



Virtual Annual Meeting
Online Worldwide 6–9 October
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EUROSPINE 2020: Quick Fires

Basic Science

- QF1** DISSECTING THE KEY PLAYERS IN A MESENCHYMAL STEM/STROMAL CELL-BASED IMMUNOMODULATORY THERAPY FOR INTERVERTEBRAL DISC DEGENERATION
Joana Ferreira, Graciosa Teixeira, Catarina Leite Pereira, Cláudia Ribeiro-Machado, Joana Caldeira, Mário Barbosa, Meriem Lamghari, Graça Almeida-Porada, Raquel Gonçalves
I3S, Instituto de Investigação e Inovação em Saúde, Porto, Portugal
- QF2** OPIOID PRESCRIPTION MONITORING IN PRE- AND POST-OPERATIVE SACROILIAC JOINT FUSION PATIENTS
Vikas Patel, Nolan Wessell, Phillip Ross, Michelle Akiyama, Emily Lindley
University of Colorado Denver, Anschutz Medical Campus, School of Medicine, Department of Orthopedics, Aurora, USA
- QF3** FULLY AUTOMATED PATIENT-SPECIFIC SIMULATION OF DEFORMITY CORRECTION: OPTIMIZING THE INSTRUMENTATION STRATEGY IN ADOLESCENT IDIOPATHIC SCOLIOSIS
Fabio Galbusera, Andrea Cina, Matteo Panico, Tito Bassani
IRCCS Istituto Ortopedico Galeazzi, Milan, Italy
- QF4** SPINAL FUSION SURGERY AFFECTS SAGITTAL VERTICAL AXIS DURING WALKING IN ADULT SPINAL DEFORMITY
Pieter Severijns, Thomas Overbergh, Kristel Van de Loock, Kaat Desloovere, Lieven Moke, Lennart Scheys
KU Leuven; Institute for Orthopaedic Research and Training, Leuven, Belgium
- QF5** PEDICLE SCREW AUGMENTATION IN LONG POSTERIOR CONSTRUCTS OF THE THORACOLUMBAR SPINE: HOW MANY PEDICLE SCREWS NEED TO BE AUGMENTED?
Anna Spicher, R.A. Lindtner, M. J. Zegg, Renè Schmid, Dietmar Krappinger, Lea Hamberger, Werner Schmoelz
Medical University of Innsbruck, Department of Trauma Surgery, Innsbruck, Austria

Craniocervical Junction

- QF6** DO CHIARI I MALFORMATION PATIENTS HAVE MARKED SPINAL CORD ATROPHY ON EARLY-AGE?
Zhong He, Xiaodong Qin, Zezhang Zhu, Yong Qiu, Bangping Qian, Bin Wang, Yang Yu, Zhen Liu, Xu Sun, Jun Jiang, Saihu Mao, Jun Qiao, Benlong Shi, Hongda Bao
Dept of Spine Surgery, The Affiliated Drum Tower Hospital of Nanjing University Medical School, Zhongshan Road 321, Nanjing, China
- QF7** DOES POSTERIOR OCCIPITOCERVICAL FUSION FOR UNSTABLE UPPER CERVICAL TRAUMA SIGNIFICANTLY CHANGE THE SAGITTAL CERVICAL BALANCE AND INDUCE NECK DISABILITY?
PANAGIOTIS KOROVISSIS, VASILEIOS SYRIMPEIS
GENERAL HOSPITAL OF PATRAS, Greece
- QF8** LONG-TERM RADIOGRAPHIC OUTCOME OF OCCIPITOCERVICAL FUSION FOR CRANIOCERVICAL INSTABILITY: AN AVERAGE 7-YEAR FOLLOW-UP

Takayohi Shimizu, Shunsuke Fujibayashi, Bungo Otsuki, Koichi Murata, Kosei Ono, Shuichi Matsuda
Dept of Orthopaedic Surgery, Kyoto University, Kyoto, Japan

Trauma

- QF9** CHANGING DEMOGRAPHIC TRENDS IN SPINE TRAUMA: THE PRESENTATION AND OUTCOME OF MAJOR SPINE TRAUMA IN THE ELDERLY
Nagassima Rodrigues Dos Reis Katharina , Daniel P Ahern, Shane Evans, Jake McDonnell, Dennys Gibbons, Joseph S Butler
National Spinal Injuries Unit, Mater Misericordiae University Hospital, Eccles Street, Dublin 7, Ireland; School of Medicine, Trinity College Dublin, Ireland; School of Medicine, University College Dublin, Dublin, Ireland; Royal College of Surgeons in Ireland, 123 St Stephen's Green, Dublin, Ireland
- QF10** DOES DYNAMIC ANTERIOR PLATE FIXATION PROVIDE ADEQUATE STABILITY FOR TRAUMATIC SUBAXIAL CERVICAL FRACTURES AT LONG-TERM FOLLOW-UP?
Siegmond Lang, Carsten Neumann, Lasse Fiedler, Volker Alt, Markus Loibl, Maximilian Kerschbaum, Christian Pfeifer
University Hospital Regensburg, Department of Trauma Surgery, Regensburg, Germany
- QF11** TRANSFER-TIME DEPENDENT MORTALITY OF ODONTOID FRACTURES
Tiarnán Ó Doinn, Jake McDonnell, Daniel P. Ahern, Enda G Kelly, Shane Evans, Declan Ross, John Mahon, Joseph S Butler
National Spinal Injuries Unit, Department of Trauma & Orthopaedic Surgery, Mater Misericordiae University Hospital, Dublin, Ireland
- QF12** A NEW INTRA-OPERATIVE ASSESSMENT OF CRANIOCERVICAL NEUTRAL ALIGNMENT ON TRAUMA PATIENTS: C2-MANDIBLE ANGLE
Celeste Tavolaro, Richard Bransford, Derrick Foge, Ekamjeet Dhillon, Haitao Zhou, Carlo Bellabarba
Dept of Orthopaedics and Sport medicine, University of Washington, Seattle, Washington, USA

Tumour

- QF13** SURGICAL TREATMENT OF ELOQUENT SPINAL DUMBBELL TUMORS: TO CUT OR NOT TO CUT?
Vicki Butenschoen, Nikolaus Koegl, Bernhard Meyer, Claudius Thomé, Maria Wostrack
Technical University of Munich, School of Medicine, Klinikum rechts der Isar, Neurosurgical Department; Department of Neurosurgery, Medical University of Innsbruck, Innsbruck, Austria
- QF14** A NOVEL QUANTITATIVE STUDY OF CT ARTEFACT COMPARING CARBON VS TITANIUM PEDICLE SCREWS IN THE ERA OF OLIGOMETASTIC DISEASE AND STEREOTACTIC BEAM RADIOTHERAPY
Khandkar Kawsar, Simran Gill, Bisola Ajayi, Cristina Lupu, Simon Weil, Timothy Bishop, Matthew Crocker, Jason Bernard, Darren Lui
St. George's University Hospital, London, UK
- QF15** INTRAOPERATIVE NEUROPHYSIOLOGIC MONITORING FOR CAUDA EQUINA TUMORS: CORRELATION ANALYSIS OF SURGICAL OUTCOMES AND NEUROPHYSIOLOGICAL DATA DURING A SINGLE SURGEON'S 10-YEAR EXPERIENCE
Subum Lee, Dae Chul Cho, Kyoung Tae Kim, Young Seok Lee, Seung Chul Rhim, Jin Hoon Park
Dept of Neurosurgery, Kyungpook National University Hospital, Kyungpook National University School of Medicine, Daegu, Korea
- QF16** DO INSTRUMENTATION LENGTH AND APPROACH SIZE AFFECT THE PRIMARY STABILITY OF THE THORACIC SPINE AFTER VERTEBRAL BODY REPLACEMENT? AN IN VITRO STUDY USING ENTIRE RIB CAGE SPECIMENS
Christian Liebsch, Tugrul Kocak, Viktor Aleinikov, Talgat Kerimbayev, Serik Akshulakov, Jan Ulrich Jansen, Morten Vogt, Hans-Joachim Wilke
Institute of Orthopaedic Research and Biomechanics, University of Ulm, Germany

- QF17** THE UTILITY OF MINIMALLY INVASIVE SPINE (MIS) SURGERY IN METASTATIC SPINE TUMOUR SURGERY
Jiong Hao Tan, Joel Yong Hao Tan, Liang Shen, Hwee Weng Dennis Hey, Naresh Kumar
Department of Orthopaedic Surgery, National University Hospital, Singapore

Infection

- QF18** POSTOPERATIVE SURGICAL SITE INFECTIONS IN PATIENTS WITH POSTERIOR (THORACO-)LUMBAR INSTRUMENTATION: MANAGEMENT AND OUTCOME IN 172 PATIENTS
Anne-Katrin Hickmann, Denis Bratelj, Tatiana Pirvu, Markus Loibl, Anne F. Mannion, Dave O'Riordan, Tamás Fekete, Dezső J. Jeszenszky, Markus Vogt, Nadia Eberhard, Yvonne Achermann, Daniel Haschtmann
Department of Spine and Neurosurgery, Schulthess Klinik, Zürich, Switzerland; Department of Neurosurgery, Kantonsspital St. Gallen, Switzerland; Spine Center Division, Department of Teaching, Research and Development, Schulthess Klinik, Zürich, Switzerland; Consulting Clinical Infectious Diseases, Kantonsspital Zug, Switzerland
Department of Infectious Diseases, University Hospital Zürich, University of Zurich, Switzerland
- QF19** BACTERIAL ADHESION ON SPINAL IMPLANTS: AN INSIGHT OF THE MOLECULAR MECHANISM BEHIND THE INFECTION
Andrea Luca, Enrico Gallazzi, Elena De Vecchi, Alessio Lovi, Lisa Babbi, Marco Brayda-Bruno, Alessandro Bidossi
Spine Unit III - Spinal Deformity IRCCS Orthopedic Institute Galeazzi - Milan, Italy
Laboratory of Clinical Chemistry and Microbiology, IRCCS Orthopedic Institute Galeazzi - Milan, Italy
- QF20** VANCOMYCIN DRAINAGE FLUID AND SERUM CONCENTRATIONS AFTER INTRA-WOUND APPLICATION
Lukas Panzenboeck, Jochen Hofstaetter, Philipp Becker, Petra Krepler
Dept. of Spine Surgery, Orthopedic Hospital Speising, Vienna, Austria

Adult Deformity

- QF21** SCORING WITH BODY MASS INDEX AND BONE MINERAL DENSITY (GAPB) ANALYSIS IN GLOBAL ALIGNMENT AND PROPORTION (GAP) SCORE OF EACH 3 CATEGORIES FOR PREDICTING MECHANICAL COMPLICATIONS AFTER ADULT SPINAL DEFORMITY SURGERY
, Kyung Hyun Kim
National Health Insurance Service Ilsan Hospital, Goyang, Rep of South Korea
- QF22** REDUCING REVISION RATES FOLLOWING 3-COLUMN OSTEOTOMY SURGERY: A SINGLE-CENTER EXPERIENCE OF TRENDS OVER SEVEN YEARS
Tanvir Johanning Bari, Dennis Winge Hallager, Lars Valentin Hansen, Benny Dahl, Martin Gehrchen
Spine Unit, Department of Orthopedic Surgery, Rigshospitalet, Copenhagen University Hospital, Copenhagen, Denmark
- QF23** DEMOGRAPHIC DIFFERENCES AND HEALTH IMPACT OF SEVERE GLOBAL SAGITTAL, CORONAL, AND MIXED SPINAL DEFORMITY IN SYMPTOMATIC ADULTS
Thomas Buell, Justin Smith, Christopher Shaffrey, Han Jo Kim, Eric Klineberg, Virginie Lafage, Renaud Lafage, Peter Passias, Munish Gupta, Douglas Burton, Frank Schwab, Shay Bess, Christopher Ames, International Spine Study Group
Dept of Neurosurgery, University of Virginia, Charlottesville, VA, USA
- QF24** COMPARISON OF THORACIC KYPHOSIS AND LUMBAR LORDOSIS DISTRIBUTION AFTER IDIOPATHIC SCOLIOSIS CORRECTION USING POSTERIOR HYBRID VERSUS SCREW INSTRUMENTATION AND THE RISK FOR PJK
Yann Philippe Charles, Pierre-Luc Marchand, Nicolas Tuzin, Jean-Paul Steib
Department of Spine Surgery, University of Strasbourg, France

- QF25** COMPARISON OF DEGENERATIVE LUMBAR DEGENERATIVE SCOLIOSIS CORRECTION AND RISK FOR MECHANICAL FAILURE USING POSTERIOR 2-ROD VERSUS 4-ROD INSTRUMENTATION
Yann Philippe Charles, Vincent Lamas, Nicolas Tuzin, Jean-Paul Steib
Dept of Spine Surgery, University of Strasbourg, France
- QF26** DOSE COMPENSATORY MECHANISM OF GLOBAL SAGITTAL BALANCE INFLUENCE SURGICAL OUTCOMES OF DROPPED HEAD SYNDROME? -A REPORT OF 22 SURGICAL CASES
Yoshifumi Kudo, Ichiro Okano, Tomoaki Toyone, Yushi Hoshino, Kenji Endo, Yuji Matsuoka, Akira Matsuoka, Hiroshi Maruyama, Ryo Yamamura, Chikara Hayakawa, Koji Ishikawa
Dept of Orthopedic surgery, Showa Univ, Tokyo, Japan
- QF27** A PROPER SPINAL COLUMN SHORTENING IN PVCR MAKE A BETTER RESULT
Tao Li, Jingming Xie , Yingsong Wang, Ying Zhang , Zhi Zhao, Ni Bi, Zhiyue Shi, Zhaoquan Zhang, Quan Li
Department of Orthopedics, The 2nd Affiliated Hospital of Kunming Medical University, Yunnan Province, China
- QF28** TRAITS, RISKS, AND BENEFITS OF ADULT CONGENITAL DEFORMITY SURGERY
Javier Pizones, Francisco Javier Pérez-Grueso, Lucía Moreno-Manzanaro, Alba Vila-Casademunt, Nicomedes Fernández-Baíllo, Jose Miguel Sánchez-Marquez, Gloria Talavera, Ibrahim Obeid, Frank Kleinstueck, Emre Acaroglu, Ahmet Alanay, Ferran Pellisé, European Spine Study Group ESSG
Hospital Universitario La Paz, Madrid, Spain
- QF29** THE USE OF 3D GAIT ANALYSIS ALONG WITH THE CLASSIC RADIOGRAPHIC ASSESSMENT IN ASD PATIENTS CAN EXPLAIN UP TO 90% OF QUALITY OF LIFE OUTCOMES
Renée Maria Saliby, Georges Kawkabani, Mario Mekhael, Eddy Saad, Abir Massaad, Elena Jaber, Stephane Jabre, Ismat Ghanem, Rami Rachkidi, Khalil Kharrat, Gaby Kreichati, Virginie Lafage, Ayman Assi
Faculty of Medicine, University of Saint-Joseph in Beirut, Lebanon
- QF30** PROSPECTIVE MULTICENTER ASSESSMENT OF COMPLICATION RATES ASSOCIATED WITH ADULT CERVICAL DEFORMITY SURGERY IN 133 PATIENTS WITH MINIMUM 1-YEAR FOLLOW-UP
Justin Smith, Thomas Buell, Christopher Shaffrey, Han Jo Kim, Eric Klineberg, Themistocles Protopsaltis, Peter Passias, Gregory Mundis, Munish Gupta, Doug Burton, Virginie Lafage, Frank Schwab, Shay Bess, Christopher Ames, International Spine Study Group
Department of Neurosurgery, University of Virginia, Charlottesville, VA, USA; Departments of Neurosurgery and Orthopedic Surgery, Duke University, Durham, NC, USA; Department of Orthopaedic Surgery, Hospital for Special Surgery, New York City, NY, USA; Department of Orthopaedic Surgery, University of California, Davis, Sacramento, CA, USA; Department of Orthopaedic Surgery, NYU Hospital for Joint Diseases, New York, NY, USA; Scripps Clinic, San Diego, USA; Department of Orthopedic Surgery, Washington University, St Louis, MO, USA; Department of Orthopaedic Surgery, University of Kansas Medical Center, Kansas City, KA, USA; Presbyterian St Lukes Medical Center, Denver, CO. USA; Department of Neurological Surgery, University of California, San Francisco, San Francisco, CA, USA

Growing spine

- QF31** A DECISION MAKING ALGORITHM FOR IMPROVING AIS SAGITTAL CLASSIFICATION INTRA AND INTER OBSERVER RELIABILITY
Kariman Abelin Genevois, Elie Haddad, Tom Schlösser, Bruno Dohin
Sept of Orthopedics, Spine Unit, Centre des Massues - Croix Rouge Française, Lyon, France
- QF32** VERTEBRAL BODY TETHERING VS POSTERIOR INSTRUMENTATION AND FUSION FOR ADOLESCENT IDIOPATHIC SCOLIOSIS: A MATCHED COHORT ANALYSIS
Ahmet Alanay, Altug Yucekul, Barkin Erdogan, Gokhan Ergene, Sahin Senay, Binnaz Ay, Pinar Yalinay Dikmen, Tais Zulemyan, Yasemin Yavuz, Caglar Yilgor
Department of Orthopedics and Traumatology, Acibadem Mehmet Ali Aydinlar University School of Medicine, Istanbul, Turkey; Comprehensive Spine Center, Acibadem University Maslak Hospital, Istanbul, Turkey; Department of Operating Room Services, Acibadem Mehmet Ali Aydinlar University Vocational School of Health Sciences, Istanbul, Turkey; Department of Cardiovascular Surgery, Acibadem Mehmet Ali Aydinlar University School of Medicine, Istanbul, Turkey;

Department of Anesthesiology, Acibadem Mehmet Ali Aydinlar University School of Medicine, Istanbul, Turkey; Department of Neurology Acibadem University Maslak Hospital, Istanbul, Turkey; Department of Biostatistics, Ankara University Faculty of Medicine, Ankara, Turkey

- QF33** SURGICAL TREATMENT OF LENKE TYPE 5 CURVES USING VERTEBRAL BODY TETHERING WITH DOUBLE SCREW-DOUBLE CORD FIXATION. RADIOLOGICAL AND CLINICAL OUTCOMES
Meric Enercan, Mustafa Elsadig, Huseyin Ozturk, Seray Gizem Gur, Ayhan Mutlu, Sinan Kahraman, Tunay Sanli, Selhan Karadereler, Azmi Hamzaoglu
Istanbul Spine Center, Istanbul, Turkey
- QF34** MINIMALLY INVASIVE VERSUS CONVENTIONAL OPEN APPROACH FOR CORRECTION AND POSTERIOR SPINAL FUSION IN PATIENTS WITH ADOLESCENT IDIOPATHIC SCOLIOSIS
Tamas F Fekete, Anne F Mannion, Daniel Haschtmann, Markus Loibl, Frank S Kleinstück, Gábor Madarassy, Dezső Jeszenszky
Schulthess Klinik, Zürich, Switzerland
- QF35** VALIDITY AND RESPONSIVENESS OF THE CORE OUTCOME MEASURES INDEX (COMI) IN PATIENTS WITH ADOLESCENT IDIOPATHIC SCOLIOSIS
Tamas F Fekete, Daniel Haschtmann, Dezső Jeszenszky, Sarah Richner-Wunderlin, Laura Zimmermann, Karishma Thekkanath, Anne F Mannion
Schulthess Klinik, Zürich, Switzerland
- QF36** SURGICAL TREATMENT OF SEVERE PEDIATRIC SPINAL DEFORMITY SIGNIFICANTLY IMPROVES PULMONARY FUNCTION
Munish Gupta, Lawrence Lenke, Oheneba Boachie-Adjei, David Bumpass, Mark Erickson, Sumeet Garg, Richard McCarthy, Peter Newton, Joshua ps, Amer Samdani, Suken Shah, Paul Sponseller, Daniel Sucato, Burt Yaszay, Michael Kelly
Washington University School of Medicine, St. Louis, United States
- QF37** AIS SUBJECTS WITH SEVERE RIB CAGE DEFORMITY HAVE ALTERED 3D POSTURAL ALIGNMENT
Mohamad Karam, Ayman Assi, Claudio Vergari, Raphael Pietton, Khalil Kharrat, Raphael Vialle, Ismat Ghanem, Wafa Skalli
Faculty of Medicine, University of Saint-Joseph in Beirut, Lebanon
- QF38** RESTORATION OF THORACIC KYPHOSIS IN LENKE I AND II AIS IMPROVES SPONTANEOUS CORRECTION OF THE COMPENSATORY LUMBAR CURVE
Dominique Rothenfluh, Nicholas Beresford-Cleary, Colin Nnadi
University of Oxford, Oxford, UK
- QF39** COMPARISON OF FOUR DIFFERENT METHODS OF CORRECTION FOR ADOLESCENT IDIOPATHIC SCOLIOSIS: RESULTS FROM A NATIONAL COHORT STUDY
Federico Solla, Sebastien Pesenti, Louis Boissiere, Brice Ilharreborde, Yann-Philippe Charles, Christian Morin, Jean-Luc Clément
French Society of Spine Surgery, Nice, France

Complications and patient safety

- QF40** A MODIFIED POSITION FOR OPTIMIZED SKELETAL MATURITY ASSESSMENT OF AIS PATIENTS WITH LOW-DOSE STEREORADIOGRAPHY
, Victoria Blouin, Victor Jullien, Olivier Chémaly, Sylvain Deschenes, Marjolaine Roy-Beaudry, Soraya Barchi, John Flynn, Stefan Parent
CHU Sainte-Justine, Montreal, Canada
- QF41** 30-AND 90-DAY READMISSIONS AND REOPERATIONS IN LUMBAR SPINE SURGERY. DIFFERENCES IN INCIDENCE AND CAUSES
Anna Duc, Stian Solumsmoen, Tanvir Bari, Martin Gehrchen, Benny Dahl, Rachid Bech-Azeddine
Section of Spine Surgery, Center for Rheumatology and Spine Diseases, Glostrup, Denmark
- QF42** INTRAOPERATIVE AND EARLY POSTOPERATIVE COMPLICATIONS AFTER SURGERY FOR SEVERE PEDIATRIC SPINAL DEFORMITY HAVE A HIGH RATE OF RESOLUTION AT 2 YEARS BUT AFFECT OUTCOME SCORES
Munish Gupta, Lawrence Lenke, Oheneba Boachie-Adjei, David Bumpass, Mark Erickson, Sumeet Garg, Richard McCarthy, Peter Newton, Joshua Pahys, Amer Samdani, Suken Shah, Paul Sponseller, Daniel Sucato, Michael Kelly
Washington University School of Medicine, St. Louis, United States

- QF43** RATE OF EARLY REOPERATIONS DUE TO HEMATOMAS AND RISK FACTOR ANALYSIS IN 1.180 PATIENTS OPERATED WITH ANTERIOR CERVICAL DISCECTOMY AND FUSION
Samer Habiba, Bjarte Vik, Nicola Logallo, Aqeel Chaudhry, Terje Sundstrøm
Dept of Neurosurgery, Bergen, Norway
- QF44** POSTERIOR SPINAL FUSION WITH PEDICLE SCREWS FOR ATLANTOAXIAL INSTABILITY IN CHILDREN
Kohei Kuroshima, Koki Uno, Masaaki Ito, Teppei Suzuki
Dept of Orthopaedic Surg, Kobe Medical Center, Japan
- QF45** HOW TO WITHDRAW THE DISLOCATED RIB HEAD FROM SPINAL CANAL EFFECTIVELY WITHOUT RESECTION IN DYSTROPHIC SCOLIOSIS SECONDARY TO TYPE 1 NEUROFIBROMATOSIS: DOES RISKY SCREW/HOOK INSERTION AT THE CORRESPONDING VERTEBRA WORK?
Song Li, Saihu Mao, Zhen Liu, Zezhang Zhu, Benlong Shi, Jun Qiao, Yong Qiu
the Affiliated Drum Tower Hospital of Nanjing University Medical School, Nanjing, China
- QF46** FOUR TYPES OF CORONAL DECOMPENSATION AFTER CERVICOTHORACIC HEMIVERTEBRA RESECTION
Yong Qiu, Zezhang Zhu, Yang Li, Benlong Shi, Zhen Liu, Bin Wang, Saihu Mao, Bangqin Qian, Yang Yu, Jun Qiao
Spine Surgery, Drum Tower Hospital of Nanjing University Medical School, Nanjing, China
- QF47** PRE-OPERATIVE HALO-GRAVITY TRACTION FOR PATIENTS WITH SEVERE FOCAL KYPHOSIS IN THE UPPER THORACIC SPINE: A SAFE AND EFFECTIVE ALTERNATIVE FOR THREE-COLUMN OSTEOTOMY
Benlong Shi, Zezhang Zhu, Yang Li, Zhen Liu, Xu Sun, Yong Qiu, Bin Wang, Yang Yu, Saihu Mao
Spine Surgery, Drum Tower Hospital of Nanjing University Medical School, Nanjing, China
- QF48** PERIOPERATIVE COMPLICATIONS OF CURATIVE SURGICAL RESECTION FOR SPINAL METASTASES IN ELDERLY PATIENTS
Noritaka Yonezawa, Satoru Demura, Satoshi Kato, Katsuhito Yoshioka, Kazuya Shinmura, Noriaki Yokogawa, Takaki Shimizu, Norihiro Oku, Ryo Kitagawa, Makoto Handa, Ryohei Annen, Hideki Murakami, Hiroyuki Tsuchiya
Dept of Orthopaedic Surgery, Kanazawa University, Kanazawa, Japan
- QF49** WHICH CURVES ARE AT THE GREATEST RISK FOR DISTAL ADDING ON: COMPARISON BETWEEN ATYPICAL AND TYPICAL LENKE 1A CURVES
Zezhang Zhu, Rui Yin, Xiaodong Qin, Benlong Shi, Bin Wang, Yang Yu, Zhen Liu, Xu Sun, Jun Jiang, Saihu Mao, Jun Qiao, Hongda Bao, Bangping Qian, Yong Qiu
Department of Spine Surgery, Nanjing, China

Degenerative (cervical)

- QF50** CERVICAL SEGMENTS STILL MOVE TEN YEARS AFTER TOTAL DISC REPLACEMENT
Radek Hart, Martin Komzak, David Nahlik
Dept. of Orthopaedics and Traumatology, Znojmo, Czech Republic
- QF51** A MULTI-CENTRE, PROSPECTIVE, RANDOMIZED CONTROLLED TRIAL COMPARING THE EFFICACY AND SAFETY OF PRODISC®C IMPLANT TO ANTERIOR CERVICAL DISCECTOMY AND FUSION (ACDF) SURGERY IN THE TREATMENT OF SYMPTOMATIC CERVICAL DISC DISEASE (SCDD) AT 2-YEARS
Naresh Kumar, Leonard Voronov, Chien Niu, Hee-Kit Wong
Department of Orthopaedic Surgery, National University Health System (NUHS), Singapore; Centinel Spine, USA; Chang Gung Memorial Hospital, Orthopaedics Department, Kuei Shan Hsiang Taoyuan Hsien, Taiwan
- QF52** CORRELATION BETWEEN QUALITY OF LIFE, PAIN AND FUNCTIONAL MEASURES IN CERVICAL SPONDYLOTIC MYELOPATHY
Manuel Ramírez, Pilar González-Tartière, Andrea Khoudeir, Ana García de Frutos, Lluïsa Montesinos, Karla Rojas, Xurxo Segura, Antonia Matamalas, Sleiman Haddad, Judith Sánchez Raya, Ferran Pellisé
Spine Unit, Vall d'Hebron University Hospital, Barcelona
- QF53** SHELTER TECHNIQUE IN THE TREATMENT OF OSSIFICATION OF THE POSTERIOR LONGITUDINAL

LIGAMENT INVOLVING THE C2 SEGMENT

Jiangang Shi, Kaiqiang Sun, Jingchuan Sun
Department of Orthopedic Surgery, Spine Center, Changzheng Hospital, Second Military Medical University, Shanghai, China

Degenerative (thoracolumbar)

- QF54** ADJACENT SEGMENT DEGENERATION AND REVISION SURGERY RATES AFTER HYBRID POSTEROLATERAL FUSION WITH TOPPING-OFF DYNAMIC STABILIZATION OF THE LUMBAR SPINE VERSUS CLASSICAL CIRCUMFERENTIAL FUSION. A 5-YEAR FOLLOW-UP COMPARISON
Carlos Barrios, José I. Maruenda, Felipe Garibo
Institute for Research on Musculoskeletal Disorders, Catholic University; University Clinic Hospital, Valencia, Spain
- QF55** RETURN-TO-WORK AFTER DECOMPRESSION ALONE FOR LUMBAR SPINAL STENOSIS
Rachid Bech-Azeddine, Søren Fruensgaard, Mikkel Andersen, Leah Carreon
Rigshospitalet - Glostrup, Section of Spine Surgery, Center for Rheumatology and Spine, Diseases, Glostrup, Denmark
- QF56** CHANGE IN SAGITTAL ALIGNMENT AFTER DECOMPRESSION ALONE IN PATIENTS WITH LUMBAR SPINAL STENOSIS: A PROSPECTIVE COHORT STUDY
Jamal Bech Bouknaitir, Leah Carreon, Stig Brorson, Casper Friis, Mikkel Andersen
Spine Unit, Department of Orthopedic Surgery, Zealand University Hospital, Køge, Denmark; Spine Surgery and Research, Spine Center of Southern Denmark – part of Lillebaelt Hospital, Denmark
- QF57** BIOCHEMICAL AND GENETIC RISK FACTORS FOR SEVERITY OF ENDPLATE LESIONS IN THE LUMBAR SPINE
Alessandra Colombini, Fabio Galbusera, Maria Cristina Cortese, Enrico Gallazzi, Marco Viganò, Domenico Albano, Sabina Cauci, Luca Maria Sconfienza, Marco Brayda-Bruno
IRCCS Istituto Ortopedico Galeazzi, Milan, Italy
- QF58** DOES DURATION OF SCIATICA PRIOR TO ELECTIVE MICRODISCECTOMY IMPACT ON PATIENT REPORTED OUTCOME?
Mitchell Foster, Pierre Côté, Tim Pigott
1 Department of Neurosurgery, Walton Centre NHS Foundation Trust, Liverpool, UK; 2 CRUK Brain Tumour Centre of Excellence, University of Edinburgh, Edinburgh; 3 Canada Research Chair in Disability Prevention and Rehabilitation, Ontario Tech University, Oshawa, Canada; 4 Centre for the Study of Disability Prevention and Rehabilitation at Ontario Tech University and CMCC Toronto, ON, Canada
- QF59** CLINICAL OUTCOME OF LUMBAR FUSION FOR LOW GRADE ISTHMIC AND DEGENERATIVE SPONDYLOLISTHESIS: IS THERE A DIFFERENCE?
Daniel Haschtmann, Christian Brand, Tamas F Fekete, Dezső Jeszenszky, Frank S Kleinstück, Markus Loibl, Anne F Mannion
Spine Center, Schulthess Klinik, Zürich, Switzerland
- QF60** SAGITTAL ALIGNMENT, ADJACENT SEGMENT DISEASE AND PSEUDARTHROSIS AFTER SHORT-SEGMENT LUMBAR FUSION
Vasileios Igoumenou, Vasileios Karantzoulis, Evgeny Melamud, Farzam Vazifehdan
Spine Center Stuttgart, Diakonie-Klinikum Stuttgart, Stuttgart, Germany
- QF61** MRI CHARACTERISTICS MEAN 13.8 YEARS AFTER LUMBAR DISC HERNIATION SURGERY IN ADOLESCENCE - A CASE CONTROL STUDY
Tobias Lagerbäck 1,2, Granit Kastrati 3, Hans Möller 1,4, Karin Jensen 3, Mikael Skorpil 5,6, Paul Gerdhem 1,2
1Department of Clinical Science, Intervention and Technology, Division of Orthopedics and Biotechnology, Karolinska Institutet, 141 86, Stockholm, Sweden; 2Department of Reconstructive Orthopedics, Karolinska University Hospital, Stockholm, Sweden; 3Department of Clinical Neuroscience, Division of Neuro, Karolinska Institutet, Stockholm, Sweden; 4Center for Spine Surgery in Stockholm, Södra Fiskartorpsvägen 15 H, 114 85, Stockholm, Sweden; 5Department of Molecular Medicine and Surgery, Karolinska Institutet, Stockholm, Sweden; 6Department of Neuroradiology, Karolinska University Hospital, Solna, Stockholm, Sweden
- QF62** CLINICAL OUTCOME OF COCCYGECTOMY FROM A SINGLE SURGEON SERIES USING A PARAMEDIAN CURVILINEAR INCISION

Satish Nagappa, Zeiad Alshameeri, Mohammed Elmajee, Yousuf Hashmi, Ajay Bowry, Morgan Jones, Jonathan Spilsbury
Dept of Spinal Surgery, The Royal Orthopaedic Hospital, Birmingham, UK

QF63 SURGICAL TREATMENT FOR LUMBAR SPINAL STENOSIS: A SINGLE-BLINDED RANDOMIZED CONTROLLED TRIAL
LUIZ CLAUDIO RODRIGUES, JAMIL NATOUR
SANTA MARCELINA FACULTY OF MEDICINE, Sao Paulo, Brazil

QF64 LONG-TERM CHANGES OF SAGITTAL SPINOPELVIC ALIGNMENT AND CLINICAL IMPLICATIONS AFTER MINIMALLY INVASIVE LUMBAR DECOMPRESSION SURGERY: MINIMUM 5-YEAR FOLLOW UP
Hamidullah Salimi, Hiromitsu Toyoda, Kentaro Yamada, Hidetomi Terai, Masatoshi Hoshino, Akinobu Suzuki, Shinji Takahashi, Hiroaki Nakamura
Department of Orthopaedic Surgery, Osaka, Japan

QF65 A CLINICAL 20-YEARS FOLLOW-UP ON PLIF OPERATION
Sebastian Winkler, Josef Georg Grohs
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Diagnostics and imaging

QF66 VALIDATION OF AN AUTOMATED, ARTIFICIAL-INTELLIGENCE-BASED SYSTEM FOR GRADING RADIOLOGICAL FEATURES OF DEGENERATION ON MRIS OF THE LUMBAR SPINE
Alexandra Grob, Markus Loibl, Amir Jamaludin, Jeremy Fairbank, Sebastian Winklhofer, Tamás Fekete, Daniel Haschtmann, Frank Kleinstück, Dezső Jeszenszky, François Porchet, Oliver Distler, Anne Mannion
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QF67 THE PREVALENCE OF REDUNDANT NERVE ROOTS IN PATIENTS WITH LUMBAR SPINAL STENOSIS IS BODY-POSITION DEPENDENT
Luca Papaverio, Stella Ebert, Carlos Marques
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Epidemiology and medical economics

QF68 THE LEVEL OF PSYCHOLOGICAL DISTRESS IN SPINE SURGEONS: A CROSS-SECTIONAL STUDY
Darius Kalasauskas, Andrea Chmitorz, Malte Ottenhausen, Klaus Lieb, Florian Ringel
Department of Neurosurgery, University Medical Centre, Johannes-Gutenberg-University Mainz, Mainz, Germany; Department of Psychiatry and Psychotherapy, University Medical Center Mainz, Mainz, Germany; German Resilience Centre, Mainz, Germany

QF69 CONCORDANCE BETWEEN PATIENTS AND SURGEONS: EXPECTATIONS OF CERVICAL SPINE SURGERY
Carol A Mancuso, Roland Duculan, Frank P Cammisa, Andrew A Sama, Alexander P Hughes, Darren R Lebl, Federico P Girardi
Department of Orthopedic Surgery, New York, NY, USA

Intradural spinal pathologies

QF70 ASSOCIATION OF CONTRAST MRI FINDINGS WITH PREOPERATIVE MOTOR STATUS IN SPINAL MENINGIOMA
Kosei Ono, Takayoshi Shimizu, Shunsuke Fujibayashi, Bungo Otsuki, Koichi Murata, Shuichi Matsuda
Dept of Orthopaedic surgery, Kyoto University, Kyoto Japan

Minimal invasive spine surgery (MISS)

- QF71** MINIMALLY INVASIVE SURGERY FOR NEUROMUSCULAR SCOLIOSIS: A CASE CONTROL STUDY COMPARING CORRECTION OF DEFORMITY AND PERI-OPERATIVE MORBIDITY IN 148 PATIENTS (48 MIS, 100 CONTROL)
Alexandre Ansorge, Charlotte De Bodmann, Jesse Galina, Sayyida Hasan, Stephen Wendolowski, Terry Amaral, Vishal Sarwahi, Romain Dayer
Geneva University Hospitals, Geneva, Switzerland; Lausanne University Hospital, Lausanne, Switzerland; Cohen Children's Medical Center, New York, USA; Schulthess Clinic, Zurich, Switzerland
- QF72** MINIMALLY INVASIVE TRANSFORAMINAL LUMBAR INTERBODY FUSION USING AUGMENTED REALITY SURGICAL NAVIGATION FOR PERCUTANEOUS PEDICLE SCREW PLACEMENT
Yann Philippe Charles, Roberto Luigi Cazzato, Rami Nachabe, Jean-Paul Steib, Afshin Gangi
Departments of Spine Surgery and Interventional Radiology, University of Strasbourg, France
- QF73** COMPARISON MIS ALIF INDIVIDUAL CAGES VS SPO,PSO IN LUMBAR LORDOSIS RESTORATION FOR LUMBAR DEGENERATIVE SCOLIOSIS
Anton Denisov, Dmitriy Ptashnikov, Dmitriy Mikhailov, Sergei Masevnin, Nikita Zaborovsky, Oleg Smekalenkov, Olga Lapaeva
Dept of spinal and bone oncology surgery, Saint-Petersburg, Russia
- QF74** EXPERIMENTAL STUDY OF MINIMALLY INVASIVE SURGICAL PROBE-MUSCLE TISSUE INTERACTION FORCES: EFFECT OF SPEED, ANGLE AND DEPTH ON FORCE FEEDBACK
Mark Driscoll, Khaled El-Monajjed, Jean Ouellet
Department of Mechanical Engineering, Montreal, QC Canada
- QF75** THE ANATOMICAL VARIATION OF THE BIFURCATIONS OF ILIAC VESSELS WITH LUMBOSACRAL TRANSITIONAL VERTEBRAE; FOR OPERATION OF OBLIQUE LATERAL INTERBODY FUSION (OLIF)
Chang-Hoon Jeon, Nam-Su Chung, Han-Dong Lee, Jung-Taek Kim, Ki-Hoon Park
Dept of Orthopaedic Surgery, Suwon, South Korea
- QF76** DO VERTEBRAL END PLATE LESIONS AFFECT THE RADIOLOGICAL OUTCOMES IN LUMBAR INTERBODY FUSION?
Chang-Hoon Jeon, Nam-Su Chung, Han-Dong Lee, Jung-Taek Kim, Ki-Hoon Park
Dept of Orthopaedic Surgery, Suwon, South Korea
- QF77** COMBINED LAMINOPLASTY WITH UNILATERAL LATERAL MASS SCREW FIXATION IN ACUTE CERVICAL CORD INJURY PRE-EXISTING OSSIFICATION OF THE POSTERIOR LONGITUDINAL LIGAMENT
Sang Gu Lee
Dept of Neurosurgery, Incheon, South Korea
- QF78** THORACO-LUMBAR INTERFASCIAL PLANE (TLIP) BLOCK AND INTRATHECAL FENTANYL INJECTION RESULTS IN AN OPIOID-FREE PERI- AND POST-OPERATIVE RECOVERY AND EARLY AMBULATION AFTER PERCUTANEOUS LUMBAR SPINE SURGERY
Christian Morgenstern, Carlos Ramirez Paesano, Albert Juanola Galcerán, Rudolf Morgenstern
Morgenstern Institute of Spine, CM Teknon, Barcelona, Spain
- QF79** LATERAL LUMBAR INTERBODY FUSION DID NOT REDUCE THE RISK OF REVISION SURGERY FOR ADJACENT SEGMENT DISEASE COMPARED TO CONVENTIONAL POSTERIOR LUMBAR INTERBODY FUSION
Bungo Otsuki, Sansuke Fujibayashi, Takayoshi Shimizu, Koichi Murata, Shuichi Matsuda
Dept of Orthopaedics, Kyoto Univ., Kyoto, Japan

New techniques

- QF80** DIRECT PARS REPAIR FOR LUMBAR ISTHMIC SPONDYLOLYSIS BY UTILIZING INTRAOPERATIVE ROBOT-BASED NAVIGATION SYSTEM
liang dong, dingjun hao
Hong-Hui Hospital, Xi'an Jiaotong University College of Medicine, Xi'an, China
- QF81** CLINICAL APPLICATION OF BONE-FORMING CELL-BASED THERAPY IN SPINAL FUSION

Olivier Godeaux , Wendy Sonnet , Bruno Vande Berg, Olivier Delahaut, Diederik Peuskens, Jean-Michel Remacle, Luc Fidlers, Alphonse Lubansu
Bone Therapeutics, Gosselies, Belgium

- QF82** MINIMAL INVASIVE TEMPORARY INTERNAL DISTRACTION FOR PATIENTS WITH SEVERE SPINAL DEFORMITIES
Pawel Grabala
Medical University of Bialystok, The Faculty of Medicine, University Children's Hospital, Bialystok, Poland
- QF83** PATIENT SPECIFIC SIMULATORS FOR SURGICAL TRAINING IN SPINE SURGERY
Paolo Domenico Parchi¹, Marina Carbone², Sara Condino², Sara Stagnari¹, David Rocchi¹, Simone Colangeli³, Michelangelo Scaglione¹
1)1st Orthopedic Division University of Pisa, Italy; 2) Endocas Center University of Pisa, Italy; 3) 2nd Orthopedic Division University of Pisa, Italy
- QF84** COMPARISON OF CLINICAL AND FUNCTIONAL OUTCOMES OF VERTEBRAL BODY TETHERING IN PATIENTS WITH ADOLESCENT IDIOPATHIC SCOLIOSIS TO AGE-GENDER-BMI MATCHED HEALTHY CONTROLS
Tuna PEHLIVANOGLU, Ismail OLTULU, Emre KORKMAZ, Yigit ERDAG, Ender SARIOGLU, Ender OFLUOGLU, Mehmet AYDOGAN
Emsey Hospital, Department of Orthopedic Surgery and Neurosurgery, Advanced Spine Surgery Center, Istanbul, Turkey
- QF85** U-SHAPED TITANIUM ROD-SCREW FIXATION COMBINED WITH AUTOGRAFTING AS SURGICAL TREATMENT OF SPONDYLOLYSIS IN ADOLESCENTS: MINIMUM 5-YEARS RESULTS OF 34 PATIENTS.
Tuna PEHLIVANOGLU, Ismail OLTULU, Emre KORKMAZ, Yigit ERDAG, Ender SARIOGLU, Ender OFLUOGLU, Mehmet AYDOGAN
Emsey Hospital, Department of Orthopedic Surgery and Neurosurgery, Advanced Spine Surgery Center, Istanbul, Turkey
- QF86** COMPARISON OF LONG-TERM RESULTS OF SURGICAL TREATMENT OF IDIOPATHIC THORACIC SCOLIOSIS, LENKE TYPE 1, WITH THE APIFIX IMPLANT AND TRADITIONAL POSTERIOR FUSION
Tomasz Potaczek, Slawomir Duda, Barbara Jasiewicz
Department of Orthopedic Surgery and Rehabilitation, Zakopane, Poland
- QF87** AUGMENTED REALITY: THE FUTURE OF SPINE SURGERY?
Franziska Schmidt, Raj Nangunoori, Taylor Wong, Sertac Kirnaz, Yi Zhang, Roger Härtl
Weill Cornell Medicine, New York, USA

Non-operative treatment

- QF88** DEEP TISSUE MASSAGE AND STRENGTHENING AND STRETCHING EXERCISES FOR SUBACUTE OR PERSISTENT NECK PAIN: A COST-EFFECTIVENESS ANALYSIS OF THE STOCKHOLM NECK TRIAL (STONE)
Oscar Javier Pico-Espinosa , Emmanuel Aboagye , Pierre Côté , Anna Peterson , Lena W Holm , Irene Jensen , Eva Skillgate
Sophiahemmet University, Department of Health Promotion Sciences, Musculoskeletal & Sports Injury Epidemiology Center, Stockholm, Sweden
- QF89** CHALLENGES TO CROSS-SECTORAL CARE EXPERIENCED BY PATIENTS AND PROFESSIONALS WORKING WITH PATIENTS LIVING WITH LOW BACK PAIN: A QUALITATIVE INTERVIEW STUDY
Berit Schiøttz-Christensen, Lisbeth Petersen, Regner Birkelund
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