et al.</i> , Dept. of Artificial Joints and Biomaterials, Graduate School of Biomedical and Health Sciences, Hiroshima Univ.··S1931		

14 : 40 ~ 15 : 10		Poster Infection	Moderators T. Shirai, S. Tanishima
2-Po-105	The assessment of bactericidal effect by 222 nm ultraviolet light using rabbit surgical field model <i>Tomoaki Fukui, et al.</i> , Dept. of Orthop. Surg., Kobe Univ. Graduate School of Medicine··S1931		
2-Po-106	Analysis of osteomyelitis using raman spectroscopy 1: Method for range identification of staphylococcus aureus osteomyelitis <i>Shun Fujii, et al.</i> , Dept. of Orthop., Graduate School of Medical Science, Kyoto Prefectural Univ. of Medicine··S1932		
2-Po-107	One-year postoperative outcomes of surgical treatment for spinal infections: An analysis of patient-reported outcome measures (PROMs) in 907 cases from the Scandinavian region <i>Ryo Fujita, et al.</i> , Dept. of Orthop. Surg., Faculty of Medicine and Graduate School of Medicine, Hokkaido Univ.··S1932		
2-Po-108	Impact of different methods of local antibiotic administration therapy on the treatment of infections in orthopedic field <i>Rikuo Shinomiya, et al.</i> , Dept. of Musculoskeletal Traumatology and Reconstructive Surg., Graduate School of Biomedical and Health Sciences, Hiroshima Univ.··S1933		
2-Po-109	Mechanisms of biofilm formation by MRSA in periprosthetic joint infections <i>Keigo Yonemoto, et al.</i> , Dept. of Orthop. Surg., The Jikei Univ. School of Medicine··S1933		
2-Po-110	Analysis of osteomyelitis using raman spectroscopy 2: Characterization of the infectious properties of Staphylococcus aureus osteomyelitis <i>Shun Fujii, et al.</i> , Dept. of Orthop., Graduate School of Medical Science, Kyoto Prefectural Univ. of Medicine··S1934		

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13 : 40 ~ 14 : 10		Poster OA: Pathology 1	Moderators Y. Akasaki, K. Aso
2-Po-111	Effect of synovial cell fractions on the expression of tenascin-C <i>Gai Kobayashi, et al.</i> , Dept. of Musculoskeletal Surg., Dept. of Multimodality Therapy for Cancer, Mie Univ. Graduate School of Medicine··S1934		
2-Po-112	Disease-specific analysis of ion channel and cytokine expression in degenerative joint diseases using synovial fibroblasts derived from the knee joint <i>Kosuke Kumagai, et al.</i> , Dept. of Orthop. Surg., Shiga Univ. of Medical Science··S1935		

- 2-Po-113 Apelin mediates knee osteoarthritis pain through NGF action
 *Keisuke Atsumi, et al.*, Dept. of Orthop. Surg.,
 Field of Surg., Nippon Medical School, Graduate School of Medicine...S1935
- 2-Po-114 Relaxin (RLX)-relaxin receptor (RXFP1) system and hip joint tissues: Investigation in mouse
 hip joints *Taichi Shimizu, et al.*, Dept. of Orthop. Surg.,
 School of Medicine, Univ. of Occupational and Environmental Health...S1936
- 2-Po-115 Adhesion strength of autologous fibrin glue in autologous chondrocyte implantation
 *Yoshitaka Nakao, et al.*, Dept. of Orthop. Surg., JCHO Osaka Minato Central Hosp...S1936

14 : 10 ~ 14 : 40	Poster OA: Pathology 2	Moderators M. Nozaki, H. Koga
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- 2-Po-116 Oxidative stress is a key factor expressed in the early stages of degeneration in human knee
 articular cartilage cells *Yosuke Kaneko, et al.*, Fujita Health Univ...S1937
- 2-Po-117 Synovium induces fibrinolytic activity in synovial fluid in osteoarthritic knee joints
 *Nobuho Tanaka, et al.*, Clinical Research Center, NHO Sagamiara National Hosp...S1937
- 2-Po-118 Upregulation of Inflammatory cytokines and Chemokines in Synovial Fibroblasts Mediated
 by IL-24 *Yui Uekusa, et al.*, Dept. of Orthop. Surg., Kitasato Univ...S1938
- 2-Po-119 Repetitive compressive mechanical loading changes chondrocyte activity and energy
 metabolism though the mechanism by mitochondria dysfunction in chondrocytes
 *Masahiro Takemoto, et al.*, Dept. of Orthop. Surg., St. Marianna Univ. School of Medicine...S1938
- 2-Po-120 Inhibition of osteoarthritis progression using cartilage-specific ADAM10 conditional
 knockout mice
 *Hiroto Yamamoto, et al.*, Dept. of Orthop. Surg., Nagoya Univ. Graduate School of Medicine...S1939
- 2-Po-121 Evaluation of abnormal neovessels and pain in a rat osteoarthritic knee model using
 photoacoustic microscopy and the effect of local injection of triamcinolone acetanide
 *Nobuyuki Itaya, et al.*, Dept. of Orthop. Surg., JR Sendai Hosp...S1939

14 : 40 ~ 15 : 10	Poster OA: Knee, human, others	Moderators Y. Arai, S. Abe
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- 2-Po-122 Impact of coronal plane alignment of the knee (CPAK) classification on 3-dimensional
 kinematics during walking and patient-reported outcome after total knee arthroplasty
 *Takahiro Inoue, et al.*, Dept. of Orthop. Surg.,
 Clinical Medicine, Graduate School of Medical Sciences, Kyushu Univ...S1940
- 2-Po-123 Human meniscus histopathological and multimodal transcriptomic changes at early and
 advanced stages of knee osteoarthritis
 *Takuya Sakamoto, et al.*, Eastern Chiba Medical Center...S1940
- 2-Po-124 Correlation of age with the accumulation of advanced glycation end products (AGEs) and
 enzymatic crosslinks in human meniscus
 *Rena Hagiwara, et al.*, Dept. of Joint Surg. and Sports Medicine,
 Graduate School of Medical and Dental Sciences, Institute of Science Tokyo...S1941
- 2-Po-125 Examination of gender differences in pain mechanisms of osteoarthritis of the knee using
 synovial fluid biomarkers
 *Koji Aso, et al.*, Dept. of Orthop. Surg., Kochi Medical School, Kochi Univ...S1941
- 2-Po-126 The relationship between lymphatic vessels and synovial fluid volume in the knee
 joint synovium *Shintaro Ichikawa, et al.*, Dept. of Musculoskeletal Surg.,
 Dept. of Multimodality Therapy for Cancer, Mie Univ. Graduate School of Medicine...S1942
- 2-Po-127 Biomechanical comparison of open wedge high tibial osteotomy (OWHTO) and open wedge
 distal tuberosity osteotomy (OWDTO) using a large animal knee model
 *Hibiki Kakiage, et al.*, Dept. of Orthop. Surg., Gunma Univ. Graduate School of Medicine...S1942

15 : 10 ~ 15 : 40	Poster	Biomaterials	Moderator	N. Saito
2-Po-128	<i>In vitro</i> analysis of elasticity of artificial cartilage layer and strength of artificial subchondral bone layer in self-assembled bone-cartilage composite biomaterials <i>Takanori Kumai, et al.</i> , Dept. of Orthop. Surg., St. Marianna Univ. School of Medicine...			S1943
2-Po-129	Bone regeneration potential of silk-elastin in a rat tibial bone defect model <i>Shun Miyamoto, et al.</i> , Dept. of Orthop. Surg., Kagawa Univ....			S1943
2-Po-130	Calcium polyphosphate is metabolized by macrophage-like cells and induces the secretion of bone formation factors <i>Gou Uesugi, et al.</i> , Dept. of Orthop. and Spinal Surg., Graduate School of Medical and Dental Sciences, Institute of Science Tokyo...			S1944
2-Po-131	Evaluation of surface damage and oxidation index for post of tibial inserts retrieved after posterior stabilized total knee arthroplasty <i>Shine Tone, et al.</i> , Dept. of Orthop. Surg., Mie Univ. Graduate School of Medicine...			S1944
2-Po-132	The effect of hydrothermal conditions on the material properties of beta-TCP/HA composite materials <i>Kazuaki Nemoto, et al.</i> , Dept. of Orthop. Surg., Shinshu Univ....			S1945
2-Po-133	Bone ingrowth into a porous structure is achieved by proceeding fibrogenesis and vascularization <i>Yusuke Takaoka, et al.</i> , Dept. of Orthop. Surg., Graduate School of Medicine, Kyoto Univ....			S1945

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13 : 40 ~ 14 : 10	Poster	Spinal cord: Pathology	Moderators	T. Morimoto, Y. Oshima
2-Po-134	Evaluation of communication between mice with spinal cord injury model mice: Differences depending on the gender of the cohabiting mice <i>Isamu Sasaki, et al.</i> , Dept. of Orthop. Surg., Hirosaki Univ. Graduate School of Medicine...			S1946
2-Po-135	Association of parabrachial nucleus CGRP neurons with neuropathic pain after spinal cord injury <i>Hayato Oishi, et al.</i> , Hyogo College of Medicine, Orthop....			S1946
2-Po-136	The Pathophysiology of chronic compressive myelopathy: Focus on regulated cell death <i>Atsushi Sakuraba, et al.</i> , Dept. of Orthop. Surg., Faculty of Medicine and Graduate School of Medicine, Hokkaido Univ....			S1947
2-Po-137	Postoperative neuropathic pain in compressive cervical myelopathy: Exploration of predictive factors using resting-state functional MRI <i>Takane Nakagawa, et al.</i> , Dept. of Orthop. Surg., Univ. of Tsukuba...			S1947
2-Po-138	Novel serum biomarker discovery for spinal cord injury using biobank-based proteomics <i>Gentaro Ono, et al.</i> , Spinal Injuries Center...			S1948
2-Po-139	Cerebrospinal fluid extracellular vesicle-derived miR-9-3p in spinal cord injury: Neuroprotective implications and biomarker development <i>Tomoharu Tanaka, et al.</i> , Dept. of Orthop. Surg., Keio Univ....			S1948

14 : 10 ~ 14 : 40	Poster	Spinal cord: Regeneration	Moderators	H. Takahashi, H. Iizuka
2-Po-140	Distribution of intrathecally administered adipose-derived mesenchymal cells in a model of acute spinal cord injury using <i>in vivo</i> imaging <i>Ai Takahashi, et al.</i> , Dept. of Orthop. and Rehabilitation Medicine, Faculty of Medical Sciences, Univ. of Fukui...			S1949
2-Po-141	Image analysis of cell transplantation therapy using animal models: Building evidence for spinal cord injury regenerative medicine <i>Munehisa Shinozaki, et al.</i> , Keio Univ. Regenerative Medicine Research Center...			S1949

- 2-Po-142 Changes in microglial cell number and gene expression in a spinal cord injury mouse
.....*Kensuke Toriumi, et al.*, Inst. Adv. Clin. Med., Kindai Univ. Hosp.···S1950
- 2-Po-143 Transcranial magnetic stimulation induces neuroplasticity in marmoset
.....*Toshiyuki Shimizu, et al.*, Dept. of Orthop. Surg., Keio Univ.···S1950
- 2-Po-144 Analysis of acute liver dysfunction in mice model of spinal cord injury
.....*Kosuke Nitta, et al.*, Dept. of Orthop. Surg., Hiroasaki Univ. Graduate School of Medicine···S1951

14 : 40 ~ 15 : 10

Poster Spinal cord: Injury

Moderators M. Ohashi, T. Suzuki

- 2-Po-145 Spinal epidural electrical stimulation therapy for chronic severe spinal cord injury
.....*Yuichiro Ichihara, et al.*, Dept. of Orthop. Surg., Keio Univ.···S1951
- 2-Po-146 Improvement of spinal cord injury-induced urinary dysfunction by artificial inhibition of GABAergic neuron activity
.....*Kazuma Nagao, et al.*, Dept. of Orthop. Surg., Hyogo Medical Univ.···S1952
- 2-Po-147 The effect of the GLP-1 receptor agonist on mitochondria dysfunction after spinal cord injury
.....*Tatsuya Kishi, et al.*, Dept. of Orthop. Surg., Surgical Science, Tokai Univ.···S1952
- 2-Po-148 Prolonged IV infusion of human MSC-derived sEVs into spinal cord injured rats modulates ECM and has greater efficacy than multiple single injections
.....*Masahito Nakazaki, et al.*, Dept. of Neural Regenerative Medicine, Sapporo Medical Univ.···S1953
- 2-Po-149 Study on the efficacy of combined therapy with transplantation of human iPS cell-derived neural progenitor cells and administration of axon growth-promoting agents for spinal cord injury ····*Hiroki Takeda, et al.*, Dept. of Spine and Spinal Cord Surg., Fujita Health Univ.···S1953
- 2-Po-150 Functional analysis of fibroblasts involved in fibrotic scar formation in spinal cord injury
.....*Yasuhiro Nagatani, et al.*, Dept. of Orthop./Rheumatology,
Musculoskeletal and Cutaneous Surg., Program in Integrated Medicine,
Graduate School of Medicine, Nagoya Univ.···S1954

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Poster Intervertebral disc regeneration

Moderators Y. Mikami, H. Iwasaki

- 2-Po-151 Creation and repair of rat caudal intervertebral disc model using artificial protein (silk elastin)
.....*Hiroki Fukui, et al.*, Dept. of Orthop. Surg.,
Graduate School of Biomedical and Health Sciences, Hiroshima Univ.···S1954
- 2-Po-152 *in vivo* RNA interference of RAPTOR/mTORC1 protects against disc degeneration in a rat tail temporary static compression model
···*Naotoshi Kumagai, et al.*, Dept. of Orthop. Surg., Kobe Univ. Graduate School of Medicine···S1955
- 2-Po-153 Relationship between PITX1 and actin filaments in intervertebral discs
.....*Yuto Otani, et al.*, Dept. of Orthop. Surg., Surgical Science, Tokai Univ.···S1955
- 2-Po-154 Localization of Gremlin1-positive and Tppp3-positive cells in the lumbar intervertebral disc and changes with age ······*Yuki Kido, et al.*, Dept. of Orthop. Surg.,
Graduate School of Biomedical and Health Sciences, Hiroshima Univ.···S1956
- 2-Po-155 Feasibility of cationized gelatin nanospheres in controlled release-RNA interference effect for rat intervertebral disc
.....*Yoshiaki Hiranaka, et al.*, Dept. of Orthop. Surg., Kobe Univ. Graduate School of Medicine···S1956
- 2-Po-156 Effects of mechanical loading on a rat intervertebral disc puncture Model
.....*Nobuaki Takeura, et al.*, Dept. of Orthop.,
Graduate School of Medical Science, Kyoto Prefectural Univ. of Medicine···S1957

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13 : 40 ~ 14 : 10		Poster Muscle 1	Moderators T. Sakai, T. Aoki
2-Po-157	Assessment of whole-body skeletal muscle loss based on lower limb muscle cross-sectional areas <i>Sotaro Kono, et al.</i> , Dept. of Orthop. Surg., Graduate School of Medicine, Osaka Univ.···S1957		
2-Po-158	Investigation of the relationship between skeletal muscle parameters and the severity of knee osteoarthritis: Focusing on the sarcopenia index <i>Kazufumi Hisamoto, et al.</i> , Dept. of Orthop., Graduate School of Medical Science, Kyoto Prefectural Univ. of Medicine···S1958		
2-Po-159	Mesenchymal progenitor cells regulate macrophages during long-term disuse muscle atrophy <i>Yuki Miwa, et al.</i> , Dept. of Orthop. Surg., Keio Univ.···S1958		
2-Po-160	The effect of 5-aminolevulinic acid on muscle strength and skeletal muscle fiber type composition in mice <i>Hiromori Sagae, et al.</i> , Res. Ctr. for Mol. Genet., Yamagata Univ. Faculty of Medicine···S1959		
2-Po-161	Can the sarcopenia index calculated from blood tests be an adjunct diagnosis for sarcopenia? <i>Soshi Hirata, et al.</i> , Dept. of Orthop., Graduate School of Medical Science, Kyoto Prefectural Univ. of Medicine···S1959		
2-Po-162	Skeletal muscle stem cell dysfunction leads to muscle atrophy and impaired muscle regeneration in a mouse model of chronic kidney disease <i>Haruo Sasaki, et al.</i> , Dept. of Orthop. Surg., National Defense Medical College···S1960		
14 : 10 ~ 14 : 40		Poster Muscle 2	Moderators K. Yagishita, T. Kudo
2-Po-163	Site-specific slack length of the biceps femoris long head: Quantitative analysis using shear modulus-strain relationship in a Thiel's cadaver <i>Ginji Nara, et al.</i> , Graduate School of Health Sciences, Sapporo Medical Univ.···S1960		
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2-Po-165	Investigation of the effects of acute hematoma removal on the healing of traumatic skeletal muscle injuries <i>Yujie Ren, et al.</i> , Medicine for Sports and Performing Arts, Dept. of Health and Sport Science, Graduate School of Medicine, Osaka Univ.···S1961		
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