Scientific Program

This document is current as of March 29, 2018.

Wednesday, April 11, 2018

8:00 am - 9:30 am  General Session: MIS - Hall F
Moderator(s): Neel Anand, MD & Choll Kim, MD

8:00 am - 8:04 am  380 Minimally Invasive Sacroiliac Joint Fusion Surgery with Decortication and Threaded Implants: Analysis of the EVoluSIon Clinical Study
Speaker: A. Araghi
Authors: A. Araghi(1), R. Woodruff(2), K. Colle(3), C. Boone(4), A. Tohmeh(5)
(1)The CORE Institute, Phoenix, AZ, United States, (2)Black Hills Orthopedic and Spine Center, Rapid City, SD, United States, (3)Regional Brain and Spine, Cape Girardeau, MO, United States, (4)Bellevue Bone and Joint Physicians, Bellevue, WA, United States, (5)Northwest Orthopaedic Specialists, Spokane, WA, United States

8:05 am - 8:09 am  119 The Effect of Preoperative Symptom Duration on Postoperative Outcomes Following a Tubular Lumbar Microdiscectomy
Speaker: K. Cardinal
Authors: B. Basques(1), B. Haws(1), B. Khechen(1), P. Louie(1), K. Movassaghi(1), K. Cardinal(1), J. Guntin(1), K. Singh(1)
(1)Rush University Medical Center, Orthopaedic Surgery, Chicago, IL, United States

8:10 am - 8:14 am  471 Clinical and Radiological Consequences of Interbody Cage Subsidence Following LLIF – A Systematic Literature Review
Speaker: L. Marchi
Authors: L. Marchi(1), R. Amaral(1), R. Jensen(1), L. Pimenta(1,2)
(1)Instituto de Patologia da Coluna (IPC), Sao Paulo, Brazil, (2)UCSD, Dept Neurosurgery, San Diego, CA, United States

8:15 am - 8:19 am  263 2-year Outcomes after Minimally Invasive Sacroiliac Joint Fusion or Conservative Management: Results of a Randomized Clinical Trial
Speaker: B. Sturesson
Authors: J. Dengler(1), D. Kools(2), R. Pflugmacher(3), A. Gasbarrini(4), D. Prestamburgo(5), P. Gaetani(6), D. Cher(7), B. Sturesson(8), P. Whang(9)
(1)Charité - Universitaetsmedizin Berlin, Neurosurgery, Berlin, Germany, (2)Onze-Lieve-Vrouw Hospital, Neurosurgery, Aalst, Belgium, (3)University Hospital Bonn, Department of Orthopedics and Traumatology, Bonn, Germany, (4)Istituto Ortopedico Rizzoli di Bologna, Department of Orthopedics, Bologna, Italy, (5)ASST Ovest Milanese - Ospedale di Legnano, Department of Orthopedics and Traumatology, Legnano, Italy, (6)Policlinico San Matteo, Department of Neurosurgery, Pavia, Italy, (7)SI-BONE, Inc., Clinical Affairs, San Jose, CA, United States, (8)Aleris, Angelholm Hospital, Department of Orthopedics, Angelholm, Sweden, (9)Yale School of Medicine, Yale Orthopaedics/Spine Service, Orthopaedics, Milford, CT, United States

8:20 am - 8:24 am  152 Risk Factors for Perioperative and Postoperative Complications after Anterior
Cervical Discectomy and Fusion
Speaker: J. Guntin
Authors: B. Haws(1), B. Khechen(1), A. Narain(1), F. Hijji(1), K. Cardinal(1), J. Guntin(1), K. Singh(1)
(1)Rush University Medical Center, Orthopaedic Surgery, Chicago, IL, United States

8:25 am - 8:30 am Discussion

8:31 am - 8:35 am 245 Correlation between Intraoperative Disc Volume Removed, Fusion Success Rates and Outcome Scores in Minimally - Invasive Lateral Lumbar Interbody Fusion
Speaker: E. Marigi
Authors: E. Marigi(1), S. Yson(1), J. Sembrano(1)
(1)University of Minnesota, Orthopaedics, Minneapolis, MN, United States

8:36 am - 8:40 am 228 Anterior Column Reconstruction in Primary Adult Degenerative Scoliosis Correction Surgery: Restoring Lordosis and Achieving Indirect Decompression with Minimally Invasive Anterior Cages
Speaker: M. Mokawem
Authors: R. Lee(1), M. Mokawem(1)
(1)Royal National Orthopaedic Hospital, Spinal Surgery, Stanmore, United Kingdom

8:41 am - 8:45 am 375 Improvements in Back and Leg Pain Following a Minimally Invasive Lumbar Decompression
Speaker: B. Mayo
Authors: B. Khechen(1), B. Haws(1), A. Narain(1), F. Hijji(1), D. Massel(1), B. Mayo(1), P. Louie(1), J. Guntin(1), K. Cardinal(1), K. Singh(1)
(1)Rush University Medical Center, Orthopaedic Surgery, Chicago, IL, United States

8:46 am - 8:50 am 307 Use of An Expandable Graft-Containing Fabric Mesh System for Single-Level Lumbar Arthrodesis: Interval 12-month results from the Spineology® Clinical Outcomes Trial (SCOUT)
Speaker: J. Chi
Authors: J. Chi(1,2), K. Huang(1,2), M. Krag(3), P. Nunley(4), M. Bydon(5), S. Lavoie(6), SCOUT investigators
(1,2)Brigham and Women's Hospital, Neurosurgery, Boston, MA, United States, (3)University of Vermont College of Medicine, Orthopedics and Rehabilitation, South Burlington, VT, United States, (4)Louisiana State University Health Sciences Center, Orthopedic Surgery, Shreveport, LA, United States, (5,6)Mayo Clinic, Neurosurgery, Rochester, MN, United States, (6)Central Florida Regional Hospital, Orthopedic Surgery, Sanford, FL, United States

8:51 am - 8:55 am 507 Complications and Revision Rates in Robotic-guided vs. Fluoro-guided Minimally Invasive Lumbar Fusion Surgery - Report from MIS ReFRESH Prospective Comparative Study
Speaker: V. Hsu
Authors: S. Schroerlucke(1), M. Wang(2), A. Cannestra(3), C. Good(4), J. Lim(5), V. Hsu(6), F. Zahrawi(7), H. Villalobos(8), P. Ramirez(8), T. Sweekey(9)
(1)St Francis Hospital / Tabor Orthopedics / Crosstown Back and Pain Institute, Orthopaedic Surgery, Memphis, TN, United States, (2)University of Miami Miller School of Medicine, Neurological Surgery, Miami, FL, United States, (3)Baptist Medical Center, Neurological Surgery, Jacksonville, FL, United States, (4,5)Reston Hospital Center, Orthopaedic Surgery, Reston, VA, United States, (6)Abington Hospital, Orthopaedic Surgery, Abington, PA, United States, (7)Florida Hospital, Orthopaedic Surgery, Celebration, FL, United States, (8)Osceola Regional Medical Center, Orthopaedic Surgery, Osceola, FL, United States, (9)Doctors Hospital of Sarasota, Orthopaedic Surgery, Sarasota, FL, United States

8:56 am - 9:01 am Discussion
9:02 am - 9:06 am

389 Risk Factors for an Overnight Stay Following Anterior Cervical Discectomy and Fusion
Speaker: B. Mayo
Authors: B. Khechen(1), B. Haws(1), F. Hijji(1), A. Narain(1), B. Mayo(1), D. Massel(1), J. Guntin(1), K. Cardinal(1), K. Singh(1)
(1)Rush University Medical Center, Orthopaedic Surgery, Chicago, IL, United States

9:07 am - 9:11 am

207 Minimally Invasive Resection of Extradural Dumbbell Tumors of Thoracic Spine
Speaker: Y. Gu
Authors: Y. Gu(1)
(1)Zhongshan Hospital Fudan University, Orthopaedics, Shanghai, China

9:12 am - 9:16 am

357 Can T2 to Pelvis Fusion be avoided in Adult Spinal Deformity (ASD) with Marked Schwab Sagittal Modifier (+++) Using Staged Circumferential Minimally Invasive Surgical (CMIS) Strategies- A Minimum 2 year Outcome study
Speaker: N. Anand
Authors: N. Anand(1), B. Khandehroo(1), S. Kahwaty(1), C. Kong(1), E. Nomoto(1)
(1)Cedars Sinai Medical Center, Spine Center, Los Angeles, CA, United States

9:17 am - 9:21 am

164 Oblique Lateral Lumbar Interbody Fusion (OLLIF): Perioperative and Clinical Outcomes
Speaker: H. Abbasi
Authors: H. Abbasi(1), A. Abbasi(2)
(1)Tristate Brain and Spine Institute, Alexandria, MN, United States, (2)University of Chicago, Pritzker School of Medicine, Chicago, IL, United States

9:22 am - 9:27 am

Discussion

9:28 am - 9:32 am

261 3-year Outcomes after Minimally Invasive Sacroiliac Joint Fusion: Prospective Multicenter Study
Speaker: P. Whang
Authors: P. Whang(1), C. Frank(2), H. Lockstadt(3), S.C. Meyer(4), D. Kovalsky(5), A. Redmond(6), E. Darr(7), D. Cher(8), M. Oh(9)
(1)Yale University, Department of Orthopedics, New Haven, CT, United States, (2)Integrated Spine Care, Wauwatosa, WI, United States, (3)Bluegrass Orthopedics, Lexington, KY, United States, (4)Columbia Orthopedics, Columbia, MO, United States, (5)Orthopedic Center of Southern Illinois, Mt. Vernon, IL, United States, (6)Precision SPine Care, Tyler, TX, United States, (7)Medical University of South Carolina, Physical Medicine & Rehabilitation, Charleston, SC, United States, (8)SI-BONE, Inc., Clinical Affairs, San Jose, CA, United States, (9)Allegheny Medical Center, Neurosurgery, Pittsburgh, PA, United States

9:33 am - 9:37 am

558 The Relationship of Age on the Efficacy and Safety of a Minimally Invasive Spine Surgery in an Ambulatory Surgery Center
Speaker: C. Wade
Authors: Z. Bereczki(1), S. Prada(1), S. Songhusrt(1), M. Weiss(1), C. Wade(2), R. Davis(1)
(1)Laser Spine Institute, Tampa, FL, United States, (2)Auburn University, Industrial and Systems Engineering, Auburn, AL, United States

9:38 am - 9:42 am

167 MIS Scoliosis Surgery with Oblique Lateral Lumbar Interbody Fusion (OLLIF): Single Surgeon Feasibility Study
Speaker: H. Abbasi
Authors: H. Abbasi(1), L. Miller(2), A. Abbasi(3)
(1)Tristate Brain and Spine Institute, Alexandria, MN, United States, (2)Minnesota Disc Replacement and Spine Restoration Center, Minneapolis, MN, United States, (3)University of Chicago, Pritzker School of Medicine, Chicago, IL, United States

9:43 am - 9:47 am

101 Longitudinal PROMIS Evaluation in Minimally Invasive Transforaminal Lumbar
Interbody Fusion
Speaker: B. Haws
Authors: B. Haws(1), B. Khechen(1), K. Cardinal(1), J. Guntin(1), D. Bohl(1), K. Singh(1)
(1) Rush University Medical Center, Orthopaedic Surgery, Chicago, IL, United States

9:48 am - 9:52 am 345 Percutaneous vertebroplasty following 125I brachytherapy for poor surgical candidates with metastatic epidural spinal cord compression: a two-step clinical management
Speaker: T. Li
Authors: T. Li(1)
(1) Zibo Central Hospital Affiliated to Shandong University, Spine Surgery, Zibo, China

9:53 am - 9:59 am Discussion

10:00 am - 10:30 am Break on Exhibit Floor
Visit ISASS18 Exhibits

10:30 am - 12:00 am General Session: Innovative Technologies I - Hall F
Moderator(s): Isador Lieberman, MD & Tai Freisem, MD

10:30 am - 10:33 am 291 Patients with Sacroiliac Joint Pain have Slower Walking Speeds and Shorter, Wider Gait than Healthy Controls
Speaker: S. Kutz
Authors: R. Haddas(1), J. Cox(1), S. Kutz(2), R. Rashbaum(2)
(1) Texas Back Institute, Research Foundation, Plano, TX, United States, (2) Texas Back Institute, Plano, TX, United States

10:34 am - 10:37 am 112 BMP vs. Alternatives: Cost Savings and Clinical Outcomes Data in 137 ALIF Patients with 2 yr. Follow-up
Speaker: P. Slosar
Authors: P. Slosar(1), J. Reynolds(1), S. Martineck(1), S. Slosar(2), N. Goldthwaite(1)
(1) SpineCare Medical Group, Daly City, CA, United States, (2) University of Wisconsin, Madison, WI, United States

10:38 am - 10:41 am 337 Inpatient Pain Scores and Narcotic Utilization based on American Society of Anesthesiologists Score after Minimally Invasive Transforaminal Lumbar Interbody Fusion
Speaker: K. Cardinal
Authors: B. Haws(1), B. Khechen(1), F. Hijji(1), A. Narain(1), K. Cardinal(1), J. Guntin(1), N. Shoshana(1), K. Singh(1)
(1) Rush University Medical Center, Orthopaedic Surgery, Chicago, IL, United States

10:42 am - 10:45 am 131 Transdifferentiation of Adipose Tissue: A Novel Approach to Nucleus Pulposus Regeneration
Speaker: C. Eder
Authors: C. Eder(1), S. Schildböck(1), M. Ogon(1)
(1) Orthopädisches Spital Wien - Speising, Spine Centre, Wien, Austria

10:46 am - 10:49 am 68 Analysis of Lumbar Total Disc Replacement Removals/Revisions during a 17 Year Experience with 1,707 Patients
Speaker: J. Zigler
Authors: R. Guyer(1), J. Zigler(1), S. Blumenthal(1), D. Ohnmeiss(2)
(1) Texas Back Institute, Plano, TX, United States, (2) Texas Back Institute Research Foundation, Plano, TX, United States

10:50 am - 10:57 am Discussion
10:58 am - 11:01 am 323 Performance evaluation of resorbable mesh device containing demineralized bone matrix
Speaker: W. Walsh
Authors: W. Walsh(1), R. Oliver(1), C. Christou(1), S. Jalota(2), F. Vizesi(2)
(1)UNSW Australia, Prince of Wales Clinical School, Randwick, NSW, Australia, (2)SeaSpine, Carlsbad, CA, United States

11:02 am - 11:05 am 320 Risk Factors Associated with Pseudarthrosis following Single-Level Minimally Invasive Transforaminal Lumbar Interbody Fusion
Speaker: B. Khechen
Authors: B. Khechen(1), B. Haws(1), F. Hijji(1), A. Narain(1), J. Guntin(1), K. Cardinal(1), M. Abbas(1), K. Singh(1)
(1)Rush University Medical Center, Orthopaedic Surgery, Chicago, IL, United States

11:06 am - 11:09 am 253 Comparison of Inflammaging in Cervical and Lumbar Degenerated Intervertebral Discs: Analysis of Proinflammatory Cytokine and TRP Channel Expression
Speaker: O.N. Hausmann
Authors: A. Sadowska(1), E. Touli(2), W. Hitzl(3), H. Greutert(1), S.J. Ferguson(1), K. Wuertz-Kozak(1,4),(5), O.N. Hausmann(2)
(1)ETH, Department of Health Sciences and Technology, Zurich, Switzerland, (2)Klinik St. Anna-Hirslanden, Neuro- and Spine Center, Lucerne, Switzerland, (3)Research Office (Biostatistics), Paracelsus Medical University, Salzburg, Austria, (4)Schön Clinic Munich Harlaching, Spine Center, Munich, Germany, (5)University of Potsdam, Department of Health Sciences, Potsdam, Germany

11:10 am - 11:13 am 404 Seven Year Outcomes of Lumbar Total Disc Replacement Systems on Patient Lifestyle and Quality of Life
Speaker: S. Blumenthal
Authors: S. Blumenthal(1)
(1)Texas Back Institute, Plano, TX, United States

11:14 am - 11:17 am 325 Efficacy of a Novel Microstructured Calcium Phosphate-Collagen Bone Graft in a Rabbit Posterolateral Spine Fusion Model
Speaker: G.M. Williams
Authors: W.R. Walsh(1), R.A. Oliver(1), M.H. Pelletier(1), T. Wang(1), E.R. Walsh(1), J.M. Page(2), G.M. Williams(2)
(1)University of New South Wales, Prince of Wales Hospital, Surgical and Orthopaedic Research Laboratories, Sydney, NSW, Australia, (2)NuVasive, San Diego, CA, United States

11:18 am - 11:25 am Discussion

11:26 am - 11:29 am 523 Lumbopelvic Sagittal Alignment in Post-fusion Sitting - A Risk Factor for Adjacent Segment Pathomechanics
Speaker: A. Patwardhan
Authors: A. Patwardhan(1,2), J.-C. Le Huec(3), S. Khayatzadeh(2), R. Havey(2), G. Carandang(2), L. Voronov(2), A. Faundez(4)
(1)Loyola University Medical Center, Orthopaedic Surgery & Rehabilitation, Maywood, IL, United States, (2)Edward Hines Jr. VA Hospital, Musculoskeletal Biomechanics Laboratory, Hines, IL, United States, (3)Bordeaux University Hospital, Orthopaedic Surgery, Bordeaux, France, (4)Geneva University Hospitals, Department of Orthopaedic Surgery, Meyrin, Switzerland

11:30 am - 11:33 am 362 Risk Factors for Increased Pain Following Minimally Invasive Transforaminal Lumbar Interbody Fusion
Speaker: B. Mayo
(1)Rush University Medical Center, Orthopaedic Surgery, Chicago, IL, United States
11:34 am - 11:37 am Pre-operative Chronic Opioid Therapy: A Risk Factor for Complications, Readmission, Continued Opioid Use and Increased Costs After One and Two Level Posterior Lumbar Fusion
Speaker: N. Jain
Authors: N. Jain(1), F. Phillips(2), T. Weaver(1), S. Khan(1)
(1)Ohio State University Wexner Medical Center, Columbus, OH, United States, (2)Midwest Orthopaedics at Rush, Chicago, IL, United States

11:38 am - 11:41 am 5-year Follow-up of Interlaminar Stabilization Surgery in the ≤ 65 Year Old Patient: More Value, Less Cost
Speaker: A.T. Brecevich
Authors: A.T. Brecevich(1), C. Dowe(1), F.P. Cammisa Jr.(1), C. Abjornson(1)
(1)Hospital for Special Surgery, Integrated Spine Research Program, New York, NY, United States

11:42 am - 11:45 am SMaRT Human Neural Stem Cells to Modify Scar and Optimize Regeneration after Cervical Spinal Cord Injury
Speaker: C. Ahuja
Authors: C. Ahuja(1,2), M. Khazaei(2), P. Chan(2), Y. Yao(2), Z. Lou(2), J. Bhavsar(2), J. Wang(2), M. Fehlings(1,2)
(1)Division of Neurosurgery, Department of Surgery, University of Toronto, Toronto, ON, Canada, (2)Department of Genetics and Development, Krembil Research Institute, Toronto Western Hospital, University Health Network, Toronto, ON, Canada

11:46 am - 11:49 am Does Day of Surgery Affect Length of Stay and Hospital Charges Following Lumbar Decompression?
Speaker: J. Guntin
Authors: B. Haws(1), B. Khechen(1), F. Hijji(1), A. Narain(1), K. Cardinal(1), J. Guntin(1), A. Siddiqui(1), K. Singh(1)
(1)Rush University Medical Center, Orthopaedic Surgery, Chicago, IL, United States

11:50 am - 11:59 am Discussion

12:00 pm - 1:30 pm Industry Workshops (Not CME)
Non-CME Industry Workshop Sessions

1:30 pm - 2:30 pm Symposium 1: Worldwide Status of Cervical Total Disc Replacement - Hall F
Moderator(s): Pierce Nunley, MD

1:30 pm - 1:36 pm History & Rationale

1:37 pm - 1:43 pm US Research and Experience

1:44 pm - 1:50 pm OUS Research and Experience

1:51 pm - 1:56 pm Surgeon Reimbursement compared to ACDF/Cost Effectiveness/QALY Analysis

1:57 pm - 2:02 pm US “On Label” - Single and Two Level

2:03 pm - 2:08 pm US “Off Label” - Multi-level (3-4 levels)

2:09 pm - 2:14 pm OUS - Hybrid cTDR with Fusion

2:15 pm - 2:20 pm OUS – Multilevel (>2 levels) and “Other” Indications
2:30 pm - 3:30 pm  General Session: Tumor, Trauma, Infection - Hall F  Moderator(s): Rolando Garcia, MD & Oscar Alves, MD

2:30 pm - 3:30 pm  Predictive Factors for Survival in a Surgical Series of Metastatic Epidural Spinal Cord Compression: A Prospective North American Multi-centre Study in 142 patients  
Speaker: A. Nater  
(1)University of Toronto, Toronto, ON, Canada, (2)University College Cork, Graduate Entry Medicine, Cork, Ireland, (3)University of Washington, Seattle, WA, United States, (4)University of Kansas Medical Center, Kansas, KS, United States, (5)The CORE Institute, Sun City West, AZ, United States, (6)Sunnybrook Health Sciences Center, Toronto, ON, Canada, (7)University of British Columbia and Vancouver Coastal Health, Vancouver, ON, Canada, (8)West Virginia University, Morgantown, WV, United States, (9)The Warren Alpert Medical School of Brown University, Providence, RI, United States, (1)(10)MD Anderson Cancer Center, Houston, TX, United States, (1)(11)Mayo Clinic, Rochester, MN, United States, (1)(12)University of Pennsylvania, Philadelphia, PA, United States, (1)(3)Thomas Jefferson University, Philadelphia, PA, United States, (1)(4)Toronto Western Hospital, University Health Network, Toronto, ON, Canada

2:34 pm - 2:37 pm  Multi-level Vertebrectomy for Refractory Spondylodiscitis: Clinical Outcomes in 56 Patients  
Speaker: I. Bussey  
Authors: N. Ackshota(1), I. Bussey(1), A. Nash(1), K. Banagan(1), E. Koh(1), S. Ludwig(1), D. Gelb(1)  
(1)University of Maryland, Orthopedics, Baltimore, MD, United States

2:38 pm - 2:41 pm  Reduction in Surgical Site Infection with Suprafascial Intrawound Application of Vancomycin Powder in Instrumented Posterior Spinal Fusion: A Retrospective Case-control Study  
Speaker: R. Schär  
Authors: S. Haimoto(1), R. Schär(1), Y. Nishimura(2), M. Hara(3), T. Wakabayashi(2), H. Ginsberg(1)  
(1)St. Michael's Hospital, University of Toronto, Neurosurgery, Toronto, ON, Canada, (2)Nagoya University Graduate School of Medicine, Neurosurgery, Nagoya, Japan, (3)Inazawa Municipal Hospital, Neurosurgery, Inazawa, Japan

2:42 pm - 2:45 pm  Meta-analysis of Risk Factors Associated with Surgical Site Infection after Spinal Arthrodesis  
Speaker: T. Pannu  
Authors: S. Pesenti(1), T. Pannu(2), J. Andres Bergos(2), J. Smith(3), S. Glassman(4), F. Pellise(5), M. de Kleuver(6), D. Scibba(7), V. Lafage(2), F. Schwab(2)  
(1)Hopital d'Enfants de la Timone, Marseille, France, (2)Hospital for Special Surgery, New York, NY, United States, (3)University of Virginia, Charlottesville, VA, United States, (4)Norton Leatherman Spine Center, Louisville, KY, United States, (5)Hospital Universitari Vall Hebron, Barcelona, Spain, (6)VU University Medical Center, Amsterdam, Netherlands, (7)Johns Hopkins University, Baltimore, MD, United States

2:46 pm - 2:49 pm  MEP Monitoring versus D-wave Monitoring in Spinal Cord Tumor Surgery  
Speaker: S. Yi  
Authors: S. Yi(1), J. Kang(1)  
(1)Spine and Spinal Cord Institute, Yonsei University, College of Medicine, Neurosurgery, Seoul, Korea, Republic of

2:54 pm - 2:59 pm  Discussion
The Epidemic of Metastatic Spinal Disease: National Trends in Prevalence and Surgical Management
Speaker: S. Horn
Authors: S. Horn(1), G. Poorman(1), J. Tishelman(1), N. Stekas(1), N. Frangella(1), F. Segreto(1), J. Moon(1), O. Behery(1), N. Shepard(1), B. Diebo(2), S. Vira(1), P. Passias(1)
(1)New York University Langone Orthopedic Hospital, Division of Spinal Surgery, New York, NY, United States, (2)University Hospital of Brooklyn, Department of Orthopaedic Surgery, New York, NY, United States

The Prevalence of Occult Bacteria in Patients Undergoing Primary Spine Surgery
Speaker: C. Dowe
Authors: C. Dowe(1), A. Brecevich(1), T. Callanan(1), D. Lebl(1), F. Cammisa(1), C. Abjornson(1)
(1)Hospital for Special Surgery, Spine Research, New York, NY, United States

Inpatient Pain and Narcotics Utilization Based on Preoperative PHQ-9 Scores after Minimally Invasive Transforaminal Lumbar Interbody Fusion
Speaker: K. Cardinal
Authors: B. Haws(1), B. Khechen(1), A. Narain(1), F. Hijji(1), K. Cardinal(1), J. Guntin(1), J. Markowitz(1), K. Singh(1)
(1)Rush University Medical Center, Orthopaedic Surgery, Chicago, IL, United States

A Novel Approach for the Intraoperative Detection of Acute C5 Nerve Root Palsies
Speaker: J.W. Silverstein

Is Salvaged Blood Transfusion Appropriate in Metastatic Spine Tumour Surgery? A Prospective Clinical Study
Speaker: N. Kumar
Authors: N. Kumar(1), J. Tan(1), D. Sonnawane(1), R. Patel(1), R. Nivetha(1)
(1)National University Health System, Orthopaedics, Singapore, Singapore

Discussion

Break on Exhibit Floor
Visit ISASS18 Exhibits

General Session: Value and Outcomes in Spine Surgery - Hall F
Moderator(s): Kris Siemenow, MD & Cyrus Jensen, MD

Risk Factors for Perioperative and Postoperative Complications after Minimally Invasive Transforaminal Lumbar Interbody Fusion
Speaker: B. Khechen
Authors: B. Haws(1), B. Khechen(1), A. Narain(1), F. Hijji(1), K. Cardinal(1), J. Guntin(1), K. Singh(1)
(1)Rush University Medical Center, Orthopaedic Surgery, Chicago, IL, United States

A General Population Utility Valuation Study for Metastatic Spinal Cord Compression
Speaker: M. Pahuta
4:08 pm - 4:11 pm

247 Identifying Sources of Improvement of Axial Pain in Corrective Cervical Deformity Surgery
Speaker: N. Stekas
(1)New York University Langone Orthopedic Hospital, Division of Spinal Surgery, New York, NY, United States, (2)SUNY Downstate Medical Center, Department of Orthopedics, Brooklyn, NY, United States, (3)University of California, Davis, CA, United States, (4)University of Virginia, Department of Orthopaedic Surgery, Charlottesville, VA, United States, (5)Hospital for Special Surgery, Department of Orthopedics, New York, NY, United States, (6)University of California, Department of Neurological Surgery, San Francisco, CA, United States, (7)University of Virginia, Department of Neurosurgery, Charlottesville, VA, United States, (8)San Diego Center for Spinal Disorders, La Jolla, CA, United States, (9)Johns Hopkins University, Department of Orthopaedics, Baltimore, MD, United States, (10)Swedish Neuroscience Institute, Department of Orthopaedic Surgery, Seattle, WA, United States, (11)University of Kansas Medical Center, Department of Orthopaedic Surgery, Kansas City, KS, United States

4:12 pm - 4:15 pm

241 Patient Reported Outcomes Measurement Information System (PROMIS) Instruments Outperform Traditional Quality of Life Measures in Patients with Back and Neck Pain
Speaker: N. Stekas
Authors: D. Vasquez-Montes(1), J. Tishelman(1), D. Jevotovsky(1), R. Karia(1), N. Stekas(1), C. Bortz(1), C. Fischer(1), A. Buckland(1), T. Errico(1), T. Protopsaltis(1)
(1)NYU Langone Orthopedic Hospital, New York, NY, United States

4:16 pm - 4:19 pm

545 The Absence of Compelling Superiority Evidence in Investigational Device Spine Studies: Raising the Bar in an Era of Limited Health Care Resources
Speaker: A. Araghi
Authors: J. Batts(1), A. Araghi(2)
(1)Telos Partners, Broomfield, CO, United States, (2)The CORE Institute, Phoenix, AZ, United States

4:16 pm - 4:19 pm

38 Improvement in Ames-ISSG Cervical Deformity Classification Modifier Grades Correlate to Clinical Improvement and Likelihood of Reaching MCID in Multiple Metrics: Series of 73 Patients with 1 Year Follow-up
Speaker: S. Horn
Authors: S. Horn(1), P. Passias(1), R. Lafage(2), J. Smith(3), G. Poorman(1), B. Diebo(4), C. Bortz(1), F. Segreto(1), R. Hart(5), D. Burton(6), C. Shaffrey(7), D. Sciubba(8), E. Klineberg(9), T. Protopsaltis(1), F. Schwab(2), S. Bess((1)0), V. Lafage(2), C. Ames((1)(1)), International Spine Study Group
(1)New York University Langone Orthopedic Hospital, Division of Spinal Surgery, New York, NY, United States, (2)Hospital for Special Surgery, Department of Orthopaedic Surgery, New York, NY, United States, (3)University of Virginia, Department of Neurosurgery, Charlottesville, VA, United States, (4)SUNY Downstate Medical Center, Department of Orthopaedic Surgery, Brooklyn, NY, United States, (5)Swedish Neuroscience Institute, Department of Orthopaedic Surgery, Seattle, WA, United States, (6)University of Kansas Medical Center, Department of Orthopaedic Surgery, Kansas City, KS, United States, (7)University of Virginia, Department of Orthopaedic Surgery, Charlottesville, VA, United States, (8)Johns Hopkins University, Department of Neurosurgery, Baltimore, MD, United States, (9)University of California Davis, Department of Orthopaedic Surgery, Sacramento, CA, United States, (10)Denver International Spine Center, Department of Orthopaedic Surgery, Denver, CO, United States, (11)University of California San Francisco, Department of Neurosurgery, San Francisco, CA, United States
Discussion

4:20 pm - 4:24 pm

4:25 pm - 4:28 pm
125 Cost-utility Analysis of Lumbar Visco-elastic Total Disc Replacement versus Lumbar Dorsal, Ventral, and Dorso-ventral Spondylodesis
Speaker: B. Rischke
Authors: B. Rischke(1), E. Rischke(1), J.Y. Lazennec(2)
(1)Spine-Center-Rischke, Spine Surgery, Zurich, Switzerland, (2)University PMC, Paris, Orthopaedic and Trauma Surgery, Pitié-Salpêtrière Hospital Assistance Publique - Hopitaux de Paris, Paris, France

4:29 pm - 4:32 pm
518 The Effect of Preoperative Medications on Length of Stay, Inpatient Pain, and Narcotics Consumption Following Minimally Invasive Transforaminal Lumbar Interbody Fusion
Speaker: J. Guntin
Authors: B. Haws(1), B. Khechen(1), J. Guntin(1), K. Cardinal(1), A. Wiggins(1), K. Singh(1)
(1)Rush University Medical Center, Orthopaedic Surgery, Chicago, IL, United States

4:33 pm - 4:36 pm
4 The Patient Health Questionnaire (PHQ-9): An Aid to Assessment of Patient-reported Functional Outcomes After Spinal Surgery
Speaker: R. Knight
Authors: A. Tuck(1), M. Scribani(2), S. Grainger(3), C. Johns(4), R. Knight(5)
(1)Columbia/Bassett School of Medicine, Cooperstown, NY, United States, (2)Bassett Research Institute Center for Biostatistics, Cooperstown, NY, United States, (3)Bassett Spine Care Institute, Cooperstown, NY, United States, (4)Bassett Healthcare Network Department of Psychiatry, Cooperstown, NY, United States, (5)Bassett Spine Care Institute, Orthopedics, Oneonta, NY, United States

4:37 pm - 4:40 pm
56 Drivers of Cervical Deformity Have a Strong Influence on Achieving Optimal Radiographic and Clinical Outcomes at 1 Year Following Cervical Deformity Surgery
Speaker: C. Bortz
(1)New York University Langone Orthopedic Hospital, Division of Spinal Surgery, New York, NY, United States, (2)Brown University Alpert Medical School, Department of Orthopaedic Surgery, Providence, RI, United States, (3)University of Pittsburgh, Department of Neurologic Surgery, Pittsburgh, PA, United States, (4)Johns Hopkins University, Department of Neurosurgery, Baltimore, MD, United States, (5)University of Virginia, Department of Neurosurgery, Charlottesville, VA, United States, (6)Johns Hopkins University, Department of Orthopaedics, Baltimore, MD, United States, (7)University Hospital of Brooklyn, Department of Orthopaedic Surgery, New York, NY, United States, (8)Hospital for Special Surgery, Department of Orthopaedic Surgery, New York, NY, United States, (9)University of California San Francisco, Department of Neurosurgery, San Francisco, CA, United States, (10)Swedish Neuroscience Institute, Department of Orthopaedic Surgery, Seattle, WA, United States, (11)San Diego Center for Spinal Disorders, La Jolla, CA, United States

4:41 pm - 4:44 pm
120 Comparison of the Incidence of Fusion in ALIF Procedures between BMP-2/Allograft and Iliac Crest Autograft/Allograft
Speaker: A. Kasis
Authors: A. Kasis(1), D. Rahul(2), C. Jensen(1)
(1)Northumbria NHS Trust, Orthopaedic Spine Surgery, Ashington, United Kingdom, (2)Northumbria NHS Trust, Radiology Department, Ashington, United Kingdom

4:44 pm - 4:44 pm
20 A Comparative Analysis of Radiographic Parameters in Lumbar Fusion Techniques
Speaker: D. Park
Authors: D. Park(1), S. Ahquist(1), H. Park(1), A. Shamie(1)
Discussion

5:00 pm - 6:00 pm  
Lightning Podiums: Adult Spinal Deformity - Room 801A
Moderator(s): Paul Holman, MD

5:00 pm - 5:01 pm  
411 Determinants of patient satisfaction one year after spinal deformity surgery: A latent class analysis
Speaker: J. Yang
(1)Hospital for Special Surgery, New York, NY, United States, (2)Columbia University, Mailman school of Public Health, Department of Epidemiology, New York, NY, United States, (3)University of Virginia, Charlottesville, VA, United States, (4)University of California, Davis, Sacramento, CA, United States, (5)San Diego Center for Spinal Disorders, La Jolla, CA, United States, (6)Baylor Scoliosis Center, Plano, TX, United States, (7)University of Kansas Medical Center, Kansas City, KS, United States, (8)University of California, San Francisco, San Francisco, CA, United States, (9)Denver International Spine Center, Denver, CO, United States

5:02 pm - 5:03 pm  
463 Risk Factor Analysis for PJK after Adult Spinal Deformity Surgery: A New Simple Scoring System Based on 417 Patients with 2 Year Follow-up
Speaker: R. Lafage
(1)Hospital for Special Surgery, New York, NY, United States, (2)University of California, Davis, Sacramento, CA, United States, (3)University of Kansas Medical Center, Kansas City, KS, United States, (4)Denver International Spine Center, Denver, CO, United States, (5)University of Virginia, Charlottesville, VA, United States, (6)University of California, San Francisco, San Francisco, CA, United States, (7)Baylor Scoliosis Center, Plano, TX, United States, (8)San Diego Center for Spinal Disorders, La Jolla, CA, United States

5:04 pm - 5:05 pm  
410 Supine Radiographs are Superior to Standing Radiographs in Predicting Surgical Correction in Adult Spinal Deformity
Speaker: E. Zgonis
Authors: J. Varghese(1), E. Zgonis(2), H. Bao(3), J. Elysee(2), T. Pannu(2), R. Lafage(2), V. Lafage(2), H.J. Kim(2)
(1)SUNY Downstate Medical Center, New York, NY, United States, (2)Hospital for Special Surgery, New York, NY, United States, (3)Nanjing Drum Tower Hospital, Nanjing, China

5:06 pm - 5:07 pm  
513 Surgical Alignment in Adult Degenerative Scoliosis Patients Reduced the Sway and Increased Balance within the Cone of Economy
Speaker: R. Haddas
Authors: R. Haddas(1), I. Lieberman(2)
(1)Texas Back Institute, Research Foundation, Plano, TX, United States, (2)Texas Back Institute, Plano, TX, United States

5:08 pm - 5:09 pm  
421 Evolution of Sagittal Plane and HRQOL in HLong Thoracic Fusions Compared to Thoracolumbar Fusions to the Sacrum with Minimum 3 Yr. Follow-up
Speaker: R. Lafage
(1)Washington University, Saint Louis, MO, United States, (2)Hospital for Special Surgery, New York, NY, United States, (3)University of Virginia, Charlottesville, VA, United States,
5:10 pm - 5:14 pm Discussion

5:15 pm - 5:16 pm
469 Mechanical Loading of the Upper-most Instrumented Vertebra: Normative Values and Impact on Proximal Junctional Kyphosis in Adult Spinal Deformity Surgery
Speaker: T. Pannu
(1)Hospital for Special Surgery, New York, NY, United States, (2)University of Virginia, Charlottesville, VA, United States, (3)San Diego Center for Spinal Disorders, La Jolla, CA, United States, (4)Baylor Scoliosis Center, Plano, TX, United States, (5)University of California, San Francisco, San Francisco, CA, United States, (6)Columbia University Medical Center, New York, NY, United States, (7)Washington University, Saint Louis, MO, United States, (8)Denver International Spine Center, Denver, CO, United States, (9)Norton Leatherman Spine Center, Louisville, KY, United States

5:17 pm - 5:18 pm
473 The Clinical Impact of Global Coronal Malalignment Is Underestimated in Adult Patients with Thoraco-lumbar Scoliosis
Speaker: V. Lafage
(1)Hospital for Special Surgery, New York, NY, United States, (2)Nanjing Drum Tower Hospital, Nanjing, China, (3)Washington University, Saint Louis, MO, United States, (4)University of Virginia, Charlottesville, VA, United States, (5)San Diego Center for Spinal Disorders, La Jolla, CA, United States, (6)Baylor Scoliosis Center, Plano, TX, United States, (7)University of Kansas Medical Center, Kansas City, KS, United States, (8)University of California, San Francisco, San Francisco, CA, United States, (9)University of California, Davis, Sacramento, CA, United States, ((1)(0))Denver International Spine Center, Denver, CO, United States

5:19 pm - 5:20 pm
476 Patient-specific Rods Show a Reduction in Rod Breakage Incidence
Speaker: P. Passias
Authors: V. Fiere(1), S. Fuentes(2), E. Burger(3), T. Raabe(4), P.G. Passias(5), C. Kleck(3), T. Protopsaltis(5), A. Faure(2), P. Tropiano(2), A. Vaccaro(6), B. Blondel(2)
(1)Centre Orthopédique Paul Santy, Lyon, France, (2)Hôpital de la Timone, Chirurgie Orthopédique, Traumatique et Vertébrale, Marseille, France, (3)University of Colorado Anschutz, Medical Campus, Aurora, CO, United States, (4)East Texas Medical Center, Houston, TX, United States, (5)NYU Langone Orthopedic Hospital, New York, NY, United States, (6)Rothman Institute, Thomas Jefferson University, Philadelphia, PA, United States

5:21 pm - 5:22 pm
203 The Importance of C2-Slope, a Singular Marker of Cervical Deformity, Correlates with Patient Reported Outcomes
Speaker: D. Ge
(1)NYU Langone Orthopedic Hospital, New York, NY, United States, (2)University of Virginia Health System, Charlottesville, VA, United States, (3)Johns Hopkins University, Baltimore, MD, United States, (4)Scripps Clinic San Diego, San Diego, CA, United States, (5)Hospital for Special Surgery, New York, NY, United States, (6)University of California-Davis, Sacramento, CA, United States, (7)University of Pittsburgh School of Medicine and Medical Center,
5:23 pm - 5:24 pm  
71 Full-body Analysis of Adult Spinal Deformity Patients' Age-adjusted Alignment at 1 Year  
Speaker: P. Passias  
(1)New York University Langone Orthopedic Hospital, Division of Spinal Surgery, New York, NY, United States, (2)SUNY Downstate Medical Center, Department of Orthopaedic Surgery, Brooklyn, NY, United States, (3)Hospital for Special Surgery, Department of Orthopaedic Surgery, New York, NY, United States

5:25 pm - 5:29 pm  
Discussion

5:30 pm - 5:31 pm  
21 The Relationship between Fear-avoidance and Objective Neuromuscular Measures of Function in Patients with Adult Degenerative Scoliosis  
Speaker: A. Block  
Authors: R. Haddas(1), I. Lieberman(2), A. Block(2)  
(1)Texas Back Institute, Research Foundation, Plano, TX, United States, (2)Texas Back Institute, Plano, TX, United States

5:32 pm - 5:33 pm  
202 Should Targets for Adult Spinal Deformity Correction Depend on Pelvic Incidence?  
Speaker: N. Frangella  
Authors: T. Protopsaltis(1), A. Soroceanu(2), J. Tishelman(1), A. Buckland(1), N. Stekas(1), N. Frangella(1), G. Mundis(3), J. Smith(4), A. Daniels(5), L. Lenke(6), H.J. Kim(7), E. Klineberg(8), C. Ames(9), R. Hart((1)0), S. Bess((1)(1)), C. Shaffrey((1)(2)), F. Schwab(7), V. Lafage(7), International Spine Study Group  
(1)NYU Langone Orthopedic Hospital, New York, NY, United States, (2)University of Calgary, Calgary, AB, Canada, (3)Scripps Clinic San Diego, San Diego, CA, United States, (4)University of Virginia Health System, Charlottesville, VA, United States, (5)Brown University, Providence, RI, United States, (6)Columbia University Medical Center, New York, NY, United States, (7)Hospital for Special Surgery, New York, NY, United States, (8)University of California-Davis, Sacramento, CA, United States, (9)University of California, San Francisco, CA, United States, ((1)0)Swedish Neuroscience Institute, Seattle, WA, United States, ((1)(1))Denver International Spine Clinic, Denver, CO, United States, ((1)(2))University of Virginia Medical Center, Charlottesville, VA, United States

5:34 pm - 5:35 pm  
108 Interpretation of Spinal Radiographic Parameters in Patients with Lumbosacral Transitional Vertebrae  
Speaker: C. Varlotta  
Authors: P. Zhou(1), J. Moon(1), J. Tishelman(1), C. Varlotta(1), N. Frangella(1), T. Errico(1), T. Protopsaltis(1), P. Passias(1), A. Buckland(1)  
(1)New York University Langone Orthopedic Hospital, Division of Spinal Surgery, New York, NY, United States

5:36 pm - 5:37 pm  
160 Sitting-Standing Lumbopelvic Mechanics Are Altered by Spinal Degeneration and Fusion  
Speaker: L. Steinmetz  
(1)New York University Langone Orthopedic Hospital, Division of Spinal Surgery, New York, NY, United States
133 Pre-contoured Spinal Rods Reduce the Frequency of Residual Severe Malalignment in Adult Spinal Deformity Correction  
Speaker: D. Ge  
Authors: P. Zhou(1), J. Moon(1), B. Beaubrun(1), J. Tishelman(1), D. Vasquez-Montes(1), C. Varlotta(1), D. Ge(1), T. Errico(1), P. Passias(1), T. Protopsaltis(1), A. Buckland(1)  
(1)New York University Langone Orthopedic Hospital, Division of Spinal Surgery, New York, NY, United States

Discussion

204 The Ankle-Pelvic Angle (APA): A Summary Measurement of Pelvic and Lower Extremity Compensation  
Speaker: C. Varlotta  
Authors: M. Vaynrub(1), J. Tishelman(1), S. Horn(1), N. Stekas(1), C. Varlotta(1), P. Passias(1), A. Buckland(1), T. Errico(1), T. Protopsaltis(1)  
(1)NYU Langone Orthopedic Hospital, New York, NY, United States

42 Cervical vs Thoracolumbar Spinal Deformities: A Comparison of Baseline Quality-of-Life Burden  
Speaker: P. Passias  
(1)New York University Langone Orthopedic Hospital, Division of Spinal Surgery, New York, NY, United States, (2)Hospital for Special Surgery, Department of Orthopaedic Surgery, New York, NY, United States, (3)University of Virginia, Department of Neurosurgery, Charlottesville, VA, United States, (4)University of California San Francisco, Department of Neurosurgery, San Francisco, CA, United States, (5)University of Virginia, Department of Orthopaedic Surgery, Charlottesville, VA, United States, (6)Swedish Neuroscience Institute, Department of Orthopaedic Surgery, Seattle, WA, United States, (7)University of Kansas Medical Center, Department of Orthopaedic Surgery, Kansas City, KS, United States, (8)Denver International Spine Center, Department of Orthopaedic Surgery, Denver, CO, United States, (9)Johns Hopkins University, Department of Neurosurgery, Baltimore, MD, United States

158 Severity of Hip Osteoarthritis Affects Lower Extremity Compensatory Mechanisms in Spinopelvic Malalignment  
Speaker: N. Frangella  
(1)SUNY Downstate Medical Center, Department of Orthopaedic Surgery, Brooklyn, NY, United States, (2)New York University Langone Orthopedic Hospital, Division of Spinal Surgery, New York, NY, United States, (3)Hospital for Special Surgery, New York, NY, United States

296 Differences in Primary and Revision Deformity Surgeries: Following 1,063 Primary Thoracolumbar Adult Spinal Deformity Fusions over Time  
Speaker: D. Ge  
(1)New York University Langone Orthopedic Hospital, Division of Spinal Surgery, New York, NY, United States, (2)Bronx-Lebanon Hospital Center, Bronx, NY, United States, (3)SUNY Downstate Medical Center, Department of Orthopaedic Surgery, Brooklyn, NY, United States
Analysis of Operative Outcomes in Elderly Patients Following a Strategic Staged Circumferential Minimally Invasive Surgical (CMIS) Correction of Adults Spinal Deformity (ASD)
Speaker: N. Anand
Authors: N. Anand(1), B. Khandehroo(1), S. Kahwaty(1), C. Kong(1), E. Nomoto(1)
(1)Cedars Sinai Medical Center, Spine Center, Los Angeles, CA, United States

Lightning Podiums: Value and Outcomes in Spinal Surgery - Room 801B
Moderator(s): Domagoj Coric, MD

Finite Element Study of Vertebrae Defect After Posterior Internal Fixation Removed in Thoracolumbar Compression Fractures
Speaker: Z.-P. Luo
Authors: X.-D. Cui(1), W. Zhang(1), H.-T. Li(1), G.-D. Chen(1), H.-L. Yang(1), Z.-P. Luo(1)
(1)Orthopaedic Institute, Department of Orthopaedics, the First Affiliated Hospital, Soochow University, Suzhou, China

Cost-effectiveness of an Adjunctive Bone-anchored Annular Closure Device versus Conventional Lumbar Discectomy in Treating Lumbar Disc Herniations
Speaker: J. Ammerman
Authors: J. Ament(1), Z. Yang(1), E. Kulubya(2), W. Hsu(3), C. Thome(4), K. Kim(2)
(1)University of California Davis, Sacramento, CA, United States, (2)University of California Davis, Neurological Surgery, Sacramento, CA, United States, (3)Northwestern University, Orthopedic Surgery, Chicago, IL, United States, (4)University of Heidelberg, Neurological Surgery, Baden-Württemberg, Germany

Failed Lumbar Discectomy in High-risk Patients: A Descent into Morbidity, Reoperation and Financial Burden
Speaker: J. Ammerman
Authors: F. Martens(1), J. Ament(2), J. Fandino(3), The Anular Closure RCT Study Group
(1)OLV Hospital, Department of Neurosurgery, Alast, Belgium, (2)University of California Davis, Department of Neurological Surgery, Sacramento, CA, United States, (3)Cantonal Hospital Aarau, Department of Neurosurgery, Aarau, Switzerland

Variances in Opiate Use between Patients Implanted with Micron-textured Titanium vs PEEK Implants for TLIF Procedures
Speaker: A. Kranenburg
Authors: A. Kranenburg(1), A. Bruggeman(2), S. Martineck(1), P. Slosar(3)
(1)Southern Oregon Orthopedics, Medford, OR, United States, (2)Texas Spine Care Center, San Antonio, TX, United States, (3)SpineCare Medical Group, Daly City, CA, United States

The Correlation of Biomechanical Parameters Measured by Balance Analysis with the Functional Parameters Measured by Self-reported Questionnaires in Patients with Adult Degenerative Scoliosis
Speaker: I. Lieberman
Authors: R. Haddas(1), I. Lieberman(2)
(1)Texas Back Institute, Research Foundation, Plano, TX, United States, (2)Texas Back Institute, Plano, TX, United States

Discussion
5:17 pm - 5:18 pm 420 Mortality Rates Following Posterior C1-2 Fusion for Displaced Type II Odontoid Fractures in Octogenarians
Speaker: A. Nash
Authors: S. Clark(1), A. Nash(1), I. Bussey(1), D. Gelb(1), E. Koh(1), K. Banagan(1), S. Ludwig(1)
(1)University of Maryland, Orthopedics, Baltimore, MD, United States

5:19 pm - 5:20 pm 504 The Use of Cell Saver in Spinal Surgery: A Value Based Utilization Analysis
Speaker: K. Jegede
Authors: K. Jegede(1), A. Buckland(1), E. DelSole(1), P. Zhou(1), D. Vasquez-Montes(1), L. Steinmetz(1), C. Varlotta(1), N. Frangella(1), J. Goldstein(1), J. Bendo(1)
(1)New York University Langone Orthopedic Hospital, Division of Spinal Surgery, New York, NY, United States

5:21 pm - 5:22 pm 218 Utility of Mobile Apps for Video Conferencing to Follow Patients at Home after Outpatient Surgery
Speaker: F. Pencle
Authors: F. Pencle(1), A. Benny(1), J. Seale(1), K. Chin(1), Less Exposure Surgery Society
(1)LESS Institute, Fort Lauderdale, FL, United States

5:23 pm - 5:24 pm 492 Restoring Physical Fitness after Complex Lumbar Spine Surgery: Measuring Activity Levels Starting Three Months Postop
Speaker: M. Rigaud
Authors: C. Mancuso(1), M. Rigaud(1), A. Fong(1), R. Duculan(1), F. Cammisa(1), A. Sama(1), A. Hughes(1), D. Lebl(1), R. Huang(1), H. Sandhu(1), F. Girardi(1)
(1)Hospital for Special Surgery, New York, NY, United States

5:25 pm - 5:29 pm Discussion

5:30 pm - 5:31 pm 130 Preoperative PROMIS Score Is Not Predictive of Postoperative Pain Or Narcotics Consumption After Minimally Invasive Transforaminal Lumbar Interbody Fusion
Speaker: B. Haws
Authors: B. Haws(1), B. Khechen(1), A. Narain(1), K. Cardinal(1), J. Guntin(1), K. Tchalukov(1), K. Singh(1)
(1)Rush University Medical Center, Orthopaedic Surgery, Chicago, IL, United States

5:32 pm - 5:33 pm 527 Medical Cost Savings for Lumbar Spinal Stenosis Treated with Decompression and Interlaminar Stabilization as an Alternative to Fusion
Speaker: S.-R. Golish
Authors: V. Bender(1), K. Fitch(2), T. Engel(2), S.R. Golish(3)
(1)Optimize Science, Mill Valley, CA, United States, (2)Milliman, Inc., New York, NY, United States, (3)Jupiter Medical Center, Palm Beach, FL, United States

5:34 pm - 5:35 pm 342 Patient Perceptions of Minimally Invasive Versus Open Spine Surgery
Speaker: B. Haws
Authors: B. Haws(1), B. Khechen(1), A. Narain(1), F. Hijji(1), K. Cardinal(1), J. Guntin(1), M. Colman(1), K. Singh(1)
(1)Rush University Medical Center, Orthopaedic Surgery, Chicago, IL, United States

5:36 pm - 5:37 pm 481 The Course of Back Disorders in the Canadian Population: Trajectories and Outcomes
Speaker: R. Rampersaud
Authors: M. Canizares(1), R. Rampersaud(1), E. Badley(2)
(1)Krembil Research Institute, University Health Network, The Arthritis Program, Toronto, ON, Canada, (2)Krembil Research Institute, University Health Network, Arthritis Community Research and Evaluation Unit, Toronto, ON, Canada
Speaker: R. Rampersaud
Authors: R. Rampersaud(1,2),(3), K. Sundararajan(1), A.V. Perruccio(1,4), R. Gandhi(1,2), J.R. Davey(1,2), K. Syed(1,2), C. Veillette(1,2), N.N. Mahomed(1,2)
(1)Krembil Research Institute, University Health Network, Arthritis Program, Toronto, ON, Canada, (2)University Health Network, Division of Orthopaedic Surgery, Toronto, ON, Canada, (3)Krembil Neuroscience Centre, Toronto, ON, Canada, (4)University of Toronto, Dalla Lana School of Public Health, Toronto, ON, Canada

5:40 pm - 5:44 pm Discussion

5:45 pm - 5:46 pm 620 The Relationship between Pain and Patient Activation in Individuals Undergoing Spine Surgery: A Prospective Study
Speaker: X. Hu
Authors: X. Hu(1), A. Block(2), S. Bederman(3), I. Lieberman(1)
(1)Texas Back Institute, Texas Health Presbyterian Hospital Plano, Scoliosis and Spine Tumor Center, Plano, TX, United States, (2)Texas Back Institute, Plano, TX, United States, (3)Restore Orthopedics & Spine Center, Orange, CA, United States

5:47 pm - 5:48 pm 648 Is the Use of Multimodal Anesthesia for Post-operative Pain Control Effective in Patients Undergoing One or Two Level Anterior Lumbar Interbody Fusions with Posterior Percutaneous Pedicle Screw Instrumentation?
Speaker: M. Cabanne
Authors: M. Cabanne(1), M. Kardile(1), K. Majid(1), C. Kuo(1), M. Gjolaj(2), R. Bains(1)
(1)Kaiser Permanente, Regional Spine Surgery Department, Oakland, CA, United States, (2)Kaiser Permanente, Dept of Anesthesia, Oakland, CA, United States

5:49 pm - 5:50 pm 637 Factors Influencing Extended Hospital Stay in Patients Undergoing Metastatic Spine Tumour Surgery
Speaker: N. Kumar
Authors: N. Kumar(1), A.S. Zaw(1), S. Wong(1), R.S. Patel(1), D. Hey(1), G. Liu(1)
(1)National University Health System, Orthopaedics, Singapore, Singapore

5:51 pm - 5:52 pm 374 A 90 days post-cervical surgical morbidity and mortality risk factor analysis in over 1000 Asian patients.
Speaker: S.Y.G. Fung
Authors: G. Liu(1), J.H. Tan(1), R.M. Ng(1), A. Seah(1), C.Z. Ng(1), L.L. Lau(1), D. Hey(1), J. Ruiz(1), J. Thambiah(1), N. Kumar(1), H.K. Wong(1)
(1)National University Health System, Orthopaedics Surgery, Singapore, Singapore

5:53 pm - 5:54 pm Discussion

5:00 pm - 6:00 pm Lightning Podiums: Cervical Degenerative - Room 802A
Moderator(s): Michael Hisey, MD

5:00 pm - 5:01 pm 276 Perioperative Complications in Patients Treated with Posterior Cervical Fusion and Bilateral Cages
Speaker: K. Siemionow
Authors: K. Siemionow(1), R. Blok(2), M. Gillespy(3), M. Gundanna(4), W. Smith(5), Z. Hyder(6), B. Mc Cormack(7), P. Glowka(1,8)
(1)University of Illinois at Chicago, Department of Orthopaedics, Chicago, IL, United States, (2)Clark Memorial Hospital, Lafayette, IN, United States, (3)Halifax Health Medical Center, Daytona Beach, FL, United States, (4)Brazos Spine Surgery, College Station, TX, United States, (5)Western Regional Brain and Spine, Las Vegas, NV, United States, (6)Orthopedic Spine Surgery, Merrillville, IN, United States, (7)Neuropsine Institute Medical Group, San Francisco, CA, United States, (8)University of Medical Sciences, Department of Spinal...
5:02 pm - 5:03 pm  
**Clinical Experience of Integrated Interbody Fusion in Multi-level Cervical Fusion**  
Speaker: J. Garber  
Authors: J. Garber(1)  
(1)Western Regional Brain and Spine, Las Vegas, NV, United States

5:04 pm - 5:05 pm  
**Prevalence of Positive Bacterial Culture in Intervertebral Discs of Patients Undergoing Anterior Cervical Decompression and Fusion**  
Speaker: L. Bivona  
Authors: A. Banduta(1), L. Bivona(1), A. Nash(1), I. Bussey(1), K. Banagan(1), E. Koh(1), D. Gelb(1), S. Ludwig(1)  
(1)University of Maryland, Baltimore, MD, United States

5:06 pm - 5:07 pm  
**30 and 90-day Unplanned Readmission Rates, Causes, and Risk Factors after Cervical Fusion: A Single Institution Analysis**  
Speaker: O. Zaki  
Authors: O. Zaki(1), N. Jain(1), S. Khan(1)  
(1)Ohio State University Wexner Medical Center, Columbus, OH, United States

5:08 pm - 5:09 pm  
**Spinal Canal Expansion in Open-door and Double-door Laminoplasty According to Pre-operative Lamina Angle**  
Speaker: J.-M. Jung  
Authors: J.-M. Jung(1), T.-A. Jahng(2), K.-J. Kim(1), S.-J. Hyun(3)  
(1)Seoul National University Hospital, Seoul, Korea, Republic of, (2)Seoul National University College of Medicine, Neurological Surgery, Jongno-Gu, Seoul, Korea, Republic of, (3)Seoul National University College of Medicine, Bundang Hospital, Neurosurgery, Seongnam, Korea, Republic of

5:10 pm - 5:14 pm  
**Discussion**

5:15 pm - 5:16 pm  
**Dysphagia Following Anterior Cervical Spine Surgery: Assessment Using an Abridged SWAL-QOL**  
Speaker: B. Mayo  
(1)Rush University Medical Center, Orthopaedic Surgery, Chicago, IL, United States

5:17 pm - 5:18 pm  
**The Effect of Cervical Decompression on Gait in Cervical Spondylotic Myelopathy Patients**  
Speaker: T. Belanger  
Authors: R. Haddas(1), T. Belanger(2), K. Ju(2), R. Arakal(3)  
(1)Texas Back Institute, Research Foundation, Plano, TX, United States, (2)Texas Back Institute, Rockwall, TX, United States, (3)Texas Back Institute, Plano, TX, United States

5:19 pm - 5:20 pm  
**Patient Factors Associated with the Risk of Adjacent Level Subsequent Surgery after Cervical Total Disc Replacement (TDR) or Anterior Cervical Discectomy and Fusion (ACDF)**  
Speaker: K. Kim  
Authors: K. Kim(1), K. Radcliff(2), R. Jackson(3), W. Dolman(4)  
(1)University of California- Davis, Department of Neurological Surgery, Sacramento, CA, United States, (2)Rothman Institute, Thomas Jefferson University, Egg Harbor, NJ, United States, (3)Orange County Neurosurgical Associates, Laguna Hills, CA, United States, (4)Zimmer Biomet Spine, Austin, TX, United States

5:21 pm - 5:22 pm  
**Ambulatory Anterior Cervical Discectomy and Fusion is Associated with a Higher Risk of Perioperative Complications**  
Speaker: D. Park
5:23 pm - 5:24 pm 278 Anterior Cervical Pseudarthrosis Treated with Bilateral Posterior Cervical Cages
Speaker: K. Siemionow
Authors: K. Siemionow(1), P. Glowka(1,2), W. Smith(3), M. Gillespy(4), J. Huffman(5), V. Vong(6)
(1)University of Illinois at Chicago, Department of Orthopaedics, Chicago, IL, United States, (2)University of Medical Sciences, Department of Spinal Disorders and Pediatric Orthopaedics, Poznan, Poland, (3)Western Regional Center for Brain and Spine Surgery, Las Vegas, NV, United States, (4)Orthopaedic Clinic of Daytona Beach, Daytona Beach, FL, United States, (5)Napa Valley Orthopaedics, Napa, CA, United States, (6)University of California, San Francisco, CA, United States

5:25 pm - 5:29 pm Discussion

5:30 pm - 5:31 pm 424 Quality of Life and Surgical Outcomes of Spinal Decompression in Patients with Mildly Symptomatic Degenerative Cervical Myelopathy
Speaker: J. Badhiwala
Authors: J. Badhiwala(1), C. Witiw(1), F. Nassiri(1), M. Akbar(1), A. Mansouri(1), J. Wilson(1), M. Fehlings(1)
(1)University of Toronto, Division of Neurosurgery, Department of Surgery, Toronto, ON, Canada

5:32 pm - 5:33 pm 552 Radiological Comparison of Sagittal Balance Outcomes between Cervical Corpectomy and Cervical Posterior Fusion
Speaker: R. Reinas
Authors: R. Reinas(1), D. Kitumba(2,3), Ó. L. Alves(2,4)

5:34 pm - 5:35 pm 208 Impact of Body Mass Index on Surgical Outcomes, Narcotic Consumption, and Costs following Anterior Cervical Discectomy and Fusion
Speaker: B. Mayo
Authors: B. Haws(1), B. Khechen(1), A. Narain(1), F. Hijji(1), K. Cardinal(1), J. Guntin(1), B. Mayo(1), J. Markowitz(1), K. Singh(1)
(1)Rush University Medical Center, Orthopaedic Surgery, Chicago, IL, United States

5:36 pm - 5:37 pm 477 Spine Kinematics during Gait in of Cervical Spondylotic Myelopathy Patients Post Cervical Surgery
Speaker: K. Ju
Authors: R. Haddas(1), K. Ju(2), T. Belanger(3)
(1)Texas Back Institute, Research Foundation, Plano, TX, United States, (2)Texas Back Institute, Plano, TX, United States, (3)Texas Back Institute, Rockwall, TX, United States

5:38 pm - 5:39 pm 3 The Relationship between Improvements in Myelopathy and Sagittal Realignment in Cervical Deformity Surgery Outcomes
Speaker: C. Deflorimonte
(1)New York University Langone Orthopedic Hospital, Division of Spinal Surgery, new york, NY, United States, (2)University of Kansas Medical Center, Department of Orthopedic Surgery, Kansas City, KS, United States, (3)Hospital for Special Surgery, Department of
5:40 pm - 5:44 pm  Discussion

5:45 pm - 5:46 pm  12  The Risk of Recurrent Laryngeal Nerve Injury with Laterality of Approach in Anterior Cervical Discectomy and Fusion Procedures: A Randomized, Prospective Study Over 10 Years
Speaker: S. Shah
Authors: M. Bhatia(1), S. Shah(1)
(1)Pinnacle Health, Harrisburg, PA, United States

5:47 pm - 5:48 pm  266  Risk Factors Associated with Failure to Reach Minimum Clinically Important Difference in Patient Reported Outcomes after Anterior Cervical Discectomy and Fusion
Speaker: B. Khechen
Authors: B. Khechen(1), B. Haws(1), A. Narain(1), F. Hijji(1), J. Guntin(1), K. Cardinal(1), N. Shoshana(1), K. Singh(1)
(1)Rush University Medical Center, Orthopaedic Surgery, Chicago, IL, United States

5:49 pm - 5:50 pm  335  Effect of Cervical Surgery on Neuromuscular Activity During Gait in Patients with Cervical Spondylotic Myelopathy
Speaker: K. Ju
Authors: R. Haddas(1), A. Boah(2), K. Ju(3)
(1)Texas Back Institute, Research Foundation, Plano, TX, United States, (2)Texas Back Institute, Denton, TX, United States, (3)Texas Back Institute, Rockwall, TX, United States

5:51 pm - 5:52 pm  180  Does Day of Surgery Affect Length of Stay and Hospital Charges Following Anterior Cervical Discectomy and Fusion?
Speaker: B. Khechen
Authors: B. Khechen(1), B. Haws(1), F. Hijji(1), A. Narain(1), J. Guntin(1), K. Cardinal(1), K. Singh(1)
(1)Rush University Medical Center, Orthopaedic Surgery, Chicago, IL, United States

5:53 pm - 5:54 pm  613  Vertebral Body Replacement Using Patient-specific 3D-printed Polymer Implants in Cervical Spondylotic Myelopathy: 1-year Follow-up Results
Speaker: A. Amelot
Authors: A. Amelot(1,2), J.-E. Loret(1)
(1)Bretonneau Hospital, Neurosurgery, Tours, France, (2)La Pitié Salpêtrière, Neurosurgery, Paris, France

5:55 pm - 6:00 pm  Discussion

5:00 pm - 6:00 pm  Lightning Podiums: Smorgasboard - Room 802B
Moderator(s): Larry Khoo, MD

5:00 pm - 5:01 pm  568  Self-efficacy Predicts Disability Outcome in Low Back Pain
Speaker: K. Sundararajan
Authors: K. Sundararajan(1), Y.R. Rampersaud(1,2),(3), A.V. Perruccio(1,4)
(1)Krembil Research Institute, University Health Network, Arthritis Program, Toronto, ON, Canada, (2)University Health Network, Division of Orthopaedic Surgery, Toronto, ON, Canada, (3)Krembil Neuroscience Centre, Toronto, ON, Canada, (4)University of Toronto, Dalla Lana School of Public Health, Toronto, ON, Canada
Comparison of Novel Robotic Navigation System with Conventional Open Techniques: In vitro Analysis of Accuracy, Dosage, and Time Required for Pedicle Screw Placement

Speaker: M. Lendner
Authors: A. Vaccaro(1), J. Harris(2), M. Hussain(2), R. Wadhwa(3), V. Chang(4), S. Schroerlucke(5), W. Samora(6), P. Passias(7), R. Patel(8), S. D'Agostino(9), N. Whitney(10), N. Crawford(2), B. Bucklen(2), M. Lendner(1)
(1)Rothman Institute, Thomas Jefferson University Hospital, Department of Orthopaedic Surgery, Philadelphia, PA, United States, (2)Musculoskeletal Education of Research Center, Biomechanics, Audubon, PA, United States, (3)University of California, San Francisco Medical Center, Department of Neurological Surgery, San Francisco, CA, United States, (4)Henry Ford West Bloomfield Hospital, Department of Neurosurgery, West Bloomfield Township, MI, United States, (5)Tabor Orthopedics, Division of MSK Group PC, Memphis, TN, United States, (6)Nationwide Children's Hospital, Department of Orthopedic Surgery, Ann Arbor, MI, United States, (7)Hospital for Joint Diseases, NYU Langone Medical Center, Department of Orthopaedic Surgery, New York, NY, United States, (8)University of Michigan, Department of Orthopaedic Surgery, Ann Arbor, MI, United States, (9)Charleston Brain and Spine, Charleston, SC, United States, (10)Inland Neurosurgery and Spine Associates, Spokane, WA, United States,

Long-term Surgical Relief of Back Pain Following Lumbar Total Disc Replacement: Minimum 5-year Follow-up Results at Two Canadian Institutes

Speaker: J. Bourget-Murray
Authors: J. Bourget-Murray(1), G. Hardy St-Pierre(2), K. Gurr(2), J. Bouchard(1)
(1)University of Calgary, Calgary, AB, Canada, (2)University of Western Ontario, London, ON, Canada

Robotic Assisted Fixation of Sacral Fractures – Initial Experience

Speaker: J. Schroeder
Authors: J. Schroeder(1), B. Qutteineh(1), M. Liebergall(1), L. Kaplan(1), Y. Weil(2)
(1)Hadassah Hebrew University Medical Center, Jerusalem, Israel, (2)Hadassah University Hospital, Jerusalem, Israel

Biomechanical Evaluation of Lumbar Lateral Interbody Fusion for the Treatment of Adjacent Segment Disease

Speaker: I. Bussey
Authors: M. Shasti(1), A. Nash(1), I. Bussey(1), S. Koenig(1), N. O'Hara(1), T. Weir(1), D. Gelb(1), S. Ludwig(1)
(1)University of Maryland, Orthopedics, Baltimore, MD, United States

Effect of Cervical Deformity Correction on Spinal Cord Volume and Stenosis

Speaker: P. Passias
(1)New York University Langone Orthopedic Hospital, Division of Spinal Surgery, New York, NY, United States, (2)University of Virginia, Department of Orthopaedic Surgery, Charlottesville, VA, United States, (3)University of Kansas Medical Center, Department of Orthopaedic Surgery, Kansas City, KS, United States, (4)Hospital for Special Surgery, Department of Orthopaedic Surgery, New York, NY, United States, (5)SUNY Downstate Medical Center, Department of Orthopaedic Surgery, Brooklyn, NY, United States, (6)University of Virginia, Department of Neurosurgery, Charlottesville, VA, United States, (7)University of California San Francisco, Department of Neurosurgery, San Francisco, CA, United States
614 MicroRNA-181a-5p as a Potential Therapeutic Target in Facet Joint Osteoarthritis
Speaker: A. Nakamura
Authors: A. Nakamura(1), Y.R. Rampersaud(1,2), S. Nakamura(1), E. Rossomacha(1), J.S. Rockel(1), M. Kapoor(1,3)
(1)University Health Network, Arthritis Program, Toronto, ON, Canada, (2)University Health Network, Spinal Program, Toronto, ON, Canada, (3)University of Toronto, Laboratory Medicine and Pathobiology, Toronto, ON, Canada

46 Working towards the Development of a Comprehensive Cervical Spine Surgery Risk Index: An Analysis of Two Large Patient Databases to Stratify Morbidity Risk Prior to Surgery
Speaker: P. Passias
Authors: P. Passias(1), S. Horn(1), G. Poorman(1), K. Shenoy(1), C. Bortz(1), C. Varlotta(1), N. Stekas(1), M. Siow(1), A. Sure(1), B. Diebo(1), V. Lafage(2), C. Oh(1)
(1)New York University Langone Orthopedic Hospital, Division of Spinal Surgery, New York, NY, United States, (2)Hospital for Special Surgery, Department of Orthopaedic Surgery, New York, NY, United States

106 How do you Define Minimally Invasive Spine Surgery in the Context of Current Surgical Invasiveness Index?
Speaker: M. Moawad
(1)New York University Langone Orthopedic Hospital, Division of Spinal Surgery, New York, NY, United States

248 Comparative Analysis of Changes in Spinal Canal Dimension and Myelopathy Improvement between Patients with and without Cervical Deformity
Speaker: P. Passias
(1)New York University Langone Orthopedic Hospital, Division of Spinal Surgery, New York, NY, United States, (2)SUNY Downstate Medical Center, Department of Orthopedics, Brooklyn, NY, United States, (3)Peking University Third Hospital, Beijing, China, (4)Hospital for Special Surgery, Department of Orthopedics, New York, NY, United States

Discussion

604 Radiologically Defining Horizontal Gaze Using Whole Body Slot Scanner – A Prospective Study of Healthy Subjects and a Retrospective Audit
Speaker: H.-K. Wong
Authors: H.W.D. Hey(1), K.-A. Tan(1), G.K.-P. Liu(1), H.-K. Wong(1)
(1)National University Hospital, Singapore, Singapore

553 Long-term (Minimum 10 Years) Clinical and Radiologic Results in Single Level Degenerative Lumbar Stenosis with Posterior Dynamic Stabilization
Speaker: S.-G. Lee
Authors: S.-G. Lee(1), T.-K. Lim(1), Y. Ahn(1), S. Son(1), T.S. Jeong(1), W.-K. Kim(1)
(1)Gachon University, Gil Medical Center, Neurosurgery, Incheon, Korea, Republic of

537 Analysis of Debris Generated under Extreme in vitro Parameters: Mechanical Testing of a Titanium Plasma Spray Implant
Speaker: C. Schilling
Authors: C. Schilling(1), C. Wing(2)
(1)Aesculap AG, R&D Biomechanical Research, Tuttlingen, Germany, (2)Aesculap Implant
417 Relationship between Lumbar Segmental Lordosis and Pelvic Morphology
Speaker: R. Lafage
Authors: R. Lafage(1), S. Pesenti(2), D. Stein(1), J. Varghese(3), J. Elysee(1), H.J. Kim(1), L. Lenke(4), F. Schwab(1), V. Lafage(1)
(1)Hospital for Special Surgery, New York, NY, United States, (2)Hopital d'Enfants de la Timone, Marseille, France, (3)SUNY Downstate Medical Center, New York, NY, United States, (4)Columbia University Medical Center, New York, NY, United States

496 Intraoperative Imaging for Lumbar Degenerative Spondylolisthesis Identifies Instability Otherwise Missed on Flexion-extension Radiographs
Speaker: R. Duculan
Authors: C. Mancuso(1), A. Fong(1), M. Rigaud(1), R. Duculan(1), F. Cammisa(1), A. Sama(1), A. Hughes(1), D. Lebl(1), R. Huang(1), H. Sandhu(1), J. Farmer(1), F. Girardi(1)
(1)Hospital for Special Surgery, New York, NY, United States

5:40 pm - 5:44 pm Discussion

5:45 pm - 5:46 pm 157 Psoas Morphology Differs between Supine and Sitting MRI Lumbar Spine – Implications for Lateral Lumbar Interbody Fusion
Speaker: M. Moawad
(1)New York University Langone Orthopedic Hospital, Division of Spinal Surgery, New York, NY, United States, (2)SUNY Downstate Medical Center, Department of Orthopaedic Surgery, Brooklyn, NY, United States

5:47 pm - 5:48 pm 341 Comparison of Decompression with Interlaminar Stabilization vs. Decompression with Fusion in Patients Requiring Surgical Treatment for Spinal Stenosis with Grade I Spondylolisthesis at 5 Year Follow-Up
Speaker: C. Dowe
Authors: C. Dowe(1), A. Brecevich(1), F. Cammisa(1), C. Abjornson(1)
(1)Hospital for Special Surgery, Spine Research, New York, NY, United States

5:49 pm - 5:50 pm 468 The Fate and Clinical Impact of Early Cage Subsidence after Oblique Lumbar Interbody Fusion Surgery
Speaker: S.-J. Park
Authors: S.-J. Park(1), C.-S. Lee(1), S.-S. Chung(1), K.-J. Lee(1)
(1)Samsung Medical Center, SungHyunKwan University School of Medicine, Orthopedic Surgery, Seoul, Korea, Republic of

5:51 pm - 5:52 pm 16 Incomplete Pars Interarticularis Fractures in Sportsmen/women Repaired with a Percutaneous Compression Screw
Speaker: F. Altaf
Authors: L. Wilson(1), F. Altaf(2), P. Tyler(3), R. Dhawan(4)
(1)Wellington Hospital, Spinal Unit, London, United Kingdom, (2)Royal National Orthopaedic Hospital, Spinal Surgery, Stanmore, United Kingdom, (3)Royal National Orthopaedic Hospital, Radiology, Stanmore, United Kingdom, (4)Wellington Hospital, Radiology, London, United Kingdom

5:53 pm - 5:54 pm 51 ACDF Procedures Performed In Ambulatory Centers Compared to the Hospital Inpatient Setting: Length of Stay, Cost Data and Complications in Two National Databases
Speaker: P. Passias
Authors: P. Passias(1), G. Poorman(1), R. Maloney(1), S. Horn(1), C. Varlotta(1), F. Segreto(1), N. Frangella(1), B. Diebo(2), C. Wang(1), J. Moon(1), M. Gerling(1)
5:55 pm - 6:00 pm  Discussion

5:00 pm - 6:00 pm  Lightning Podiums: Spinal Gumbo - 803A
Moderator(s): Pierce Nunley, MD

5:00 pm - 5:01 pm  433 Robotic Assisted Surgeries for the Treatment of Metastatic or Primary Spine Tumors
Speaker: I. Lieberman
Authors: I. Lieberman(1), X. Hu(1)
(1)Texas Back Institute, Texas Health Presbyterian Hospital Plano, Scoliosis and Spine Tumor Center, Plano, TX, United States

5:02 pm - 5:03 pm  145 Pre-operative Planning and Rod Customization May Optimize Post-operative Alignment and Mitigate Development of Malalignemnt in Multi-segment Posterior Cervical Decompression and Fusion Patients
Speaker: P. Passias
Authors: P. Passias(1), S. Horn(1), G. Poorman(1), C. Bortz(1), F. Segreto(1), N. Frangella(1), N. Stekas(1), V. Lafage(2)
(1)New York University Langone Orthopedic Hospital, Division of Spinal Surgery, New York, NY, United States, (2)Hospital for Special Surgery, Department of Orthopaedic Surgery, New York, NY, United States

5:04 pm - 5:05 pm  237 An Investigation of the Relationship between DTI and NODDI Parameters in Postoperative DCM Patients
Speaker: W. Tian
Authors: W. Tian(1), J. Wang(1), X. Han(1), D. Li(1), G. Li(2), Q. Song(1)
(1)Fourth Clinical Medical College of Peking University, Beijing Jishuitan Hospital, Department of Spine Surgery, Beijing, China, (2)Tsinghua University, Center for Biomedical Imaging Research, Department of Biomedical Engineering, School of Medicine, Beijing, China

5:06 pm - 5:07 pm  150 Effect of PET Mesh on Mesenchymal Stem Cell Response to Bone Autograft
Speaker: B.D. Boyan
Authors: B.D. Boyan(1), Z. Schwartz(1)
(1)Virginia Commonwealth University, Biomedical Engineering, Richmond, VA, United States

5:08 pm - 5:09 pm  546 Size Matters: A Novel Interbody Fusion Cage Design Increases Contact Area for Bone Exchange and Graft Incorporation
Speaker: P. Nunley
Authors: L. Ferrara(1), P. Nunley(2)
(1)OrthoKinetic Technologies, Southport, NC, United States, (2)Spine Institute of Louisiana, Orthopaedics, Shreveport, LA, United States

5:10 pm - 5:14 pm  Discussion

5:15 pm - 5:16 pm  143 Thoracolumbar Deformity Impedes Improvement of Lower Extremity Compensatory Mechanisms in Postoperative Cervical Deformity Patients
Speaker: S. Horn
(1)New York University Langone Orthopedic Hospital, Division of Spinal Surgery, New York, NY, United States, (2)SUNY Downstate Medical Center, Department of Orthopaedic Surgery, Brooklyn, NY, United States
5:17 pm - 5:18 pm 136 Sustained Changes in Age-adjusted Full-body Compensation Following Adult Spinal Deformity Corrective Surgery
Speaker: P. Passias
(1)New York University Langone Orthopedic Hospital, Division of Spinal Surgery, New York, NY, United States, (2)SUNY Downstate Medical Center, Brooklyn, NY, United States, (3)Hospital for Special Surgery, New York, NY, United States

5:19 pm - 5:20 pm 511 Long-term Outcomes of Arthroplasty for Cervical Myelopathy versus Radiculopathy, and Arthroplasty versus Arthrodesis for Cervical Myelopathy
Speaker: M.F. Gornet
(1)The Orthopedic Center of St. Louis, St Louis, MO, United States, (2)Columbia University Medical Center, Dept of Orthopaedic Surgery, New York, NY, United States, (3)California Spine Group, Century City Hospital, Los Angeles, CA, United States, (4)Wilderness Spine Services, Columbus, OH, United States, (5)Center for Sports Medicine and Orthopedics, Chattanooga Outpatient Center, Chattanooga, TN, United States, (6)Orthopedic Associates of Allentown, Allentown, PA, United States, (7)Central Texas Spine Institute, Austin, TX, United States, (8)SPIRITT Research, St Louis, MO, United States

5:21 pm - 5:22 pm 432 Factors Predicting Clinical Outcomes in Cervical Disc Arthroplasty versus Anterior Cervical Decompression and Fusion at Minimum 10-year Follow up
Speaker: Y. Tian
Authors: Y. Tian(1), Y. Guo(2), C. Ma(3), W. Tian(3), J. Yue(4)
(1)Yale University, Orthopaedic Surgery, New Haven, CT, United States, (2)Yale University School of Medicine, New Haven, CT, United States, (3)Jishuitan Hospital, Orthopaedic Surgery, Beijing, China, (4)Yale University School of Medicine, Orthopaedic Surgery, New Haven, CT, United States

5:23 pm - 5:24 pm 557 Motion Analysis of a Mobile-core Cervical Disc Prosthesis
Speaker: R. Havey
Authors: R. Havey(1), S. Khayatzadeh(1), L. Voronov(1), G. Carandang(1), F. Phillips(2), A. Patwardhan(1,3)
(1)Edward Hines Jr. VA Hospital, Musculoskeletal Biomechanics Laboratory, Hines, IL, United States, (2)Rush University Medical Center, Orthopaedic Surgery, Chicago, IL, United States, (3)Loyola University Medical Center, Orthopaedic Surgery & Rehabilitation, Maywood, IL, United States

5:25 pm - 5:29 pm Discussion

5:30 pm - 5:31 pm 576 Segmental Recruitment During Flexion-extension Motion after Cervical Disc Arthroplasty: A Measure of Quality of Motion
Speaker: S. Khayatzadeh
Authors: S. Khayatzadeh(1), R. Havey(1), L. Voronov(1), G. Carandang(1), F. Phillips(2), A. Patwardhan(1,3)
(1)Edward Hines Jr. VA Hospital, Musculoskeletal Biomechanics Laboratory, Hines, IL, United States, (2)Rush University Medical Center, Orthopaedic Surgery, Chicago, IL, United States, (3)Loyola University Medical Center, Orthopaedic Surgery & Rehabilitation, Maywood, IL, United States

5:32 pm - 5:33 pm 367 The Efficacy of Growth Differentiation Factor-6 on Intervertebral Disc Degeneration in the Rabbit Anular-puncture Model
Speaker: S. Miyazaki
5:34 pm - 5:35 pm 656  Comparative Analysis of the Occurrence Factors for Adjacent Segment Disease - With Patients Followed More than 10 Years after Lumbar Spinal Fusion
Speaker: J. Soh
Authors: J. Soh(1), J.C. Lee(2), B.-J. Shin(2)
(1)Soonchunhyang University Cheonan Hospital, Orthopaedic Surgery, Cheonan, Korea, Republic of, (2)Soonchunhyang University, Orthopaedic Surgery, Seoul, Korea, Republic of

5:36 pm - 5:37 pm 487  A Novel Elastomer Lumbar Total Disc Replacement Device Affords Mechanics Similar to the Intact Spine: A Finite Element Study
Speaker: J.M. Zavatsky
Authors: A. Kiapour(1), K. Chin(2), J. Lubinski(2), V.K. Goel(1), J.M. Zavatsky(3)
(1)Engineering Center for Orthopaedic Research Excellence (E-CORE), The University of Toledo, Department of Bioengineering, Toledo, OH, United States, (2)LESS Institute, Fort Lauderdale, FL, United States, (3)Spine & Scoliosis Specialists, Tampa, FL, United States

5:38 pm - 5:39 pm 517  Tailorable Stiffness of Cervical TDRs through Algorithmic Design
Speaker: P. Halverson
Authors: P. Halverson(1), D. Hawkes(1)
(1)Nexus TDR, Salt Lake City, UT, United States

5:40 pm - 5:44 pm  Discussion

5:45 pm - 5:46 pm 521  Comparison of 7-year Results of One-level versus Two-level Cervical Disc Arthroplasty and Fusion
Speaker: M.F. Gornet
(1)The Orthopedic Center of St. Louis, St Louis, MO, United States, (2)California Spine Group, Century City Hospital, Los Angeles, CA, United States, (3)Wilderness Spine Services, Columbus, OH, United States, (4)Center for Sports Medicine and Orthopedics, Chattanooga Outpatient Center, Chattanooga, TN, United States, (5)Orthopedic Associates of Allentown, Allentown, PA, United States, (6)Central Texas Spine Institute, Austin, TX, United States, (7)SPIRITT Research, St Louis, MO, United States

5:47 pm - 5:48 pm 531  Outcomes of 3- and 4-level Cervical Disc Arthroplasty
Speaker: M.F. Gornet
Authors: M.F. Gornet(1), F.W. Schranck(2), A.G. Copay(2), K.M. Sorensen(2)
(1)The Orthopedic Center of St. Louis, St Louis, MO, United States, (2)SPIRITT Research, St Louis, MO, United States

5:49 pm - 5:50 pm 565  Minimum 2 Years Follow-up with CP ESP Viscoelastic Cervical Disk Replacement
Speaker: J.Y. Lazennec
Authors: J.Y. Lazennec(1)
(1)UPMC Paris, Paris, France

5:51 pm - 5:52 pm 488  A Novel Elastomer Cervical Total Disc Replacement Device Results in Biomechanics Similar to the Intact Spine: A Finite Element Study
Speaker: J.M. Zavatsky
5:53 pm - 5:54 pm  231  **Fibular Allograft as a Salvage Option in Revision Pedicle Screw Fixation**
Speaker: H. Elgafy
Authors: H. Elgafy(1), N. Lempert(1), J. Stirton(1), P. Zak(1)
(1)University of Toledo, Orthopedic, Toledo, OH, United States

5:55 pm - 6:00 pm  **Discussion**

5:00 pm - 6:00 pm  **Lightning Podiums: Spinal Potpourri - 803B**
**Moderator(s): Seok Woo Kim, MD**

5:00 pm - 5:01 pm  **A Prospective, Randomized Study Evaluating a Novel, Proprietary, Truss-based Anterior Lumbar Interbody Fusion (ALIF) Implant Used with Either Crushed Cancellous Allograft Bone or Autologous Bone Marrow Aspirate**
Speaker: M. Rauschmann
Authors: M. Rauschmann(1), M. Reckert(1), B. Chatterjee(1)
(1)Orthopädische Universitätsklinik, Friedrichsheim gGmbH, Frankfurt am Main, Germany

5:02 pm - 5:03 pm  **Patient Profiling Can Identify Spondylolisthesis Patients at Risk for Conversion from Nonoperative to Surgical Treatment**
Speaker: P. Passias
Authors: P. Passias(1), G. Poorman(1), J. Lurie(2), W. Zhao(3), T. Morgan(2), S. Horn(1), C. Bortz(1), F. Segreto(1), L. Steinmetz(1), N. Frangella(1), S. Bess(4), V. LaFage(5), M. Gerling(1), T. Errico(1)
(1)New York University Langone Orthopedic Hospital, Division of Spinal Surgery, New York, NY, United States, (2)Geisel School of Medicine at Dartmouth, Hanover, NH, United States, (3)Geisel School of Medicine at Dartmouth, Department of Biomedical Data Sciences, Hanover, NH, United States, (4)Rocky Mountain Hospital for Children, Denver, CO, United States, (5)New York University Hospital for Special Surgery, New York, NY, United States

5:04 pm - 5:05 pm  **Lumbar Interbody Fusion Rates in 3D Printed Lamellar Titanium Cages Using a Silicate Substituted Calcium Phosphate Bone Graft**
Speaker: M. Mokawem
Authors: M. Mokawem(1), R. Lee(1), C. Harman(1)
(1)Royal National Orthopaedic Hospital, Spinal Surgery, Stanmore, United Kingdom

5:06 pm - 5:07 pm  **Clinical Practice Variation (CPV) in Lumbar Microdiscectomy Informed Consent for Surgery**
Speaker: K. Bhanot
Authors: K. Bhanot(1), E. Crawford(1), G. Rosenberg(2), A. Yee(1,3)
(1)University of Toronto, Department of Surgery, Division of Orthopaedic Surgery, Toronto, ON, Canada, (2)Sunnybrook Health Sciences Centre, Toronto, ON, Canada, (3)Sunnybrook Health Sciences Centre, Department of Orthopaedic Surgery, Toronto, ON, Canada

5:08 pm - 5:09 pm  **Relationship between Opioid use and Outcomes in Patients Undergoing Basivertebral Nerve Ablation for Chronic Low Back Pain**
Speaker: A. Rhyne
Authors: A. Rhyne(1), R. Sasso(2), A. Patel(3), W. Hsu(3), J. Fischgrund(4), A. Edidin(5), P. Vajkoczy(6)
(1)OrthoCarolina Spine Center, Charlotte, NC, United States, (2)Indiana Spine Group, Carmel, IN, United States, (3)Northwestern University, Chicago, IL, United States, (4)Beaumont Orthopaedic Center, Royal Oak, MI, United States, (5)Relievant Medsystems, Inc., Sunnyvale, CA, United States, (6)Charité University Medical Centre, Berlin, Germany
5:10 pm - 5:14 pm  Discussion

5:15 pm - 5:16 pm  81 Effect of Bone Morphogenic Protein on Postoperative C-Reactive Protein Level Following Anterior Lumbar Interbody Fusion Surgery
Speaker: A. Kasis
Authors: M. Mawdsley(1), C. Jensen(1), A. Kasis(1)
(1)Northumbria NHS Trust, Orthopaedic Spine Surgery, Ashington, United Kingdom

5:17 pm - 5:18 pm  452 Nose to Back: Nasal Chondrocytes Are a Potential Autologous Cell-transplant Source for Cell Therapy Based Treatment of Degenerative Disc Disease
Speaker: M. Gay
Authors: M. Gay(1), A. Mehrkens(2), A. Barbero(3), I. Martin(3), S. Schaeren(2)
(1)University Hospital Basel, Basel, Switzerland, (2)University Hospital Basel, Department of Spinal Surgery, Basel, Switzerland, (3)University Hospital Basel, Department of Tissue Engineering, Basel, Switzerland

Speaker: P. Passias
(1)New York University Langone Orthopedic Hospital, Division of Spinal Surgery, New York, NY, United States, (2)SUNY Downstate Medical Center, Department of Orthopaedic Surgery, Brooklyn, NY, United States, (3)Bronx-Lebanon Hospital Center, Bronx, NY, United States, (4)Eastern Virginia Medical School, Norfolk, VA, United States, (5)Werner-Wicker-Klinik, Spine Center, Bad Wildungen, Germany, (6)Hospital for Special Surgery, Department of Orthopaedic Surgery, New York, NY, United States

5:21 pm - 5:22 pm  425 Smoking Is Associated with Increased Development of Musculoskeletal Burden: A Longitudinal Cohort Study from the Midlife Development in the U.S. (MIDUS) Study
Speaker: P. Tamer
Authors: P. Tamer(1), J. Du(2), K. Goon(1), U. Ahn(3), N. Ahn(2)
(1)Case Western Reserve University, School of Medicine, Cleveland, OH, United States, (2)University Hospitals, Department of Orthopedics, Cleveland, OH, United States, (3)New Hampshire Spine Institute, Bedford, OH, United States

5:23 pm - 5:24 pm  65 Tethered Cord Syndrome in the United States: Cluster Analysis of Presenting Current Anomalies and Associated Conditions
Speaker: S. Horn
Authors: S. Horn(1), G. Poorman(1), D. Vasquez-Montes(1), C. Bortz(1), F. Segreto(1), L. Steinmetz(1), N. Stekas(1), R. de la Garza Ramos(1), D. Nikas(2), P. Passias(1)
(1)New York University Langone Orthopedic Hospital, Division of Spinal Surgery, New York, NY, United States, (2)University of Illinois Health System, Chicago, IL, United States

5:25 pm - 5:29 pm  Discussion

5:30 pm - 5:31 pm  146 Chiari Malformation Clusters Describe Differing Presence of Concurrent Anomalies based on Chiari Type
Speaker: S. Horn
Authors: S. Horn(1), D. Vasquez-Montes(1), G. Poorman(1), F. Segreto(1), C. Bortz(1), C. Varlotta(1), N. Frangella(1), O. Bono(1), J. Buza(1), C.R. Goodwin(2), P. Passias(1)
(1)New York University Langone Orthopedic Hospital, Division of Spinal Surgery, New York, NY, United States, (2)Duke University Medical Center, Neurosurgery, Durham, NC, United States
The Incidence of Venous Thromboembolism in Patients Undergoing Anterior Lumbar Interbody Fusion. A Proposed Thromboprophylactic Regime
Speaker: A. Kasis
Authors: A. Kasis(1), H. Vint(1), C. Coe(2), M. Mawdsley(1), C. Jensen(1)
(1)Northumbria NHS Trust, Orthopaedic Spine Surgery, Ashington, United Kingdom,
(2)Northumbria NHS Trust, Anaesthetic Department, Ashington, United Kingdom

Treatment of Lumbar Spinal Stenosis by Percutaneous Endoscopic Interlaminar Decompression
Speaker: J. Zeng
Authors: J. Zeng(1,2)
(1)Sichuan University, Orthopaedics, Chengdu, China, (2)Sichuan University, Chengdu, China

The Effect of Surgical Alignment Surgery on the Muscular Energy Expenditure during Dynamic Balance Test in Adult Degenerative Scoliosis Patients
Speaker: R. Haddas
Authors: R. Haddas(1), I. Lieberman(2)
(1)Texas Back Institute, Research Foundation, Plano, TX, United States, (2)Texas Back Institute, Plano, TX, United States

Biomechanical Effects of Lumbar Disc Geometry on Rod Fracture Following L3 Pedicle Subtraction Osteotomy: A Finite Element Study
Speaker: A.S. Vosoughi
Authors: A. Seyed Vosoughi(1), A. Kiapour(1), A. Agarwal(1), V. Goel(1), J. Zavatsky(2)
(1)University of Toledo, Bioengineering, Toledo, OH, United States, (2)Spine & Scoliosis Specialists, Tampa, FL, United States

Gravity Line and Sagittal Alignment Are Both Risk Factors for Increased Rod Stresses in Long Lumbopelvic Fixation – A Biomechanics Study
Speaker: W. Cho
Authors: W. Cho(1), W. Wang(2), B. Bucklen(2)
(1)Albert Einstein College of Medicine/Montefiore Medical Center, Department of Orthopaedic Surgery, Bronx, NY, United States, (2)Musculoskeletal Education of Research Center, Biomechanics, Audubon, PA, United States

Biomechanical Implications of Complete Bilateral Facetectomy, Partial Bilateral Facetectomy, and Unilateral Facetectomy in Minimally Invasive Transforaminal Interbody Fusions
Speaker: L. Snyder
Authors: L. Snyder(1), J. Lehrman(1), R. Menon(1), J. Godzik(1), A. Newcomb(1), B. Kelly(1)
(1)Barrow Neurological Institute, Neurosurgery, Phoenix, AZ, United States

Relationship between Thoracolumbar Alignment and Lower Limb Alignment
Speaker: J. Elysee
(1)Hospital for Special Surgery, New York, NY, United States, (2)Hopital d’Enfants de la Timone, Marseille, France, (3)SUNY Downstate Medical Center, New York, NY, United States, (4)New York University Langone Orthopedic Hospital, New York, NY, United States

Fixation of the Sacroiliac Joint: A comparative anatomical analysis of the Lateral and Posterolateral Trajectories
Speaker: B. Cheng
Authors: D. Cook(1), C. Payne(1), M. Yeager(1), G. Schmidt(2), M. Oh(1), B. Cheng(1), D. Lindsey(3), S. Yerby(3)
Coupled Translational Movements of the Sacroiliac Joint: An In-vitro Study
Speaker: K. Odeh
Authors: K. Odeh(1), B. Taylor(2), C. Purviance(2), G. Gajudo(2), J. Leasure(2), D. Kondrashov(3)
(1)San Francisco Orthopaedic Residency Program, San Francisco, CA, United States, (2)The Taylor Collaboration, San Francisco, CA, United States, (3)St. Mary's Spine Center, San Francisco, CA, United States

Discussion

Bioskills Session Evening Hands-on-Workshop - Paradigm Spine - Hall G, Theater Red - Coflex® Decompression - RSVP to rsvp@paradigmspine.com or at booth #300

Thursday, April 12, 2018

8:00 am - 8:50 am
General Session: Endoscopic Surgery
Moderator(s): Christopher Yeung, MD & William Taylor, MD

8:00 am - 8:04 am
501 Can the Biportal Endoscopic Surgery Achieve Enough Canal Decompression for Degenerative Lumbar Stenosis? Prospective Case Control Study
Speaker: C.K. Park
Authors: C.K. Park(1), D.H. Heo(1)
(1)The Leon Wiltse Memorial Hospital, Suwon, Korea, Republic of

8:05 am - 8:09 am
435 Full Endoscopic Posterolateral Lumbar Facet Sparing Interbody Fusion and Targeted Decompression in Patients with Symptomatic Foraminal Stenosis
Speaker: J. Yue
Authors: J. Yue(1), Y. Guo(2), Y. Tian(2)
(1)Yale University School of Medicine, Guilford, CT, United States, (2)Yale University School of Medicine, New Haven, CT, United States

8:10 am - 8:14 am
590 Complications of Percutaneous Endoscopic Lumbar Discectomy via Interlaminar Approach
Speaker: J. Zeng
Authors: J. Zeng(1), T. Xie(2)
(1)West China Hospital, Sichuan University, Department of Orthopaedics, Chengdu, China, (2)Sichuan University, Dep. of Orthopaedics, Chengdu, China

8:15 am - 8:19 am
31 True Percutaneous Transforaminal Lumbar Interbody Fusion (pTLIF) with an Expandable Interbody Cage Using the Endoscopic Posterolateral Approach: A Long-term Follow-up Report of 50 Cases
Speaker: R. Morgenstern
Authors: R. Morgenstern(1), C. Morgenstern(1)
(1)Centro Médico Teknon, Barcelona, Spain

8:20 am - 8:24 am
Discussion

8:25 am - 8:29 am
502 Analysis of Clinical Results of Three Different Routes of Percutaneous Endoscopic Transforaminal Lumbar Discectomy for Lumbar Herniated Disk
Speaker: N. Adsul
Authors: N. Adsul(1), H.S. Kim(1), F. Yudoyono(1,2), B. Paudel(1,3), K.J. Kim(1), J.S. Jang(1),
8:30 am - 8:34 am

402 Percutaneous Endoscopic Lumbar Discectomy Strategy for L5-S1 Disc Herniation Based on Image Analysis: A Review of 301 Cases
Speaker: H.-K. Tsou
(1)Taichung Veterans General Hospital, Functional Neurosurgery Division, Neurological Institute, Taichung, Taiwan, Republic of China, (2)Jen-Ai Hospital, Department of Neurosurgery, Taichung, Taiwan, Republic of China, (3)China Medical University Hospital, Department of Orthopaedic Surgery, Taichung, Taiwan, Republic of China

8:35 am - 8:39 am

227 Therapeutic Feasibility of Full Endoscopic Decompression in One- to Three-level Lumbar Canal Stenosis via a Single Skin Port Using a New System, Percutaneous Stenoscopic Lumbar Decompression (PSLD)
Speaker: K.T. Lim
Authors: K.T. Lim(1)
(1)Good Doctor Teun Teun Spine Hospital, Anyang, Korea, Republic of

8:40 am - 8:44 am

660 Endoscopic Biopsy and Debridement of Thoracic and Lumbar Discitis
Speaker: K. Lawson
Authors: K. Lawson(1,2)
(1)Loma Linda University Medical Center, Orthopedic Surgery, Loma Linda, CA, United States, (2)Michigan Clinic Neurosurgery, Spine Surgery Clinic, Saginaw, MI, United States

8:45 am - 8:49 am

Discussion

8:50 am - 8:54 am

285 Percutaneous Transforaminal Endoscopic Surgery (PTES) for Lumbar Disc Herniation after Previous Intervention
Speaker: Y. Gu
Authors: Y. Gu(1)
(1)Zhongshan Hospital Fudan University, Orthopaedics, Shanghai, China

8:55 am - 8:59 am

430 Ventral Dural Approach of the Percutaneous Full Endoscopic Interlaminar Lumbar Discectomy for Symptomatic Bilateral Radiculopathy in Huge L5-S1 Herniated Nucleus Pulposus
Speaker: N. Adsul
(1)Nanoori Suwon Hospital, Neurosurgery, Suwon, Korea, Republic of, (2)Nanoori Hospital, Neurosurgery, Seoul, Korea, Republic of, (3)Nanoori Incheon Hospital, Neurosurgery, Incheon, Korea, Republic of

9:00 am - 9:04 am

658 Reduced In-patient Narcotic Consumption and Hospital Stay with ERAS® Transforaminal Lumbar Interbody Fusion (TLIF): Comparison to Standard Minimally-invasive TLIF
Speaker: K. Madhavan
(1)University of Miami Miller School of Medicine, Neurosurgery, Miami, FL, United States, (2)School of Medicine, National Yang-Ming University, Taipei, Taiwan, Neurosurgery, Taipei, Taiwan, Republic of China, (3)University of Miami Miller School of Medicine, Anesthesiology, Miami, FL, United States
9:05 am - 9:09 am 497 Fully Endoscopic Lumbar Interbody Fusion Using a Percutaneous Biportal Endoscopic Technique: Technical Note and Preliminary Clinical Results
Speaker: D.H. Heo
Authors: D.H. Heo(1), C.K. Park(1)
(1)The Leon Wiltse Memorial Hospital, Suwon, Korea, Republic of

9:10 am - 9:15 am Discussion

9:15 am - 10:10 am Presidential Address & Presidential Guest Speaker
Presidential Address by Jeffrey Goldstein, MD, FACS; Presidential Guest Speaker Lee Woodruff

10:10 pm - 10:40 pm Break on Exhibit Floor
Visit ISASS18 Exhibits

10:40 am - 12:00 am General Session: Diagnostic Imaging
Moderator(s): Theirry Marnay, MD & Donna Ohnmeiss, MD

10:40 am - 10:44 am 279 Comparison of CT versus MRI T2-weighted SPACE Sequence Pedicle Measurements
Speaker: K. Siemionow
Authors: P. Glowka(1,2), K. Siemionow(3), L. Glowka(4), T. Kotwicki(1)
(1)University of Medical Sciences, Department of Spinal Disorders and Pediatric Orthopaedics, Poznan, Poland, (2)University of Illinois at Chicago, Chicago, IL, United States, (3)University of Illinois at Chicago, Department of Orthopaedics, Chicago, IL, United States, (4)University of Medical Sciences, Poznan, Poland

10:45 am - 10:49 am 236 A Case-control Study on Diagnostic and Biomarker Utility of NODDI in Postoperative DCM Patients
Speaker: W. Tian
Authors: W. Tian(1), J. Wang(1), X. Han(1), D. Li(1), G. Li(2), Q. Song(1)
(1)Fourth Clinical Medical College of Peking University, Beijing Jishuitan Hospital, Department of Spine Surgery, Beijing, China, (2)Tsinghua University, Center for Biomedical Imaging Research, Department of Biomedical Engineering, School of Medicine, Beijing, China

10:50 am - 10:54 am 89 The Effect of Age on Baseline SWAL-QOL Scores
Speaker: B. Khechen
Authors: B. Khechen(1), B. Haws(1), B. Mayo(1), D. Massel(1), J. Guntin(1), K. Cardinal(1), K. Singh(1)
(1)Rush University Medical Center, Orthopaedic Surgery, Chicago, IL, United States

10:55 am - 10:59 am 290 Neuromuscular Activity during Gait in Patients with Sacroiliac Joint Pain Compared to Healthy Controls
Speaker: J. Cox
Authors: R. Haddas(1), J. Cox(1), S. Kutz(2), R. Rashbaum(2)
(1)Texas Back Institute, Research Foundation, Plano, TX, United States, (2)Texas Back Institute, Plano, TX, United States

11:00 am - 11:04 am 355 An Anatomic Shape System for MRI Grading Lumbar Foramina Stenosis
Speaker: G. McBride
Authors: G. McBride(1)
(1)Orlando Orthopedic Center, Spine Center, Orlando, FL, United States

11:05 am - 11:09 am Discussion

11:10 am - 11:14 am 472 3D Quantitative Assessment of Fat Infiltration in Spinopelvic Muscles: A Normative Analysis on 30 Young Adults
11:15 am - 11:19 am 66 Supine vs. Upright Weight Bearing MRI in the Evaluation of Patients with Lumbar Spondylolisthesis
Speaker: R. Guyer
Authors: R. Guyer(1), D. Ohnmeiss(2)
(1)Texas Back Institute, Plano, TX, United States, (2)Texas Back Institute Research Foundation, Plano, TX, United States

11:20 am - 11:24 am 493 Degree of Mobility at L4-L5 in Preoperative and Intraoperative Images in Patients with Lumbar Degenerative Spondylolisthesis
Speaker: R. Duculan
Authors: R. Duculan(1), C. Mancuso(1), A. Fong(1), M. Rigaud(1), J. Yang(1,2), F. Cammisa(1), A. Sama(1), A. Hughes(1), D. Lebl(1), R. Huang(1), H. Sandhu(1), J. Farmer(1), F. Girardi(1)
(1)Hospital for Special Surgery, New York, NY, United States, (2)Columbia University, Mailman School of Public Health, Department of Epidemiology, New York, NY, United States

11:25 am - 11:29 am 235 A Case-control Study on Diagnostic and Biomarker Utility of DTI Parameters in Postoperative DCM Patients
Speaker: W. Tian
Authors: W. Tian(1), J. Wang(1), X. Han(1), D. Li(1), G. Li(2), Q. Song(1)
(1)Fourth Clinical Medical College of Peking University, Beijing Jishuitan Hospital, Department of Spine Surgery, Beijing, China, (2)Tsinghua University, Center for Biomedical Imaging Research, Department of Biomedical Engineering, School of Medicine, Beijing, China

11:30 am - 11:34 am Discussion

11:35 am - 11:39 am 232 Clinical Application of Shear Wave Elastography to Diagnose and Evaluate Spinal Cord Dysfunction in Patients with Cervical Spondylotic Myelopathy
Speaker: W. Tian
Authors: W. Tian(1), Q. Song(1), T. Chen(2), X. Han(1), J. Wang(1)
(1)Fourth Clinical Medical College of Peking University, Beijing Jishuitan Hospital, Department of Spine, Beijing, China, (2)Fourth Clinical Medical College of Peking University, Beijing Jishuitan Hospital, Department of Ultrasound, Beijing, China

11:40 am - 11:44 am 281 Cervical extensor muscles atrophy in the patients with single level cervical spondylotic radiculopathy treated by fusion with posterior cervical cages placed bilaterally in the facet joints
Speaker: K. Siemionow
Authors: P. Glowka(1,2), K. Siemionow(2), P. Janusz(1)
(1)University of Medical Sciences, Department of Spinal Disorders and Pediatric Orthopaedics, Poznan, Poland, (2)University of Illinois at Chicago, Department of Orthopaedics, Chicago, IL, United States

11:45 am - 11:49 am 124 MRI: A Possible Alternative to a Standing Lateral Radiograph for Evaluating Cervical Sagittal Alignment in Patients with Cervical Disc Herniation?
Speaker: W.-H. Cai
Authors: W. Liu(1), W.-H. Cai(1)
(1)The First Affiliated Hospital of Nanjing Medical University, Nanjing, China

11:50 pm - 11:54 pm 529 Toward Standardization of Lumbar Flexion-extension Studies
Speaker: J. Hipp
11:55 pm - 12:00 pm  Discussion

12:00 pm - 1:30 pm  Industry Workshops (Not CME)
Non-CME Industry Workshop Sessions

1:30 pm - 2:30 pm  Symposium 2: Peri-Operative Risk Management and Complication Mitigation - Hall F
Moderator(s): Isador Lieberman, MD

1:30 pm - 1:39 pm  Diabetes and Complications after Spine Surgery

1:40 pm - 1:49 pm  Psychological Optimization for Spine Surgery

1:50 pm - 1:59 pm  Does Smoking Impair Surgical Outcomes after Spine Surgery

2:00 pm - 2:09 pm  Malnutrition and Optimizing Surgical Outcomes

2:10 pm - 2:29 pm  Questions and Discussion; Case Presentation

2:30 pm - 3:00 pm  General Session: Arthroplasty - Hall F
Moderator(s): Matthew Scott-Young, MBBS, FRACS, FAOrthA & Scott Blumenthal, MD

2:30 pm - 2:33 pm  192 The Impact of Coronal Alignment of Device on Radiographic Degeneration in the Case of Total Disc Replacement
Speaker: S.W. Kim
(1)Hallym University Medical Center, Seoul, Korea, Republic of

2:34 pm - 2:37 pm  437 M6-C Artificial Cervical Disc 24 Month Follow up: Clinical and Radiographic Outcomes from Five Investigational Centers Involved in a US FDA Approved IDE Study
Speaker: R. Sasso
(1)Indiana Spine Group, Orthopaedic Surgery Indiana University School of Medicine, Carmel, IN, United States, (2)Carolina Neurosurgery and Spine Associates, Charlotte, NC, United States, (3)Midwest Orthopaedics at Rush, Chicago, IL, United States, (4)Texas Back Institute, Plano, TX, United States, (5)Hospital for Special Surgery, New York, NY, United States

2:38 pm - 2:41 pm  601 Cervical Hybrid Arthroplasty 6 Year Lifestyles Outcomes Analysis
Speaker: P. Pazmino
Authors: P. Pazmino(1), R. Husman(2), G. Margossian(3)
(1)SpineCal, Santa Monica, CA, United States, (2)UCLA, Los Angeles, CA, United States, (3)SpineCal, Glendale, CA, United States

2:42 pm - 2:45 pm  483 10-year Range of Motion Outcomes from a Prospective Randomized Trial Comparing BRYAN Cervical Disc Arthroplasty with Anterior Cervical Decompression and Fusion
Speaker: W. Lavelle
Authors: W. Lavelle(1), K.D. Riew(2), A. Levi(3), J. Florman(4)
(1)SUNY Upstate Medical University, Orthopedic Surgery, Syracuse, NY, United States, (2)Columbia University Medical Center, Orthopedic Surgery, New York, NY, United States, (3)University of Miami Miller School of Medicine, Neurosurgery, Miami, FL, United States, (4)Maine Medical Center, Neurological Surgery, Scarborough, ME, United States
2:46 pm - 2:49 pm

Outcomes of Single Level Total Disc Arthroplasty for Lumbar Degenerative Disc Disease
Speaker: M. Scott-Young
Authors: M. Scott-Young(1), L. McEntee(1), B. Schram(2), J. Furness(2), E. Ralthbone(2), M. Zotti(1), W. Hing(2)
(1)Gold Coast Spine, Southport, QLD, Australia, (2)Bond University, Faculty of Health Sciences and Medicine, Gold Coast, QLD, Australia

2:50 pm - 2:53 pm

Retrieval Analysis of a Titanium Ceramic Composite Cervical Total Disc Replacement
Speaker: R. Siskey
Authors: R. Siskey(1,2), L. Ciccarelli(1), S. Kurtz(1,2), V. Singh(3), J. Toth(4)
(1)Exponent, Biomedical Engineering, Philadelphia, PA, United States, (2)Drexel University, Biomedical Engineering, Philadelphia, PA, United States, (3)Medtronic, Memphis, PA, United States, (4)The Medical College of Wisconsin, Milwaukee, WI, United States

2:54 pm - 3:30 pm

Guest Speaker Robin Young; Awards Ceremony; Transfer of Presidency
Jeffrey Goldstein, MD, FACS

3:30 pm - 4:00 pm

Break on Exhibit Floor
Visit ISASS18 Exhibits

4:00 pm - 5:00 pm

General Session: Cervical Degenerative - Hall F
Moderator(s): Avinash Patwardhan, MD & Richard Guyer, MD

4:00 pm - 4:04 pm

Validity of Sagittal and Axial Plane Metrics in the Assessment of Cervical Canal Stenosis on Magnetic Resonance Imaging
Speaker: K. Sritharan
Authors: K. Sritharan(1), U. Chamoli(1), J. Kuan(2), A. Diwan(1)
(1)University of New South Wales, Spine Service, St. George & Sutherland Clinical School, Sydney, NSW, Australia, (2)St. George MRI, Sydney, NSW, Australia

4:05 pm - 4:09 pm

Do Cervical Spine Surgery Patients Recall Their Preoperative Status? A Cohort Study of Recall Bias in Patient-reported Outcomes
Speaker: I. Aleem
(1)Henry Ford Hospital, Surgery, Detroit, MI, United States, (2)University of Michigan, Orthopaedic Surgery, Spine Division, Ann Arbor, MI, United States, (3)Mayo Clinic, Orthopedics Spine, Rochester, MN, United States, (4)Center for Sports Medicine and Orthopedics, Chattanooga, TN, United States, (5)Emory University, Department of Orthopedic Surgery, Emory Spine Center, Atlanta, GA, United States, (6)Mayo Clinic, Neurosurgery, Rochester, MN, United States, (7)Mayo Clinic, Orthopedics, Rochester, MN, United States

4:10 pm - 4:14 pm

Patient phenotypes associated with surgical outcomes in patients with mild degenerative cervical myelopathy
Speaker: J. Badhiwala
Authors: J. Badhiwala(1), C. Witiw(1), F. Nassiri(1), M. Akbar(1), A. Mansouri(1), G. Ibrahim(1), J. Wilson(1), M. Fehlings(1)
(1)University of Toronto, Division of Neurosurgery, Department of Surgery, Toronto, ON, Canada

4:15 pm - 4:19 pm

Cervical Mismatch: The Normative Value of T1S-CL and its Ability to Predict Ideal CL
Speaker: D. Stein
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<th>Time</th>
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| 4:20 pm - 4:24 pm | **539 Sagittal Balance Radiological Outcomes in Patients Submitted to C0-C1-C2 Posterior Fixations**  
Speaker: D. Kitumba  
Authors: D. Kitumba(1,2), R. Reinas(1), O. Alves(1)  
(1)Centro Hospitalar Vila Nova de Gaia, Neurocirurgia, Vila Nova de Gaia, Portugal,  
(2)Faculdade de Medicina da Universidade Agostinho Neto, Luanda, Angola |
| 4:25 pm - 4:29 pm | Discussion                                                             |
| 4:30 pm - 4:34 pm | **217 Pre-operative Chronic Opioid Therapy is a Risk Factor for Wound Complications, Emergency Department Visits, and Increased Costs After Cervical Fusion: A Commercial Insurance Database Study**  
Speaker: N. Jain  
Authors: N. Jain(1), J. Brock(2), F. Phillips(3), T. Weaver(1), S. Khan(1)  
(1)Ohio State University Wexner Medical Center, Columbus, OH, United States,  
(2)Perelman School of Medicine, Philadelphia, PA, United States,  
(3)Midwest Orthopaedics at Rush, Chicago, IL, United States |
| 4:35 pm - 4:39 pm | **242 Functional Balance Testing in Cervical Spondylotic Myelopathy Patients**  
Speaker: R. Haddas  
Authors: R. Haddas(1), K. Ju(2), R. Arakal(3), S. Hochschuler(3), T. Belanger(2)  
(1)Texas Back Institute, Research Foundation, Plano, TX, United States,  
(2)Texas Back Institute, Rockwall, TX, United States,  
(3)Texas Back Institute, Plano, TX, United States |
| 4:40 pm - 4:44 pm | **360 Impact of Local Steroid Application on Dysphagia Following an Anterior Cervical Discectomy and Fusion: Results of a Prospective, Randomized, Single Blind Trial**  
Speaker: B. Haws  
Authors: B. Haws(1), B. Khechen(1), A. Narain(1), F. Hijji(1), D. Bohl(1), K. Cardinal(1), J. Guntin(1), K. Singh(1)  
(1)Rush University Medical Center, Orthopaedic Surgery, Chicago, IL, United States |
| 4:45 pm - 4:49 pm | **86 Use of Polyetheretherketone Interbody Devices for One-level Anterior Cervical Discectomy and Fusion Results in a Five-fold Higher Rate of Pseudarthrosis Compared to Structural Allograft**  
Speaker: K. Krause  
Authors: K. Krause(1), K. Bridges(1), O. Obayashi(1), A. Raslan(1), K. Than(1)  
(1)Oregon Health and Science University, Neurosurgery, Portland, OR, United States |
| 4:50 pm - 4:54 pm | **138 Neuromuscular Activity during Gait in Patients with Cervical Spondylotic Myelopathy Compared to Controls**  
Speaker: J. Cox  
Authors: R. Haddas(1), J. Cox(1), R. Arakal(2), T. Belanger(3), S. Hochschuler(2), A. Boah(4), K. Ju(3)  
(1)Texas Back Institute, Research Foundation, Plano, TX, United States,  
(2)Texas Back Institute, Plano, TX, United States,  
(3)Texas Back Institute, Rockwall, TX, United States,  
(4)Texas Back Institute, Denton, TX, United States |
| 4:55 pm - 5:00 pm | Discussion                                                             |
| 5:00 pm - 6:00 pm | **Symposium 3: The Sacroiliac Joint - The Pathway from Pain to Treatment - Hall F** |
5:00 pm - 5:02 pm  Introduction  Speaker: Morgan P. Lorio

5:03 pm - 5:12 pm  Why does the SIJ hurt? Anatomy & Biomechanics

5:13 pm - 5:22 pm  Prevalence of SIJ Pain and the Validity of a Functional Diagnosis

5:23 pm - 5:32 pm  Diagnostic Injections and the Role of Diagnostic Imaging

5:33 pm - 5:42 pm  Surgical vs. Non-Surgical Management of SIJ Pain

5:43 pm - 5:48 pm  Special Guest/SIMEG Representative

5:49 pm - 6:00 pm  Discussion

5:30 pm - 8:30 pm  Bioskills Session Evening Hands-on-Workshop (Not CME) - joimax - Hall G, Theater Red - Endoscopic Spinal Decompression - Faculty: Dr. Daniel Laich and Dr. Ralf Wagner - RSVP to booth #407 or Melissa.Brumley@joimaxusa.com

5:30 pm - 8:30 pm  Bioskills Session Evening Hands-on-Workshop (Not CME) - Zimmer Biomet - Hall G, Theater Blue - Advanced Arthroplasty Training: Getting Beyond Disc Herniation - Objectives: In this cadaver lab setting, expert faculty discuss, demonstrate, and coach. - Faculty: Larry Khoo, MD - RSVP to booth #230 or http://zimmerbiomet.cvent.com/ISASS2018

5:30 pm - 8:30 pm  Bioskills Session Evening Hands-on-Workshop (Not CME) - PremiaSpine, Ltd - Hall G, Theater Green - ProMIS™ Fusion System – One-step Direct Skin-To-Screw Approach - TOPS™ System - Motion preserving solution for stenosis + spondy - Faculty: Dr. Bernd Illerhaus - RSVP to ronsacher@premiaspine.com

Friday, April 13, 2018

7:00 am - 8:00 am  Continental Breakfast

8:00 am - 9:00 am  General Session: Innovative Technologies II - Hall F  Moderator(s): Stephen Hochschuler, MD & Pierce Nunley, MD

8:00 am - 8:04 am  344 Comparing the Osseointegration of Seven Spinal Interbody Device Materials in an Ovine Bone Implantation Model  Speaker: G.M. Williams  Authors: W.R. Walsh(1), M.H. Pelletier(1), T. Wang(1), C. Christou(1), E.R. Walsh(1), J. Malik(2), R.M. Donahoe(2), S.S. Bannigan(2), G.M. Williams(2)  (1)University of New South Wales, Prince of Wales Hospital, Surgical and Orthopaedic Research Laboratories, Sydney, NSW, Australia, (2)NuVasive, San Diego, CA, United States

International Spine Study Group
(1) New York University Langone Orthopedic Hospital, Division of Spinal Surgery, New York, NY, United States, (2) Hospital for Special Surgery, Department of Orthopaedic Surgery, New York, NY, United States, (3) University of Pittsburgh, Department of Neurologic Surgery, Pittsburgh, PA, United States, (4) Johns Hopkins University, Department of Neurosurgery, Baltimore, MD, United States, (5) Johns Hopkins University, Department of Orthopaedics, Baltimore, MD, United States, (6) University of California Davis, Department of Orthopaedic Surgery, Sacramento, CA, United States, (7) University of California San Francisco, Department of Neurological Surgery, San Francisco, CA, United States, (8) University of Virginia, Department of Neurosurgery, Charlottesville, VA, United States

8:10 am - 8:14 am 327 Improving Spinal Fusion with Vitamin C: A Murine Model
Speaker: K. Tillinghast
Authors: K. Tillinghast(1,2), J.V. Chen(2), K. Lee(1), B. Halloran(3), A.B. Dang(1,2)
(1) University of California, San Francisco, Department of Orthopaedic Surgery, San Francisco, CA, United States, (2) San Francisco VA Health Center, Orthopaedic Translational Research Lab, San Francisco, CA, United States, (3) University of California, San Francisco, Department of Medicine, Endocrinology, San Francisco, CA, United States

8:15 am - 8:19 am 522 Non-invasive in vivo MR Spectroscopy of Lumbar Discs Correlates with Provocation Discography & Fusion Surgery Outcomes
Speaker: M.F. Gornet
(1) The Orthopedic Center of St. Louis, St Louis, MO, United States, (2) University of California San Francisco, Department of Orthopedic Surgery, Redwood City, CA, United States, (3) Scripps Clinic, Department of Orthopedic Surgery, San Diego, CA, United States, (4) Nocimed, Inc, Redwood City, CA, United States, (5) SPIRITT Research, St Louis, MO, United States

8:20 am - 8:24 am 96 Cervical Alignment Comparative Analysis of Fixed Irreducible and Reducible Atlantoaxial Dislocations
Speaker: P. Passias
(1) New York University Langone Orthopedic Hospital, Division of Spinal Surgery, New York, NY, United States, (2) SUNY Downstate Medical Center, Department of Orthopaedic Surgery, Brooklyn, NY, United States, (3) Peking University Third Hospital, Beijing, China

8:25 am - 8:29 am Discussion

8:30 am - 8:34 am 184 A Titanium Surface Treatment on PEEK Interbody Cages Significantly Improves Bone Cell Functions
Speaker: D.J. Hickey
Authors: D.J. Hickey(1), T.J. Webster(2), S. Adams(3), I. Fedder(4)
(1) Tyber Medical, Research & Development, Bethlehem, PA, United States, (2) Northeastern University, Chemical Engineering, Boston, MA, United States, (3) Duke University Hospital, Orthopedics, Durham, NC, United States, (4) St. Joseph's Hospital, Spine and Scoliosis Center, Baltimore, MD, United States

8:35 am - 8:39 am 94 Impact of Iliac Crest Bone Grafting on Postoperative Outcomes and Complication Rates Following Minimally Invasive Transforaminal Lumbar Interbody Fusion
Speaker: B. Haws
Authors: B. Haws(1), B. Khechen(1), K. Cardinal(1), J. Guntin(1), K. Singh(1)
(1) Rush University Medical Center, Orthopaedic Surgery, Chicago, IL, United States

8:40 am - 8:44 am 88 The Oblique Lumbar Inter Body Fusion (OLIF), Including the L5S1 Level, Early Post Operative Safety Profile in a Multi Center Review
8:45 am - 8:49 am  
100  **The Correlation between Cervical Alignment and Posterior Cervical Muscle Fatty Infiltration at Baseline in Cervical Deformity Patients**  
Speaker: F. Segreto  
Authors: P. Passias(1), C. Wang(1), G. Poorman(1), S. Horn(1), F. Segreto(1), C. Bortz(1), N. Stekas(1), D. Ge(1), H.J. Kim(2), V. Lafage(2), M. Gerling(1)  
(1) New York University Langone Orthopedic Hospital, Division of Spinal Surgery, New York, NY, United States, (2) Hospital for Special Surgery, Department of Orthopaedic Surgery, New York, NY, United States

8:50 am - 8:54 am  
324  **The Osteogenic Response of PEEK Implants is Improved with a Novel Ti Coating**  
Speaker: W. Walsh  
Authors: W. Walsh(1), M. Pelletier(1), C. Christou(1), J. He(2), F. Vizesi(2), S. Boden(3)  
(1) UNSW Australia, Surgical & Orthopaedic Research Laboratories, Randwick, NSW, Australia, (2) SeaSpine, Carlsbad, CA, United States, (3) Emory University, Emory Orthopaedics & Spine Center, Atlanta, GA, United States

8:55 am - 8:59 am  
Discussion

9:00 am - 10:00 am  
Symposium 4: Meet the Experts in Spine Implant Biotechnologies - Hall F  
Moderator(s): Gunnar B.J. Andersson, MD, PhD

9:00 am - 9:09 am  
PEEK, HA PEEK and Porous PEEK science

9:10 am - 9:19 am  
An Introduction to Controlled Surface Morphologies and the Hard Tissue Response

9:20 am - 9:29 am  
Titanium 3D Printing/Porous Titanium: Basic Science and Clinical Results

9:30 am - 9:39 am  
Biomechanical Pros/Cons of the Current Manufacturing Options: Coatings/3D Printing/Acid Etching/Salt Subtraction PEEK

9:40 am - 9:49 am  
Nano-technology: The Relative Importance of Material vs. Surface Topography

9:50 am - 9:59 am  
Q&A

10:00 am - 10:30 am  
Break on Exhibit Floor  
Visit ISASS18 Exhibits

10:30 am - 12:00 am  
General Session: Adult Spinal Deformity - Hall F  
Moderator(s): Massimo Balsano, MD & Matthew Scott-Young, MBBS, FRACS, FAOrthA

11:00 am - 11:02 am  
292  **Bone Marrow Concentration vs. Iliac Crest Bone Graft: 2-Year Results in a Single-Blinded Randomized Controlled Trial on Thoracolumbar Spinal Fusion Bone Grafts in Multi-Level Adult Spinal Deformity**  
Speaker: P. Passias  
11:03 am - 11:05 am  
**304 Predictive Model for Distal Junctional Kyphosis After Cervical Deformity Surgery**  
**Speaker:** P. Passias  
(1)New York University Langone Orthopedic Hospital, Division of Spinal Surgery, New York, NY, United States, (2)SUNY Downstate Medical Center, Department of Orthopaedic Surgery, Brooklyn, NY, United States, (3)Hospital for Special Surgery, Department of Orthopaedic Surgery, New York, NY, United States

11:06 am - 11:08 am  
**470 Pelvic Compensation in Sagittal Malalignment: How Much Retroversion Can the Pelvis Accommodate?**  
**Speaker:** V. Lafage  
(1)SUNY Downstate Medical Center, New York, NY, United States, (2)Hopital Européen Georges-Pompidou, Paris, France, (3)Hospital for Special Surgery, New York, NY, United States, (4)New York University Langone Orthopedic Hospital, New York, NY, United States

11:09 am - 11:11 am  
**249 Prospective Multicenter Analysis of Clinical and Radiographic Outcomes Following Surgical Correction of Patients with Moderate to Severe Cervical Deformities and Horizontal Gaze Disruption**  
**Speaker:** N. Stekas  
(1)NYU Langone Orthopedic Hospital, New York, NY, United States, (2)University of Virginia Health System, Charlottesville, VA, United States, (3)Johns Hopkins University, Baltimore, MD, United States, (4)Hospital for Special Surgery, New York, NY, United States, (5)University of California-Davis, Sacramento, CA, United States, (6)Swedish Neuroscience Institute, Seattle, WA, United States, (7)University of Kansas Medical Center, Kansas City, KS, United States, (8)University of California, San Francisco, CA, United States

11:12 am - 11:14 am  
**308 The Influence of BMI on Achieving Age Adjusted Alignment Goals in Adult Spinal Deformity Corrective Surgery with Full Body Analysis at 1 Year**  
**Speaker:** P. Passias  
(1)New York University Langone Orthopedic Hospital, Division of Spinal Surgery, New York, NY, United States, (2)SUNY Downstate Medical Center, Department of Orthopaedic Surgery, Brooklyn, NY, United States, (3)Hospital for Special Surgery, Department of Orthopaedic Surgery, New York, NY, United States

11:15 am - 11:19 am  
**Discussion**
11:20 am - 11:22 am  
**Biomechanical Assessment of Multi-rod Instrumentation Techniques Following Pedicle Subtraction Osteotomy: A Finite Element Study**  
Speaker: **A.S. Vosoughi**  
Authors: A. Seyed Vosoughi(1), A. Kiapour(1), A. Agarwal(1), V. Goel(1), J. Zavatsky(2)  
(1)University of Toledo, Bioengineering, Toledo, OH, United States, (2)Spine & Scoliosis Specialists, Tampa, FL, United States

11:23 am - 11:25 am  
**Perioperative Adverse Events in Adult and Pediatric Spine Surgery: A Prospective Cohort Analysis of 364 Consecutive Patients**  
Speaker: **A. Lovi**  
Authors: A. Lovi(1), L. Babbi(1), G. Ristori(1), S. Razza(1), A. Luca(1), M. Brayda-Bruno(1), Spine Care Group  
(1)IRCCS Orthopaedic Galeazzi Institute, Milan, Italy

11:26 am - 11:28 am  
**The Correlation of Scoliosis Research Society Questionnaires with Biomechanical Parameters Measured by with Gait and Balance Analyses in Patients with Adult Degenerative Scoliosis**  
Speaker: **I. Lieberman**  
Authors: R. Haddas(1), I. Lieberman(2)  
(1)Texas Back Institute, Research Foundation, Plano, TX, United States, (2)Texas Back Institute, Plano, TX, United States

11:29 am - 11:31 am  
**From Degenerative to Deformity: Are we Doing Enough to Restore Sagittal Balance in Short Segment Fusions?**  
Speaker: **K. Jegede**  
Authors: K. Jegede(1), J. Tishelman(1), G. Poorman(1), N. Stekas(1), L. Steinmetz(1), P. Passias(1), T. Errico(1), A. Buckland(1), T. Protopsaltis(1)  
(1)NYU Langone Orthopedic Hospital, New York, NY, United States

11:32 am - 11:34 am  
**Clinical and Radiographic Presentation and Treatment of Patients with Cervical Deformity Secondary to Thoracolumbar Proximal Juncional Kyphosis are Distinct Despite Achieving Similar Outcomes: Analysis of 123 Prospective CD Cases**  
Speaker: **P. Passias**  
(1)New York University Langone Orthopedic Hospital, Division of Spinal Surgery, New York, NY, United States, (2)Brown University Alpert Medical School, Department of Orthopaedic Surgery, Providence, RI, United States, (3)University of Pittsburgh, Department of Neurologic Surgery, Pittsburgh, PA, United States, (4)Hospital for Special Surgery, Department of Orthopaedic Surgery, New York, NY, United States, (5)SUNY Downstate Medical Center, Department of Orthopaedic Surgery, Brooklyn, NY, United States, (6)Johns Hopkins University, Department of Neurosurgery, Baltimore, MD, United States, (7)University of Virginia, Department of Neurosurgery, Charlottesville, VA, United States, (8)University of California San Francisco, Department of Neurological Surgery, San Francisco, CA, United States, (9)Swedish Neuroscience Institute, Department of Orthopaedic Surgery, Seattle, WA, United States, (10)Scripps, Department of Orthopaedics, La Jolla, CA, United States

11:35 am - 11:39 am  
**Discussion**

11:40 am - 11:42 am  
**Radiographic Analysis of Coronal and Sagittal Alignment Correction after a Strategic Staged Surgical Protocol for CMIS Correction of ASD**  
Speaker: **N. Anand**  
Authors: N. Anand(1), B. Khandehroo(1), S. Kahwaty(1), C. Kong(1), E. Nomoto(1)  
(1)Cedars Sinai Medical Center, Spine Center, Los Angeles, CA, United States

11:43 am - 11:45 am  
**Pre-Operative Extension Lateral Cervical Radiographs are Associated with...**
Osteotomy Type, Approach and Post-Operative Cervical Alignment Following Cervical Deformity Surgery
Speaker: E. Zgonis
(1)University of California, Davis, Sacramento, CA, United States, (2)Hospital for Special Surgery, New York, NY, United States, (3)Washington University, Saint Louis, MO, United States, (4)New York University Langone Orthopedic Hospital, New York, NY, United States, (5)University of Virginia, Charlottesville, VA, United States, (6)University of Kansas Medical Center, Kansas City, KS, United States, (7)San Diego Center for Spinal Disorders, La Jolla, CA, United States, (8)University of Oregon Health Sciences Center, Portland, OR, United States, (9)University of California, San Francisco, San Francisco, CA, United States

11:46 am - 11:48 am
499 Progression of Spinopelvic Parameters in Patients with Thoracolumbar Adult Spinal Deformity: A 2 Year Longitudinal Follow up
Speaker: S.Y.G. Fung
(1)National University Health System, Singapore, Singapore, (2)National University of Singapore, Singapore, Singapore

11:49 am - 11:51 am
134 The Utility of Gait Analysis in Patients with Symptomatic Adult Degenerative Scoliosis
Speaker: I. Lieberman
Authors: R. Haddas(1), I. Lieberman(2)
(1)Texas Back Institute, Research Foundation, Plano, TX, United States, (2)Texas Back Institute, Plano, TX, United States

11:52 am - 11:54 am
210 Increased Fall Rate and Fall Risk in Adult Spinal Deformity Patients is Associated with Sagittal Alignment Parameters
Speaker: J. Godzik
Authors: J. Godzik(1), R. Mauria(2), R. Hlubek(1), C. Walker(1), A. Whiting(1), U. Kakarla(1), J. Turner(1)
(1)Barrow Neurological Institute, Phoenix, AZ, United States, (2)Creighton Medical School, Ahoenix, AZ, United States

11:55 pm - 11:59 pm
Discussion

12:00 pm - 1:00 pm
General Session: ACSR at ISASS - Hall F
Moderator(s): Alexader R. Vaccaro, MD, PhD, MBA

12:00 pm - 12:15 pm
Robotics: What can we expect in the next 5-10 years?

12:16 pm - 12:30 pm
Navigation: Is it already ancient history?

12:31 pm - 12:45 pm
Surgical Planning Software: Has there been a measureable impact?

12:45 pm - 12:59 pm
Discussion

1:00 pm - 2:00 pm
General Session: Pediatric Spine - Hall F
Moderator(s): Aaron Buckland, MD & Neel Anand, MD

1:00 pm - 1:04 pm
182 Neurologic Outcome Following Differential Resolution of Neuromonitoring Alerts during Pediatric Spine Surgery
Speaker: A.K. Sestokas
1:05 pm - 1:09 pm  201 Surgical Management of Congenital Spinal Hernia Combined with Hydrocephalus
Speaker: J. Arzikulov
Authors: J. Arzikulov(1), T. Axmediev(2), M. Axmediev(3)
(1)Tashkent Medical Academy / Republic Research Center of Neurosurgery, Tashkent, Uzbekistan, (2)Tashkent Medical Academy / Republic Research Center of Neurosurgery, Pediatric Surgery, Tashkent, Uzbekistan, (3)Tashkent Medical Academy / Republic Research Center of Neurosurgery, Pediatric Neurosurgery, Tashkent, Uzbekistan

1:10 pm - 1:14 pm  300 Spinopelvic alignment affects Health-related Quality of Life (HRQoL) for Patients with Early Onset Scoliosis
Speaker: J.F. Schulz
(1)Children's Hospital at Montefiore Medical Center, Orthopaedic Surgery, Bronx, NY, United States, (2)University of Zagreb, Zagreb, Croatia, (3)IWK Health Centre, Halifax, NS, Canada, (4)University of Calgary, Calgary, AB, Canada, (5)Children's Spine Study Group, Valley Forge, PA, United States, (6)Hospital for Special Surgery, New York City, NY, United States, (7)University of Utah, Salt Lake City, UT, United States, (8)Children's Hospital of Los Angeles, Los Angeles, CA, United States

1:15 pm - 1:19 pm  60 Developments in the Treatment of Chiari Type 1 Malformations over the Past Decade
Speaker: L. Steinmetz
(1)New York University Langone Orthopedic Hospital, Division of Spinal Surgery, New York, NY, United States, (2)SUNY Downstate Medical Center, Department of Orthopaedic Surgery, Brooklyn, NY, United States

1:20 pm - 1:24 pm  295 The Reliability of Pre-operative Prone Radiographs to Determine Spinal Curve Flexibility in Adolescent Idiopathic Scoliosis
Speaker: J.F. Schulz
Authors: T. Joshi(1), R. Hanstein(2), J.A. Gomez(2), J.F. Schulz(2)
(1)Drexel University College of Medicine, Philadelphia, PA, United States, (2)Children's Hospital at Montefiore Medical Center, Orthopaedic Surgery, Bronx, NY, United States

1:25 pm - 1:29 pm  Discussion

1:30 pm - 1:34 pm  445 Convex Manipulation versus All Level One Side Instrumentation in Lenke Type 3 and 6 Scoliosis: Technical Features, Results and Complications
Speaker: L. Oggiano
Authors: L. Oggiano(1), S. Sessa(1), C. Curri(1), G. La Rosa(1)
(1)Bambino Gesù Children's Hospital, Department of Surgery, Rome, Italy

1:35 pm - 1:39 pm  618 Cervical Deformity in Adolescent Idiopathic Scoliosis Patients: Is it Clinically Significant?
Speaker: I. Lieberman
Authors: I. Lieberman(1), X. Hu(1)
(1)Texas Back Institute, Texas Health Presbyterian Hospital Plano, Scoliosis and Spine Tumor Center, Plano, TX, United States
1:40 pm - 1:44 pm  478 Final Fusion in Patients Affected by EOS Treated by Magnetically Controlled Growing Rods (MCGR): Results and Complications
Speaker: C. Curri
Authors: C. Curri(1), L. Oggiano(1), S. Sessa(1), G. La Rosa(1)
(1)Bambino Gesù Children’s Hospital, Department of Surgery, Orthopaedic Unit, Rome, Italy

1:45 pm - 1:49 pm  494 Does Surgical Approach affect Outcomes in AIS Patients with 70° or Larger Curves with Less than 30% Curve Flexibility?
Speaker: S.Y.G. Fung
(1)National University Health System, Singapore, Singapore, (2)National University of Singapore, Singapore, Singapore

1:50 pm - 1:54 pm  45 Trends in Treatment of Scheuermann’s Kyphosis: A Study of 1070 Cases from 2003-2012
Speaker: P. Passias
(1)New York University Langone Orthopedic Hospital, Division of Spinal Surgery, New York, NY, United States, (2)SUNY Downstate Medical Center, Department of Orthopaedic Surgery, Brooklyn, NY, United States, (3)Johns Hopkins University, Department of Neurosurgery, Baltimore, MD, United States, (4)Hospital for Special Surgery, Department of Orthopaedic Surgery, New York, NY, United States

1:55 pm - 1:59 pm  Discussion

2:00 pm - 3:00 pm  General Session: Biomechanics - Hall F
Moderator(s): Saeed Khyatzadeh, MD & Óscar L Alves, MD

2:00 pm - 2:04 pm  515 Muscular Energy Expenditure during Dynamic Balance Test in Adult Degenerative Scoliosis Patients Compared to Controls
Speaker: R. Haddas
Authors: R. Haddas(1), I. Lieberman(2)
(1)Texas Back Institute, Research Foundation, Plano, TX, United States, (2)Texas Back Institute, Plano, TX, United States

2:05 pm - 2:09 pm  50 Cervical Deformity Patients with Concurrent Thoracolumbar Deformity Recruit More Lower Limb Compensation
Speaker: P. Passias
(1)New York University Langone Orthopedic Hospital, Division of Spinal Surgery, New York, NY, United States, (2)Hospital for Special Surgery, Department of Orthopaedic Surgery, New York, NY, United States

2:10 pm - 2:14 pm  209 Tailoring Selection of Transforaminal Interbody Spacer Based on Biomechanical Characteristics and Surgical Goals: Evaluation of an Expandable Spacer
Speaker: J. Godzik
Authors: J. Godzik(1), J. Lehrman(2), A. Newcomb(2), M. Ramkumar(2), A. Whiting(1), B. Kelly(2), L. Snyder(1)
(1)Barrow Neurological Institute, Phoenix, AZ, United States, (2)Barrow Neurological Institute, Spinal Biomechanics Laboratory, Phoenix, AZ, United States

2:15 pm - 2:19 pm  24 Biomechanical Effects of the Lordotic Angle of Hyperlordotic Interbody Cage on
Lumbar Spine
Speaker: Z. Zhang
Authors: W. Liu(1), Z. Zhang(1), G. Fogel(2), Z. Liao(3), J. Zhu(3)
(1)Tsinghua University, Mechanical Engineering, Beijing, China, (2)Spinepainbegone, San Antonio, TX, United States, (3)Institute of Tsinghua University in Shenzhen, Biomechanics and Biotechnology Lab, Shenzhen, China

2:20 pm - 2:24 pm
118 Endplate Deformation due to Open versus Strutted Intervertebral Devices
Speaker: A. Valdevit
Authors: A. Valdevit(1,2), A. Kedzierska(2), M.B. Gallagher(3), J.M. Schneider(3), P.F. Ullrich(3)
(1)SEA Limited, Biomedical Engineering, Columbus, OH, United States, (2)Stevens Institute of Technology, Biomedical Engineering, Hoboken, NJ, United States, (3)Titan Spine, LLC, Research, Mequon, WI, United States

2:25 pm - 2:29 pm
Discussion

2:30 pm - 2:34 pm
265 Variations among Human Spine Segments and Their Relationships to in vitro Kinematics: A Retrospective Analysis of Experimental Data Including 581 Cervical Motion Segments from 147 Donor Spines
Speaker: A. Newcomb
Authors: A. Newcomb(1), J. Lehrman(1), N. Crawford(1), B. Kelly(1)
(1)Barrow Neurological Institute, Spinal Biomechanics Lab, Phoenix, AZ, United States

2:35 pm - 2:39 pm
135 Finite Element Analysis of Pre and Post Lumbar Fusion for Adult Degenerative Scoliosis Patients
Speaker: R. Haddas
Authors: R. Haddas(1), M. Xu(2), I. Lieberman(3), J. Yang(2)
(1)Texas Back Institute, Research Foundation, Plano, TX, United States, (2)Texas Tech University, Mechanical Engineering, Lubbock, TX, United States, (3)Texas Back Institute, Plano, TX, United States

2:40 pm - 2:44 pm
109 Interpreting 2-Dimensional and 3-Dimensional Alignment in Adolescent Idiopathic Scoliosis – How Should Thoracic Kyphosis Be Defined?
Speaker: N. Frangella
Authors: S. Ramchandran(1), A. Sure(1), J. Moon(1), P. Zhou(1), N. Frangella(1), L. Steinmetz(1), T. Errico(1), A. Buckland(1)
(1)New York University Langone Orthopedic Hospital, Division of Spinal Surgery, New York, NY, United States

2:45 pm - 2:49 pm
195 Off-axis Rotation of the Sacroiliac Joint: An In-vitro Study
Speaker: K. Odeh
Authors: K. Odeh(1), B. Taylor(2), C. Purviance(2), G. Gajudo(2), D. Lindsey(3), S. Yerby(3), D. Kondrashov(1,4), J. Leasure(1,2)

2:50 pm - 2:54 pm
567 How Important Is the Biological Fusion in a Long Lumbopelvic Spinal Fixation? – An In-silico Biomechanics Analysis
Speaker: W. Wang
Authors: W. Cho(1), W. Wang(2), B. Bucklen(2)
(1)Albert Einstein College of Medicine/Montefiore Medical Center, Department of Orthopaedic Surgery, Bronx, NY, United States, (2)Musculoskeletal Education of Research Center, Biomechanics, Audubon, PA, United States

2:55 pm - 2:59 pm
Discussion
3:00 - 3:15
Close of ISASS18