



EUROSPINE 2019: E-posters

Basic Science, Biology

- P1** ATTENUATION OF INTERVERTEBRAL DISC DEGENERATION AND OSTEOPHYTE FORMATION VIA INHIBITION OF HEDGEHOG SIGNALING
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Dept of Orthopedic surgery, UOEH, Japan
- P2** CLINICAL TRIAL FOR SPINAL CORD INJURY WITH NEURAL LINEAGE STEM CELL
Keung-Nyun Kim
Dept. of Neurosurgery, Yonsei University, Seoul, Korea

Basic Science, Biomechanics

- P3** BRIDGING THE GAP BETWEEN STATIC AND DYNAMIC: HOW GLOBAL POSTURAL, SPINO-PELVIC AND HIP ALIGNMENT PARAMETERS PERFORM DURING WALKING?
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Faculty of Medicine, University of Saint-Joseph, Beirut, Lebanon; Institut de Biomecanique Humaine Georges Charpak, Arts et Metiers ParisTech, Paris, France; Spine division, Hospital for Special Surgery, New York, USA
- P4** COMPARISON OF CERVICAL SAGITTAL PARAMETERS AMONG PATIENTS WITH NECK PAIN AND HEALTHY CONTROLS
morteza faghijouybari, mohsen rostami, ramin kordi
Department of Neurosurgery, Shariati Hospital, Tehran, Iran
- P5** SACROPELVIC FIXATION: A BIOMECHANICAL COMPARISON BETWEEN DIFFERENT TECHNIQUES ACCOUNTING FOR MICROMOTION AT THE BONE-IMPLANT INTERFACE
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IRCCS Istituto Ortopedico Galeazzi, Milan, Italy
- P6** THREE-DIMENSIONAL FULL BODY POSTURAL ALIGNMENT IN SUBJECTS WITH AIS WITH DIFFERENT TYPES OF CURVATURE
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Faculty of Medicine, University of Saint-Joseph, Beirut, Lebanon; Institut de Biomecanique Humaine Georges Charpak, Arts et Metiers ParisTech, Paris, France
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Kee Kim, Tejas Karnati, Vijay Permeswaran, Amy Claeson, Anup Gandhi
University of California Davis School of Medicine, Sacramento, CA, USA; Zimmer Biomet Spine, Westminster, CO, USA
- P8** DEVELOPMENT OF A BIOMECHANICAL TEST SETUP FOR PEDICLE SCREW INSTRUMENTATIONS REGARDING THE COMPLEX ILIOSACRAL JOINT LOADING
Sven Krüger¹, Jens Beger¹, Bernd Wiedenhöfer², Christoph Schilling¹
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- P9** INCONSISTENCY WITHIN SCOLIOSIS SURGEONS TREATING THE SAME AIS-CASES. AN EVALUATION OF A MULTI-CENTRE-SURVEY
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Institute of Orthopaedic Research and Biomechanics, Ulm, Germany
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Pieter Severijns, Thomas Overbergh, Kaat Desloovere, Lieven Moke, Lennart Scheys
Institute for Orthopaedic Research and Training; KU Leuven, Belgium
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Takahiro Tanaka, Hidetoshi Murata
Department of Neurosurgery, Yokohama City University, Yokohama, Kanagawa, Japan
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Institut de Biomecanique Humaine Georges Charpak, Paris, France
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Arts et Métiers ParisTech, Paris, France
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Zhi Zhao, Yingsong Wang, Jingming Xie, Zhiyue Shi, Qiuhan Lu, Ying Zhang, Ni Bi, Quan Li, Tao Li
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Craniocervical Junction (all pathologies)

- P15** UPPER CERVICAL FUSION SURGERY FOR OS ODONTOIDEUM WITH CHONDRODYSPLASIA PUNCTATA IN PEDIATRIC PATIENTS INCLUDING INFANTS
Yujiro Takeshita, Kota Miyoshi
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Dept of Orthopaedic Surgery, The Jikei University Kashiwa Hospital, Chiba, Japan

Degenerative (cervical)

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Brian Dial, Valentine Esposito, Melissa Erickson
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Clínica Universidad de Navarra, Pamplona, Spain
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Geert Mahieu, Frederique Van Ermen
Orthopedic Center of Antwerp, Orthoca, Belgium

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Atsunori Ohnishi, Akira Yamagishi, Masayoshi Ishii, Tetsuo Ohwada
Dept of Orthopaedic surgery, Amagasaki, Japan
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Christian Medical College, Vellore, India
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Chulalongkorn University and King Chulalongkorn Memorial Hospital, Bangkok, Thailand
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Xiang-Yao Sun, Chao Kong, Shi-Bao Lu
Department of Orthopedics, Xuanwu Hospital Capital Medical University, China

Degenerative (thoracolumbar)

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Peter Ferlic, Michael Götzen
Department of Orthopaedic Surgery - Medical University of Innsbruck, Austria
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Dept of Orthopedic Surgery, Kyoto Univ, Japan
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Hasibullah Habibi, Shinji Takahashi, Masatoshi Hoshino, Hiroaki Nakamura
Dept of Orthopedic Surgery, Osaka, Japan
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Jukka Huttunen, Henna-Kaisa Jyrkkänen, Mette Nissen, Tiina-Mari Ikäheimo, Nils Danner, Mikael von und zu Fraunberg
Dept of Neurosurgery, Kuopio, Finland
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Department of Orthopaedics and Traumatology, Jyväskylä, Finland
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Spine Service, Hospital for Special Surgery, New York, USA
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Dept of Orthopedics, Novosibirsk, Russia
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Dept of Orthopaedic Surgery, JCHO Osaka Hospital, Osaka, Japan

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Dept of Orthopaedic surgery, Asahikawa, Japan
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Washington University in St. Louis, St. Louis, USA
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Dept of Orthopedic surgery, Shiga, Japan
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Department of Orthopedic Surgery, Tottori-University Hospital, Yonago, Japan
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Dept of Neurosurgery, Leiden, Netherlands
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Makoto Yoshida, Yasuo Ohori
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Trauma (whole spine)

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St. Joseph's University Medical Center, Department of Orthopaedics, Paterson, NJ, USA
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Department of Spine Surgery, Honghui Hospital, Xi'an Jiaotong University College of Medicine, Xi'an, China
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Sung Kyu Kim, So Hyun Moon
Department of Orthopedic Surgery, Chonnam National University Medical School & Hospital
Department of Nursing, Chosun University, Gwangju, South Korea

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Hiroyuki Nakarai, Akiro Higashikawa, Kenichi Watanabe
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Ane Simony, Mikkel Osterheden Andersen
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Tumour (whole spine)

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Department of Neurosurgery and Innovative Medicine, Irkutsk, Russia
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Dept of Orthopedic surgery, Seoul St. Mary's Hospital, The Catholic University of Korea, Seoul, South Korea
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Sung Kyu Kim, So Hyun Moon
Department of Orthopedic Surgery, Chonnam National University Medical School & Hospital
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Department of Orthopaedic Surgery, National University Health System (NUHS), Singapore
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Department of Orthopaedic Surgery, National University Health System (NUHS), Singapore
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Department of orthopedic surgery, Samsung medical center, Seoul, Korea

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Infection (whole spine)

- P55** NEW SURGICAL STRATEGY FOR PRIMARY PYOGENIC SPONDYLODISCITIS : COMPARISON OF COMBINED ANTERO-POSTERIOR APPROACH VERSUS POSTERIOR-ONLY APPROACH
Dong Ryul Heo, Ja Wook Koo, Sung Hoon Choi, Chang-Nam Kang
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Hiroaki Kimura, Juichi Miura, Bunnichiro Wadayama
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Dept of Neurosurgery, Leiden University Medical Center (LUMC), Leiden, The Netherlands
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Dept of Orthopaedic surgery, Clínica Universidad de Navarra, Pamplona, Spain
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Markus Pietrek, Ralph Kothe
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- P60** CAN DISTRIBUTION PATTERN OF INTRASPINAL EPIDURAL ABSCESS OF THE THORACIC AND LUMBAR SPINES BE ONE OF THE PROGNOSTIC FACTORS OF RESIDUAL NEUROLOGIC DEFICIT AFTER SURGERY?-A RETROSPECTIVE STUDY
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Adult Deformity (whole spine)

- P61** BRIDGING THE GAP BETWEEN STATIC AND DYNAMIC POSTURAL ALIGNMENT: HOW DOES THE SAGITTAL VERTICAL AXIS PERFORM DURING WALKING?
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Faculty of Medicine, University of Saint-Joseph, Beirut, Lebanon; Institut de Biomecanique Humaine Georges Charpak, Arts et Metiers ParisTech, Paris, France; Spine division, Hospital for Special Surgery, New York, USA
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Faculty of Medicine, University of Saint-Joseph, Beirut, Lebanon; Institut de Biomecanique Humaine Georges Charpak, Arts et Metiers ParisTech, Paris, France; Spine division, Hospital for Special Surgery, New York, USA
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Schulthess Klinik, Zurich, Switzerland; Vall d'Hebron Institute of Research (VHIR) and Hospital Vall d'Hebron, Barcelona, Spain; Bordeaux University Hospital, France; Acibadem University, Istanbul, Turkey; Hospital Universitario La Paz, Madrid, Spain
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Xu Sun, Chang-zhi Du, Ze-zhang Zhu, Yong Qiu
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- P70** CERVICAL ABNORMALITIES IN SEVERE SPINAL DEFORMITY: A TEN-YEAR MRI REVIEW
Ying Zhang, Jingming Xie, Yingsong Wang, Zhi Zhao, Tao Li, Quan Li, Zhiyue Shi, Qian Lu, Ni Bi
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Growing Spine

- P71** FIRST OUT-OF-BRACE RADIOGRAPHS ARE BETTER PREDICTORS THAN IN-BRACE RADIOGRAPHS OF ADOLESCENT IDIOPATHIC SCOLIOSIS CONSERVATIVE TREATMENT
Francesca Di Felice, Stefano Negrini, Francesco Negrini, Giulia Rebagliati, Fabio Zaina, Sabrina Donzelli
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Peking Union Medical College Hospital, Beijing, China
- P75** IMPROVEMENT OF CARDIOPULMONARY FUNCTION AND ITS CORRELATION WITH SURGERY IN PATIENTS WITH SCOLIOSIS
Youxi Lin, Haining Tan, Tianhua Rong, Yang Jiao, Chong Chen, Jianxiong Shen, Wangshu Yuan, Hui Cong
Peking Union Medical College Hospital, Beijing, China
- P76** POSTOPERATIVE AXIAL NECK PAIN AND ITS ASSOCIATED PARAMETERS FOLLOWING POSTERIOR CORRECTIVE SURGERY FOR THE AIS PATIENTS
Akira Matsumura, Takashi Namikawa, Minori Kato, Yusuke Hori, Masayoshi Iwamae
Dept. of Orthop. Surg., Osaka City General Hospital, Osaka, Japan
- P77** EFFECTIVENESS OF PROVIDENCE NIGHT-TIME BRACING COMPARED TO FULL-TIME BOSTON BRACING FOR ADOLESCENT IDIOPATHIC SCOLIOSIS. A MATCHED COHORT STUDY.
Ane Simony, Mikkel Osterheden Andersen, Stig Mindedahl Jespersen, Leah Yaccat Carreon
Dept. Spine Surgery & Research, Lillebelt Hospital, Denmark
- P78** DOES SURGICAL CORRECTION OF SCOLIOSIS IN IDIOPATHIC SYRINGOMYELIA PRODUCE OUTCOMES SIMILAR TO THOSE IN CHIARI I MALFORMATION WITH SYRINGOMYELIA?
Haining Tan, Chong Chen, Youxi Lin, Tianhua Rong, Yang Jiao, Jiaqi Bi, Peiyu Sun, Zheng Li, Jinqian Liang, Jianxiong Shen
Department of Orthopedics, Peking Union Medical College Hospital and Graduate School of Peking Union Medical College, Peking Union Medical College, Chinese Academy of Medical Science, Beijing, China

Intradural Spinal Pathologies

- P79** CONSERVATIVE AND SURGICAL MANAGERMENTS OF SPINAL CORD CAVERNOUS MALFORMATIONS
Yu-ichiro Ohnishi, Hirofumi Sugano, Sho Fujiwara, Takashi Moriwaki, Haruhiko Kishima
Department of Neurosurgery, Osaka University Medical School, Osaka, Suita, Japan
- P80** THE BEST METHOD TO TREAT SPINAL ARTERIOVENOUS MALFORMATIONS. OUR 14 YEARS EXPERIENCE. A RETROSPECTIVE STUDY.
Olesia Slobodian, Yuriy Samonenko, Andriy Nayda, Oleg Svyryduk
Scientific-Practical Center of Endovascular Neuroradiology NAMS of Ukraine

Minimal Invasive Spine Surgery (MISS)

- P81** ANALYSIS OF TEMPORAL CHANGES IN DURAL TUBE MORPHOLOGY AFTER LLIF INDIRECT DECOMPRESSION
Yutaka Kono, Hogaku Gen, Yoshio Sakuma
Department of Orthopaedic Surgery, Chiba Central Medical Center, Chiba, Japan
- P82** PREDISPOSING FACTORS FOR EARLY CAGE SUBSIDENCE AFTER LATERAL LUMBAR INTERBODY FUSION
Ki-Hyoung Koo
Department of Orthopaedic Surgery,
Yeson Hospital, Bucheon, Korea
- P83** COMPARISON OF SINGLE-POSITION ROBOTIC-ASSISTED SURGERY VERSUS CONVENTIONAL MINIMALLY INVASIVE SURGERY FOLLOWING LLIF: AN IN VITRO ASSESSMENT
Jeffery Larson, Richard Frisch, Gerald Hayward, Jonathan Harris, Jorge Gonzalez, Brandon Bucklen
Musculoskeletal Education and Research Center (MERC), A division of Globus Medical Inc, Audubon, USA

- P84** FROM OPTICAL TO DIGITAL: THE CHALLENGES AND LEARNING CURVES WITH 3D4K DIGITAL VISUALISATIONS IN MINIMALLY INVASIVE SPINE SURGERY (MISS)
Mohd Hisam Muhamad Ariffin
Universiti Kebangsaan Malaysia Medical Centre, Kuala Lumpur, Malaysia
- P85** ACCURACY OF A NOVEL, AUGMENTED REALITY NAVIGATION TECHNOLOGY USING INTRAOPERATIVE CONE BEAM CT FOR PERCUTANEOUS SPINE SURGERY
Simon Peh, Sebastian Lippross, Julian Pfarr, Jost Philipp Schäfer, Anindita Chatterjea*, Andreas Seekamp
Orthopaedics and Trauma Surgery, UKSH, Kiel, Germany; *Philips Healthcare, Best, the Netherlands
- P86** ANATOMICAL FEASIBILITY OF RIGHT OBLIQUE APPROACH FOR L5-S1 OBLIQUE LUMBAR INTERBODY FUSION
Myung-Hoon Shin, Jong-Tae Kim
Dept of Neurosurgery, Incheon St Mary's hospital, The Catholic university of Korea, Incheon, Korea

New Techniques

- P87** ANEURYSMAL BONE CYST OF THE SPINE: TREATMENT BY CONCENTRATED BONE MARROW INJECTION
Giovanni Barbanti Brodano, Marco Girolami, Riccardo Ghermandi, Silvia Terzi, Stefano Bandiera, Gisberto Evangelisti, Valerio Pipola, Alessandro Gasbarrini
Dept of Oncological and Degenerative Spine Surgery, IRCCS Istituto Ortopedico Rizzoli, Bologna, Italy
- P88** TRANS-SACRAL INTERBODY FIXATION VS. TRANSFORAMINAL LUMBAR INTERBODY FUSION AT THE LUMBOSACRAL JUNCTION FOR LONG FUSIONS TO THE SACROPELVIS IN PRIMARY ADULT SCOLIOSIS
Michael Faloon, Hong-Lei Yi, Stuart Changoor, Thomas Ross, Oheneba Boachie-Adjei
St. Joseph's University Medical Center, Department of Orthopaedics, Paterson, NJ, USA
- P89** CORTICAL VERSUS TRADITIONAL PEDICLE SCREW TECHNIQUES IN POSTERIOR LUMBAR INTERBODY FUSION
Paul Licina, Emma Johnston
Brisbane Private Hospital Research Group, Spring Hill, Australia
- P90** A NOVEL SURGICAL TECHNIQUE IN TRANSFORAMINAL LUMBAR INTERBODY FUSION BY THE BONE GRAFT DELIVERY DEVICE: EVALUATION OF THERAPEUTIC EFFECT IN PATIENTS WITH MINIMAL INVASIVE SPINE SURGERY
Sher-Wei Lim
Department of Neurosurgery, Chi-Mei Medical Center, Chiali, Tainan, Taiwan
Department of Nursing, Min-Hwei College of Health Care Management, Tainan, Taiwan
- P91** SATELLITE ROD FIXATION AROUND ROD-FRACTURE AREA IN REVISION SURGERY AFTER THREE-COLUMN OSTEOTOMY FOR SEVERE KYPHOSCOLIOSIS: A MINIMUM OF 2 YEARS FOLLOW-UP
Dun Liu, Yang Li, Benlong Shi, Zhen Liu, Xu Sun, Zezhang Zhu, Yong Qiu
Spine Surgery, Drum Tower Hospital of Nanjing University Medical School, China
- P92** PEDICLE SCREW ACCURACY IN CLINICAL UTILIZATION OF MINIMALLY INVASIVE NAVIGATED ROBOT-ASSISTED SPINE SURGERY
David Wallace, Arnold Vardiman, Neil Crawford, Leigh Ahrendtsen, Jessica Riggelman, Charles Ledonio
Musculoskeletal Education and Research Center (MERC), A Division of Globus Medical, Inc., Audubon, USA

Diagnostics and Imaging

- P93** PATIENTS WITH L4/5 LUMBAR DEGENERATIVE SPONDYLOLISTHESIS HAVE DECREASED BONE MINERAL DENSITY AT L4 MEASURED BY QUANTITATIVE CT
Roland Duculan, Alex Fong, John A. Carrino, James C. Farmer, Frank P. Cammisa, Andrew A. Sama, Alexander P. Hughes, Darren R. Lebl, Russel C. Huang, Harvinder S. Sandhu, Carol A. Mancuso, Federico P. Girardi
Hospital for Special Surgery, New York, USA

- P94** EVALUATION OF A NEW SAGITTAL CLASSIFICATION SYSTEM IN ADOLESCENT IDIOPATHIC SCOLIOSIS
Sidsel Fruergaard, Jain Mohit, Søren Ohrt-Nissen, Martin Gehrchen, Benny Dahl
Dept of Orthopedic Surgery, Spine Unit, Rigshospitalet, Copenhagen, Denmark
- P95** PREDICTORS OF SURGICAL SITE INFECTION AFTER SPINAL INSTRUMENTATION SURGERY: A CONSECUTIVE SERIES
HIROYUKI INOSE, Atsushi Okawa
Dept of Orthopedics, Tokyo Medical and Dental University, Tokyo, Japan
- P96** IS VERTEBRAL POSTERIOR EDGE SAFETY LINE FOR CERVICAL POSTERIOR SCREW INSERTION ? -RADIOLOGICAL STUDY OF VERTEBRAL ARTERY IN THE CERVICAL SPINE-
Kyongsong Kim, Misa Kido, Mitsuri Hasegawa, Masaaki Kawauchi
Department of Radiology, Chiba Shintoshi Rurban Clinic, Chiba, Japan
- P97** OBJECTIVE AND PRECISE X-RAY LANDMARK LOCALIZATION USING DEEP LEARNING
Frank Niemeyer, Fabio Galbusera, Annette Kienle, Hans-Joachim Wilke
Institute for Orthopaedic Research and Biomechanics, Ulm University, Ulm, Germany
- P98** NEW CLASSIFICATION OF CORONAL MALALIGNMENT FOR ADULT SPINAL DEFORMITY: THE ROLE OF LATERAL BENDING FILMS
Ibrahim Obeid, Kazunori Hayashi, Louis Boissière, Derek Cawley, David Kieser, Pedro Berjano, Claudio Lamartina, Munish Gupta, Clément Silvestre, Themis Protopsaltis, Anouar Bourghli, Ferran Pellisé, Prokopis Annis, Elias Papadopoulos, Gaby Kreichati
Spine Surgery Unit 1, Bordeaux University Pellegrin Hospital, Bordeaux, France
- P99** LUMBAR MUSCLE MORPHOLOGY AS A PROGNOSTIC MARKER AFTER DISCECTOMY
Nuno Cruz Oliveira, Elisa Condez, Alexandre Almeida, Pedro Pinho, Ricardo Magalhães, Bruno Santos, Pedro Varanda, Rui Duarte
Orthopedic Surgery Department, Hospital de Braga, Portugal
- P100** A HIERARCHICAL CLASSIFICATION OF RIGHT THORACIC ADOLESCENT IDIOPATHIC SCOLIOSIS
Saba Pasha, Victor Ho
Children's Hospital of Philadelphia, Philadelphia, USA
- P101** QUANTIFYING CERVICAL SPONDYLOSIS: RELIABILITY TESTING OF A COHERENT CT-BASED SCORING SYSTEM
Eric Rydman, Sara Bankler, Sari Ponzer, Hans Pettersson
Department of Clinical Science and Education, Södersjukhuset, Karolinska Institutet, Stockholm, Sweden
- P102** CORRELATION BETWEEN ADAM'S TEST AND DIGITAL PELVIC INCLINOMETER IN ADULTS
Rumiana Tasheva, Krassimir Kolev
National Sports Academy "Vasil Levski", Sofia, Bulgaria

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- P103** SPINAL INJECTIONS VERSUS CONSERVATIVE TREATMENT FOR SPINAL PAIN: THE KOREAN SPINE PATIENT OUTCOMES RESEARCH TRIAL (K-SPORT) OBSERVATIONAL COHORT
Dong Ah Shin
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Patient Safety

- P104** CLINICAL APPROACH AND SURGICAL STRATEGY FOR SPINAL DISORDERS IN PREGNANT WOMEN
Hanna Hitscherich, Maria Wostrack, Sven Eicker, Judith Rösler, Peter Vajkoczy, Nikolaus Kögl, Claudius Thome, Enrico Tessitore, Bernhard Meyer
Dept of Neurosurgery, Klinikum Rechts der Isar, Technical University of Munich, Germany

Complications

- P105** UNPLANNED READMISSION FOLLOWING COMPLEX SPINE SURGERY – 2-YEARS FOLLOW UP USING THE SPINE ADVERSE EVENT SEVERITY (SAVES) SYSTEM
Tanvir Johanning Bari, Sven Karstensen, Mathias Dahl Sørensen, Martin Gehrchen, John Street, Benny Dahl
Spine Unit, Department of Orthopedic Surgery, Rigshospitalet, Copenhagen University Hospital, Copenhagen, Denmark; Combined Neurosurgical and Orthopedic Spine Program, Vancouver General Hospital, University of British Columbia, Vancouver, British Columbia, Canada; Department of Orthopedics and Scoliosis Surgery, Texas Children's Hospital & Baylor College of Medicine, Fannin St, Houston, Texas, USA
- P106** MORTALITY AND REVISION SURGERY FOLLOWING COMPLEX SPINE SURGERY: 2-YEAR FOLLOW-UP USING THE SPINE ADVERSE EVENT SEVERITY (SAVES) SYSTEM
Tanvir Johanning Bari, Sven Karstensen, Mathias Dahl Sørensen, Martin Gehrchen, John Street, Benny Dahl
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- P107** RATES OF HOSPITAL-BASED, INTRA-OPERATIVE, AND SHORT-TERM COMPLICATIONS FOLLOWING THORACIC COSTOTRANSVERSECTOMY BASED ON UNDERLYING DIAGNOSIS
Ashraf El Naga, Richard Bransford, Eric Rebich, Celeste Tavolaro, Edward Jung, Haitao Zhou, David Gendelberg, Carlo Bellabarba
University of Washington, Orthopaedics and Sports Medicine, Seattle, USA
- P108** NEUROLOGIC CHANGES FOLLOWING POSTERIOR THORACIC CORPECTOMIES VIA A COSTOTRANSVERSECTOMY TYPE APPROACH
Ashraf El Naga, Richard Bransford, Celeste Tavolaro, Eric Rebich, Edward Jung, Haitao Zhou, David Gendelberg, Carlo Bellabarba
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- P109** COMPLICATIONS OF LONG FIXATION TO SACRUM: ROLE OF ILIAC FIXATION
Khaled El-Youssef, Shah Nawaz Haleem, Louis Boissiere, Guillaume Riouallon, Clement Silvestre, Vincent Fier, Georges Abi Lahoud, Yann Philippe Charles, Ibrahim Obeid
Clocheville Hospital, Tours, France
- P110** DECREASED RATE OF SURGICAL SITE INFECTION AFTER SPINAL SURGERY WITH INSTRUMENTATION USING BUNDLED APPROACH INCLUDING SURVEILLANCE AND INTRA-WOUND VANCOMYCIN APPLICATION
Shunsuke Fujibayashi, Takashi Sono, Bungo Otsuki, Takayoshi Shimizu, Koichi Murata, Shuichi Matsuda
Dept of Orthopedic Surgery, Kyoto Univ, Japan

Epidemiology and Medical Economics

- P111** THE INCIDENCE AND MANAGEMENT TRENDS OF METASTATIC SPINAL TUMORS IN SOUTH KOREA
: A NATIONWIDE POPULATION-BASED STUDY
Dong Ryul Heo, Ja Wook Koo, Sung Hoon Choi, Chang-Nam Kang
Department of Orthopaedic Surgery, Hanyang University College of Medicine, Seoul, Korea
- P112** COMPARED TO PATIENTS PREOPERATIVE EXPECTATIONS, SURGEONS' PREOPERATIVE EXPECTATIONS MORE OFTEN CORRESPOND TO PATIENT-REPORTED FULFILLMENT OF EXPECTATIONS TWO YEARS AFTER LUMBAR SURGERY
Carol A. Mancuso, Roland Duculan, Frank P. Cammisa, Andrew A. Sama, Alexander P. Hughes, Darren R. Lebl, Federico P. Girardi
Department of Orthopedics, Hospital for Special Surgery, New York, NY, USA
- P113** IMPROVEMENT IN MULTIPLE DOMAINS OF FUNCTIONAL STATUS WITH INCREASING PHYSICAL ACTIVITY AFTER LUMBAR SURGERY: LONGITUDINAL ANALYSIS
Carol A. Mancuso, Manuela C. Rigaud, Roland Duculan, Frank P. Cammisa, Andrew A. Sama, Alexander P. Hughes, Darren R. Lebl, Russel C. Huang, Harvinder S. Sandhu, Federico P. Girardi
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- P114** OCCURRENCE OF PSYCHIATRIC COMORBIDITY IN PATIENTS WITH UNSPECIFIC AND SPECIFIC BACK PAIN DIAGNOSES
Pernille Sanberg Ljungdahl 1, Olav Sivertsen Garvik 2, Elsebeth Stenager 3, Berit Sciøttz-Christensen 1, Bente Mertz Nørgård 2, Maria Iachina 2
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- P115** THE COST OF ROUTINE RADIOGRAPHS, 6 WEEKS AFTER LUMBAR FUSION SURGERY.
Ane Simony, Hanne Thomsen, Morten Vuust
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