

ISASS18 | Toronto, Ontario, Canada

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 EVoluSlon 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. Stuesson](#)
Authors: J. Dengler(1), D. Kools(2), R. Pflugmacher(3), A. Gasbarrini(4), D. Prestamburgo(5), P. Gaetani(6), D. Cher(7), B. Stuesson(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, Ängelholm Hospital, Department of Orthopedics, Ängelholm, 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)Brigham and Women's Hospital, Neurosurgery, Boston, MA, United States, (2)Harvard Medical School, 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)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. Sweeney(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)Reston Hospital Center, Orthopaedic Surgery, Reston, VA, United States, (5)Reston Hospital Center, Orthopaedics, 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](#)
Authors: B. Khechen(1), B. Haws(1), A. Narain(1), F. Hijji(1), B. Mayo(1), D. Massel(1), D. Bohl(1), J. Guntin(1), K. Cardinal(1), K. Singh(1)
(1)Rush University Medical Center, Orthopaedic Surgery, Chicago, IL, United States

- 11:34 am - 11:37 am **213 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 **162 5-year Follow-up of Interlaminar Stabilization Surgery in the ≤ 65 Year Old Patient: More Value, Less Cost**
 Speaker: [A.T. Breceovich](#)
 Authors: A.T. Breceovich(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 **582 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 **193 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**

2:21 pm - 2:30 pm	Panel Discussion
2:30 pm - 3:30 pm	General Session: Tumor, Trauma, Infection - Hall F Moderator(s): Rolando Garcia, MD & Oscar Alves, MD
2:30 pm - 2:33 pm	<p>196 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 Authors: A. Nater(1), L.A. Tetreault(2), B. Kopjar(3), P.M. Arnold(4), M.B. Dekutoski(5), J.A. Finkelstein(6), C.G. Fisher(7), J.C. France(8), Z.L. Gokaslan(9), L. Rhines((1)0), P.S. Rose((1) (1)), A. Sahgal(6), J.M. Schuster((1)(2)), A.R. Vaccaro((1)(3)), M.G. Fehlings((1)(4)) (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)0)MD Anderson Cancer Center, Houston, TX, United States, ((1)(1))Mayo Clinic, Rochester, MN, United States, ((1) (2))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</p>
2:34 pm - 2:37 pm	<p>554 Multi-level Vertebroctomy 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</p>
2:38 pm - 2:41 pm	<p>199 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</p>
2:42 pm - 2:45 pm	<p>467 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. Sciubba(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</p>
2:46 pm - 2:49 pm	<p>451 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</p>
2:54 pm - 2:59 pm	Discussion

- 3:00 pm - 3:03 pm **54 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
- 3:04 pm - 3:07 pm **343 The Prevalence of Occult Bacteria in Patients Undergoing Primary Spine Surgery**
Speaker: C. Dowe
Authors: C. Dowe(1), A. Breceovich(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
- 3:08 pm - 3:11 pm **185 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
- 3:12 pm - 3:15 pm **625 A Novel Approach for the Intraoperative Detection of Acute C5 Nerve Root Palsies**
Speaker: J.W. Silverstein
Authors: J.W. Silverstein(1), M.J. Goldstein(2), N.P. Shah(3), D. Porter(4), R. Madhok(5), J.F. Harrington, Jr.(6), S.K. Basra(7)
(1)Neuro Protective Solutions, Clinical Neurophysiology, Hauppauge, NY, United States, (2)Orthopedic Associates of Manhasset, Great Neck, NY, United States, (3)Connecticut Neck and Back Specialists, Danbury, NY, United States, (4)Neuro Protective Solutions, Hauppauge, NY, United States, (5)Neuroaxis Neurosurgical Associates, New York, NY, United States, (6)Neuro Brain & Spine Surgery, Stony Brook, NY, United States, (7)Long Island Spine Specialists, Commack, NY, United States
- 3:16 pm - 3:19 pm **636 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. Sonnewane(1), R. Patel(1), R. Nivetha(1)
(1)National University Health System, Orthopaedics, Singapore, Singapore
- 3:24 pm - 3:29 pm **Discussion**
- 3:30 pm - 4:00 pm Break on Exhibit Floor Visit ISASS18 Exhibits**
- 4:00 pm - 5:00 pm General Session: Value and Outcomes in Spine Surgery - Hall F**
Moderator(s): **Kris Siemenow, MD & Cyrus Jensen, MD**
- 4:00 pm - 4:03 pm **188 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
- 4:04 pm - 4:07 pm **429 A General Population Utility Valuation Study for Metastatic Spinal Cord Compression**
Speaker: M. Pahuta

Authors: M. Pahuta(1), J. Werier(2), E. Wai(2), D. Coyle(3)

(1)Henry for Health System, Orthopedic and Neurological Surgery, Detroit, MI, United States,

(2)The Ottawa Hospital, Ottawa, ON, Canada, (3)University of Ottawa, Ottawa, ON, Canada

4:08 pm - 4:11 pm

247 Identifying Sources of Improvement of Axial Pain in Corrective Cervical Deformity Surgery

Speaker: N. Stekas

Authors: P. Passias(1), G. Poorman(1), S. Horn(1), B. Diebo(2), F. Segreto(1), C. Bortz(1), L. Steinmetz(1), D. Ge(1), E. Klineberg(3), C. Shaffrey(4), V. Lafage(5), T. Protopsaltis(1), C. Ames(6), J. Smith(7), G. Mundis(8), B. Neuman(9), R. Hart((1)0), D. Burton((1)(1)), International Spine Study Group

(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

- 4:20 pm - 4:24 pm **Discussion**
- 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](#)
Authors: P. Passias(1), S. Horn(1), G. Poorman(1), A. Daniels(2), K. Hamilton(3), H. Kim(1), D. Sciubba(4), J. Smith(5), B. Neuman(6), N. Stekas(1), C. Bortz(1), F. Segreto(1), L. Steinmetz(1), B. Diebo(7), C. Shaffrey(5), V. Lafage(8), R. Lafage(8), T. Protopsaltis(1), C. Ames(9), R. Hart((1)0), G. Mundis((1)1)), R. Eastlack((1)1)), International Spine Study Group
(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
- 4:41 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)

(1)UCLA, Orthopaedic Surgery, Santa Monica, CA, United States

4:49 pm - 5:00 pm

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

Authors: J. Yang(1,2), V. Lafage(1), R. Lafage(1), J. Smith(3), E. Klineberg(4), C. Shaffrey(3), G. Mundis(5), R. Hostin(6), D. Burton(7), C. Ames(8), S. Bess(9), F. Schwab(1), International Spine Study Group (ISSG)

(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

Authors: R. Lafage(1), F. Schwab(1), E. Klineberg(2), D. Burton(3), S. Bess(4), H.J. Kim(1), J. Smith(5), C. Ames(6), R. Hostin(7), C. Shaffrey(5), G. Mundis(8), V. Lafage(1), International Spine Study Group (ISSG)

(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

Authors: M. Gupta(1), R. Lafage(2), M. Kelly(1), C. Shaffrey(3), G. Mundis(4), R. Hostin(5), D. Burton(6), C. Ames(7), F. Schwab(2), H.J. Kim(2), E. Klineberg(8), S. Bess(9), J. Smith(3), V. Lafage(2), International Spine Study Group (ISSG)

(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,

(4)San Diego Center for Spinal Disorders, La Jolla, CA, United States, (5)Baylor Scoliosis Center, Plano, TX, United States, (6)University of Kansas Medical Center, Kansas City, KS, United States, (7)University of California, San Francisco, San Francisco, CA, United States, (8)University of California, Davis, Sacramento, CA, United States, (9)Denver International Spine Center, Denver, CO, 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

Authors: T. Pannu(1), R. Lafage(1), J. Smith(2), C. Shaffrey(2), G. Mundis(3), R. Hostin(4), C. Ames(5), L. Lenke(6), M. Gupta(7), H.J. Kim(1), S. Bess(8), J. Gum(9), F. Schwab(1), V. Lafage(1), International Spine Study Group (ISSG)

(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

Authors: N. Plais(1), H. Bao(2), H.J. Kim(1), M. Gupta(3), V. Lafage(1), J. Smith(4), G. Mundis(5), R. Hostin(6), D. Burton(7), C. Ames(8), E. Klineberg(9), S. Bess((1)0), F. Schwab(1), R. Lafage(1), International Spine Study Group (ISSG)

(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

Authors: T. Protopsaltis(1), S. Ramchandran(1), J. Tishelman(1), N. Stekas(1), D. Ge(1), J. Smith(2), B. Neuman(3), G. Mundis(4), R. Lafage(5), E. Klineberg(6), K. Hamilton(7), V. LaFage(5), M. Gupta(8), R. Hart(9), F. Schwab(5), D. Burton((1)0), S. Bess((1)(1)), C. Shaffrey((1)(2)), C. Ames((1)(3)), International Spine Study Group

(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,

Pittsburgh, PA, United States, (8)BJC Institute of Health at Washington University School of Medicine, Saint Louis, MO, United States, (9)Swedish Neuroscience Institute, Seattle, WA, United States, ((1)0)University of Kansas Medical Center, Kansas City, KS, United States, ((1)(1))Denver International Spine Clinic, Denver, CO, United States, ((1)(2))University of Virginia Medical Center, Charlottesville, VA, United States, ((1)(3))University of California, San Francisco, CA, United States

5:23 pm - 5:24 pm

71 Full-body Analysis of Adult Spinal Deformity Patients' Age-adjusted Alignment at 1 Year

Speaker: P. Passias

Authors: S. Horn(1), N. Frangella(1), G. Poorman(1), D. Vasquez-Montes(1), B. Diebo(2), C. Bortz(1), F. Segreto(1), L. Steinmetz(1), N. Stekas(1), J. Moon(1), P. Zhou(1), S. Vira(1), A. Sure(1), M. Siow(1), J. Tishelman(1), B. Beaubrun(1), W. Bronson(1), C. Wang(1), T. Errico(1), V. Lafage(3), A. Buckland(1), P. Passias(1)

(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

Authors: A. Buckland(1), P. Zhou(1), J. Moon(1), J. Tishelman(1), B. Beaubrun(1), L. Steinmetz(1), S. Horn(1), N. Stekas(1), D. Vasquez-Montes(1), G. Poorman(1), T. Errico(1), T. Protopsaltis(1), J. Vigdorichik(1)

(1)New York University Langone Orthopedic Hospital, Division of Spinal Surgery, New York, NY, United States

NY, United States

- 5:38 pm - 5:39 pm **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
- 5:40 pm - 5:44 pm **Discussion**
- 5:45 pm - 5:46 pm **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
- 5:47 pm - 5:48 pm **42 Cervical vs Thoracolumbar Spinal Deformities: A Comparison of Baseline Quality-of-Life Burden**
Speaker: [P. Passias](#)
Authors: P. Passias(1), G. Poorman(1), V. Lafage(2), J. Smith(3), C. Ames(4), C. Shaffrey(5), S. Horn(1), C. Wang(1), C. Varlotta(1), C. Bortz(1), F. Segreto(1), N. Stekas(1), R. Hart(6), D. Burton(7), R. Lafage(2), S. Bess(8), D. Sciubba(9), 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)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
- 5:49 pm - 5:50 pm **158 Severity of Hip Osteoarthritis Affects Lower Extremity Compensatory Mechanisms in Spinopelvic Malalignment**
Speaker: [N. Frangella](#)
Authors: L. Day(1), B. Beaubrun(2), P. Zhou(2), J. Moon(2), J. Tishelman(2), L. Steinmetz(2), C. Varlotta(2), N. Frangella(2), E. DeSole(2), D. Vasquez-Montes(2), J. Vigdorich(2), R. Schwarzkopf(2), R. Lafage(3), V. Lafage(3), T. Protopsaltis(2), P. Passias(2), T. Errico(2), A. Buckland(2)
(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
- 5:51 pm - 5:52 pm **296 Differences in Primary and Revision Deformity Surgeries: Following 1,063 Primary Thoracolumbar Adult Spinal Deformity Fusions over Time**
Speaker: [D. Ge](#)
Authors: G. Poorman(1), P. Zhou(1), D. Vasquez-Montes(1), S. Horn(1), F. Segreto(1), C. Bortz(1), D. Ge(1), N. Stekas(1), J. Auerbach(2), J. Moon(1), J. Tishelman(1), M. Gerling(1), B. Diebo(3), R. de la Garza Ramos(1), J. Paul(1), P. Passias(1)
(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

- 5:53 pm - 5:54 pm **441 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
- 5:55 pm - 6:00 pm **Discussion**
- 5:00 pm - 6:00 pm Lightning Podiums: Value and Outcomes in Spinal Surgery - Room 801B**
Moderator(s): **Domagoj Coric, MD**
- 5:00 pm - 5:01 pm **14 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
- 5:02 pm - 5:03 pm **252 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
- 5:04 pm - 5:05 pm **176 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
- 5:06 pm - 5:07 pm **234 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
- 5:08 pm - 5:09 pm **508 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
- 5:10 pm - 5:14 pm **Discussion**
- 5:15 pm - 5:16 pm **190 Thoracolumbar Osteoporotic Vertebral fracture with Delayed-onset Myelopathy: Clinical Presentation and Surgical Outcomes**
Speaker: [J.-Y. Seo](#)
Authors: J.-Y. Seo(1), K.-Y. Ha(2), Y.-H. Kim(2), S.-I. Kim(2)
(1)Jeju National University Hospital, Department of Orthopaedic Surgery, Jeju, Korea,

Republic of, (2)Seoul St. Mary's Hospital, Orthopaedic Surgery, Seoul, Korea, Republic of

- 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

- 5:38 pm - 5:39 pm **562 The Need to Improve Prediction of Responders and Non-responders in Elective Spine, Hip, and Knee Surgery: A Health-economic Argument**
 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)Neurospine Institute Medical Group, San Francisco, CA, United States, (8)University of Medical Sciences, Department of Spinal

- 5:02 pm - 5:03 pm **609 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 **416 Prevalence of Positive Bacterial Culture in Intervertebral Discs of Patients Undergoing Anterior Cervical Decompression and Fusion**
Speaker: [L. Bivona](#)
Authors: A. Bandutia(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 **354 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 **116 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 **381 Dysphagia Following Anterior Cervical Spine Surgery: Assessment Using an Abridged SWAL-QOL**
Speaker: [B. Mayo](#)
Authors: B. Khechen(1), B. Haws(1), B. Mayo(1), D. Massel(1), D. Bohl(1), A. Narain(1), F. Hijji(1), J. Guntin(1), K. Cardinal(1), K. Singh(1)
(1)Rush University Medical Center, Orthopaedic Surgery, Chicago, IL, United States
- 5:17 pm - 5:18 pm **336 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 **474 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 **5 Ambulatory Anterior Cervical Discectomy and Fusion is Associated with a Higher Risk of Perioperative Complications**
Speaker: [D. Park](#)

Authors: D. Park(1), A. Arshi(2), H. Park(2), C. Wang(3), Z. Buser(3), J. Wang(3), A. Shamie(2)
(1)UCLA, Orthopaedic Surgery, Santa Monica, CA, United States, (2)UCLA, Los Angeles, CA, United States, (3)University of Southern California, Los Angeles, CA, United States

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)

(1)Centro Hospitalar Vila Nova de Gaia, Neurosurgery, Vila Nova de Gaia, Portugal, (2)Centro Hospitalar Vila Nova de Gaia, Vila Nova de Gaia, Portugal, (3)Hospital Américo Boavida, Luanda, Angola, (4)Hospital Lusíadas Porto, Porto, Portugal

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](#)

Authors: P. Passias(1), S. Horn(1), C. Bortz(1), S. Ramachandran(1), D. Burton(2), T. Protopsaltis(1), R. Lafage(3), V. Lafage(3), B. Diebo(4), G. Poorman(1), F. Segreto(1), D. Ge(1), N. Frangella(1), J. Smith(5), C. Ames(6), C. Shaffrey(7), H.J. Kim(8), B. Neuman(9), A. Daniels(8), A. Soroceanu(10), E. Klineberg(11), International Spine Study Group
(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

Orthopedics, New York, NY, United States, (4)SUNY Downstate Medical Center, Department of Orthopedics, Brooklyn, NY, United States, (5)University of Virginia, Department of Neurosurgery, Charlottesville, VA, United States, (6)University of California San Francisco, Department of Neurological Surgery, CA, United States, (7)University of Virginia, Charlottesville, VA, United States, (8)Hospital for Special Surgery, New York, NY, United States, (9)Johns Hopkins Medical Center, Baltimore, MD, United States, ((1)0)University of Calgary, Calgary, AB, Canada, ((1)(1))University of California Davis, Davis, CA, United States

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

- 5:02 pm - 5:03 pm **534 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((1)0), N. Crawford(2), B. Bucklen(2), M. Lendner((1)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, ((1)0)Inland Neurosurgery and Spine Associates, Spokane, WA, United States, ((1)1)Technion American Medical School (2)0(2)0, Spine Research Fellow I Rothman Institute, Philadelphia, PA, United States
- 5:04 pm - 5:05 pm **9 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
- 5:06 pm - 5:07 pm **638 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
- 5:08 pm - 5:09 pm **579 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
- 5:10 pm - 5:14 pm **Discussion**
- 5:15 pm - 5:16 pm **99 Effect of Cervical Deformity Correction on Spinal Cord Volume and Stenosis**
Speaker: [P. Passias](#)
Authors: P. Passias(1), G. Poorman(1), C. Wang(1), T. Protopsaltis(1), C. Shaffrey(2), R. Hart(3), V. Lafage(4), B. Diebo(5), J. Smith(6), S. Horn(1), F. Segreto(1), C. Bortz(1), N. Stekas(1), L. Steinmetz(1), C. Ames(7), R. Lafage(4), H.J. Kim(4), International Spine Study Group
(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

- 5:17 pm - 5:18 pm **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
- 5:19 pm - 5:20 pm **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
- 5:21 pm - 5:22 pm **106 How do you Define Minimally Invasive Spine Surgery in the Context of Current Surgical Invasiveness Index?**
Speaker: M. Moawad
Authors: A. Buckland(1), J. Moon(1), S. Ramchandran(1), M. Siow(1), P. Zhou(1), D. Vasquez-Montes(1), N. Stekas(1), L. Steinmetz(1), J. Goldstein(1), J. Bendo(1), Y. Kim(1), T. Errico(1), T. Protopsaltis(1), P. Passias(1)
(1)New York University Langone Orthopedic Hospital, Division of Spinal Surgery, New York, NY, United States
- 5:23 pm - 5:24 pm **248 Comparative Analysis of Changes in Spinal Canal Dimension and Myelopathy Improvement between Patients with and without Cervical Deformity**
Speaker: P. Passias
Authors: P. Passias(1), G. Poorman(1), C. Wang(1), S. Vira(1), C. Jalai(1), B. Diebo(2), S. Horn(1), C. Bortz(1), F. Segreto(1), L. Steinmetz(1), C. Varlotta(1), J. Tishelman(1), S. Wang(3), R. Lafage(4), V. Lafage(4)
(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
- 5:25 pm - 5:29 pm **Discussion**
- 5:30 pm - 5:31 pm **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
- 5:32 pm - 5:33 pm **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
- 5:34 pm - 5:35 pm **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

- 5:36 pm - 5:37 pm **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
- 5:38 pm - 5:39 pm **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
Authors: A. Buckland(1), B. Beaubrun(1), E. Isaacs(1), J. Moon(1), P. Zhou(1), S. Horn(1), G. Poorman(1), J. Tishelman(1), L. Steinmetz(1), C. Varlotta(1), L. Day(2), T. Errico(1), P. Passias(1), T. Protopsaltis(1)
(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. Breceovich(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)

(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

5:55 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 Malalignment 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](#)

Authors: S. Horn(1), D. Vasquez-Montes(1), A. Sure(1), M. Siow(1), G. Poorman(1), B. Diebo(2), C. Bortz(1), F. Segreto(1), C. Varlotta(1), N. Stekas(1), P. Zhou(1), J. Moon(1), J. Tishelman(1), B. Beaubrun(1), C. Wang(1), S. Vira(1), M. Gerling(1), T. Protopsaltis(1), T. Errico(1), A. Buckland(1), P. Passias(1)

(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](#)
Authors: P. Passias(1), S. Horn(1), G. Poorman(1), S. Vira(1), D. Vasquez-Montes(1), C. Bortz(1), F. Segreto(1), N. Frangella(1), D. Ge(1), J. Moon(1), P. Zhou(1), B. Diebo(2), A. Sure(1), J. Tishelman(1), B. Beabrun(1), C. Jalai(1), C. Wang(1), T. Errico(1), T. Protopsaltis(1), A. Buckland(1), V. LaFage(3)
(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](#)
Authors: M.F. Gornet(1), K.D. Riew(2), T.H. Lanman(3), J.K. Burkus(4), S.D. Hodges(5), J.R. McConnell(6), R.F. Dryer(7), A.G. Copay(8), F.W. Schranck(8)
(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](#)

Authors: S. Miyazaki(1,2), K. Kato(1), K. Chang(1), W.C. Bae(3), Y. Sun(4), W. Jiang(4), J. Yamada(1), E. Abarado(1), E. Linn(1), C. Muehleman(1), M.E. Lenz(1), R.L. Sah(1), A.D. Diwan(5), K. Masuda(1)
(1)University of California, San Diego, Departments of Orthopaedic Surgery, La Jolla, CA, United States, (2)Kobe University Graduate School of Medicine, (1)Departments of Orthopaedic Surgery, Kobe, Japan, (3)University of California, San Diego, Departments of Radiology, La Jolla, CA, United States, (4)University of California, San Diego, Departments of Bioengineering, La Jolla, CA, United States, (5)St. George Hospital University, Orthopaedics Research Institute and Department of Orthopaedic Surgery, Sydney, NSW, Australia

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

Authors: M.F. Gornet(1), T.H. Lanman(2), J.K. Burkus(3), S.D. Hodges(4), J.R. McConnell(5), R.F. Dryer(6), F.W. Schranck(7), A.G. Copay(7)

(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

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

5:53 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

635 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

141 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

392 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

436 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

151 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)Relieva 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. Schaeeren(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
- 5:19 pm - 5:20 pm **319 Traumatic Fractures of the Cervical Spine: Analysis of Changes in Incidence, Etiology, Concurrent Injuries and Complications Among 488,262 Patients from 2005-2013.**
Speaker: [P. Passias](#)
Authors: P. Passias(1), G. Poorman(1), F. Segreto(1), C. Jalai(1), S. Horn(1), C. Bortz(1), D. Vasquez-Montes(1), D. Ge(1), N. Stekas(1), B. Diebo(2), S. Vira(1), O. Bono(1), R. De La Garza-Ramos(3), J. Moon(1), C. Wang(4), B. Hirsch(1), P. Zhou(1), M. Gerling(1), H. Koller(5), V. Lafage(6)
(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 Wildungnen, 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

- 5:32 pm - 5:33 pm **75 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
- 5:34 pm - 5:35 pm **600 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
- 5:36 pm - 5:37 pm **514 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
- 5:38 pm - 5:39 pm **578 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
- 5:40 pm - 5:44 pm **Discussion**
- 5:45 pm - 5:46 pm **563 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
- 5:47 pm - 5:48 pm **174 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
- 5:49 pm - 5:50 pm **414 Relationship between Thoracolumbar Alignment and Lower Limb Alignment**
Speaker: J. Elysee
Authors: J. Elysee(1), R. Lafage(1), S. Pesenti(2), J. Varghese(3), J. Moon(4), P. Zhou(4), J. Tishelman(4), B. Beaubrun(4), D. Vasquez-Montes(4), T. Protosaltis(4), T. Errico(4), A. Buckland(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)New York University Langone Orthopedic Hospital, New York, NY, United States
- 5:51 pm - 5:52 pm **350 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)

(1)Allegheny Health Network, Neuroscience Institute, Pittsburgh, PA, United States,
(2)Allegheny Health Network, Department of Orthopaedic Surgery, Pittsburgh, PA, United States, (3)SI-BONE, Inc., San Jose, CA, United States

- 5:53 pm - 5:54 pm **189 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
- 5:55 pm - 6:00 pm **Discussion**
- 6:00 pm - 7:30 pm **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),

J.H. Choi(1), S.K. Chung(1), J.H. Kim(1), I.T. Jang(4), S.H. Oh(5), Jae Eun Park, Sol Lee
(1)Nanoori Suwon Hospital, Neurosurgery, Suwon, Korea, Republic of, (2)Hasan Sadikin
Hospital, College of Medicine, Padjadjaran University, Neurosurgery, Bandung, Jawa Barat,
Indonesia, (3)Grande International Hospital, Kathmandu, Nepal, (4)Nanoori Hospital,
Neurosurgery, Seoul, Korea, Republic of, (5)Nanoori Incheon Hospital, Neurosurgery,
Incheon, Korea, Republic of

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](#)

Authors: H.-K. Tsou(1), S.-C. Shen(1), Y.-T. Shih(2), H.-T. Chen(3), C.-L. Tang(1), R.-H. Lin(1)
(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](#)

Authors: N. Adsul(1), H.S. Kim(1), S.H. Choi(1), K.J. Kim(1), J.H. Kim(1), S.K. Chung(1), J.H.
Choi(1), J.S. Jang(1), I.T. Jang(2), S.H. Oh(3), Jae Eun Park, Sol Lee

(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](#)

Authors: K. Madhavan(1), H.-K. Chang(2), J.P. Kolcun(1), T. Urakov(1), J. Grossman(3), M.Y.
Wang(1)

(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): Theiry 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**

Speaker: [V. Lafage](#)

Authors: N. Bronsard(1), C. Amabile(2), A. Ianessi(1), B. Moal(2), W. Skalli(2), H. Bao(3), F. Schwab(4), F. de Peretti(1), V. Lafage(4)

(1)Centre Hospitalier Universitaire de Nice, Nice, France, (2)Laboratoire de Biomécanique, Arts et Métiers ParisTech, Paris, France, (3)Nanjing Drum Tower Hospital, Nanjing, China, (4)Hospital for Special Surgery, New York, NY, United States

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](#)

Authors: J. Hipp(1), O. Avila-Montes(1), P. Newman(1)
(1)Medical Metrics, Research & Development, Houston, TX, United States

- 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](#)
Authors: S.W. Kim(1), S.-H. Paik(1), J.-K. Oh(1), Y.-H. Kwak(1), H.-W. Lee(1), K.-H. You(1)
(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](#)
Authors: R. Sasso(1), D. Coric(2), F. Phillips(3), R. Guyer(4), S. Blumenthal(4), J. Zigler(4), A. Sama(5), F. Cammisa(5), T. Albert(5)
(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 **439 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. Ralibone(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 **532 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 **628 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 **11 Do Cervical Spine Surgery Patients Recall Their Preoperative Status? A Cohort Study of Recall Bias in Patient-reported Outcomes**
Speaker: [I. Aleem](#)
Authors: M.T. Shamaa(1), I. Aleem(2), B. Currier(3), M.J. Yaszemski(3), H. Poppendeck(3), P.M. Huddleston(3), J. Eck(4), J. Rhee(5), M. Bydon(6), B. Freedman(3), A. Nassr(7)
(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 **316 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 **401 Cervical Mismatch: The Normative Value of T1S-CL and its Ability to Predict Ideal CL**
Speaker: [D. Stein](#)
Authors: B. Staub(1), R. Lafage(1), D. Stein(1), H.J. Kim(1), C. Shaffrey(2), G. Mundis(3), R. Hostin(4), D. Burton(5), L. Lenke(6), M. Gupta(7), C. Ames(8), E. Klineberg(9), F. Schwab(1), V. Lafage(1), International Spine Study Group (ISSG)

(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 Kansas Medical Center, Kansas City, KS, United States, (6)Columbia University Medical Center, New York, NY, United States, (7)Washington University, Saint Louis, MO, United States, (8)University of California, San Francisco, San Francisco, CA, United States, (9)University of California, Davis, Sacramento, CA, United States

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

Moderator(s): Morgan P. Lorio, MD, FACS & Frank Phillips, MD

- 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
- 8:05 am - 8:09 am **147 Predicting the Occurrence of Complications Following Corrective Cervical Deformity Surgery: Analysis of a Prospective Multicenter Database Using Predictive Analytics**
Speaker: [P. Passias](#)
Authors: P. Passias(1), C. Oh(1), S. Horn(1), H.J. Kim(2), D.K. Hamilton(3), D. Sciubba(4), B. Neuman(5), A. Buckland(1), G. Poorman(1), C. Bortz(1), F. Segreto(1), N. Frangella(1), C. Varlotta(1), T. Protopsaltis(1), E. Klineberg(6), C. Ames(7), J. Smith(8), V. Lafage(2),

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

Authors: M.F. Gornet(1), J.C. Lotz(2), R.K. Eastlack(3), J. Peacock(4), F.W. Schranck(5), J. Claude(4), A.G. Copay(5)

(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

Authors: P. Passias(1), C. Wang(1), G. Poorman(1), S. Horn(1), F. Segreto(1), C. Bortz(1), C. Varlotta(1), D. Ge(1), B. Diebo(2), S. Wang(3)

(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

Speaker: R. Hynes

Authors: R. Hynes(1), Y. Rivera-Colon(2), M. Oh(3), D. Datta(4), A. Yu(3), J. Cannas(5), D. Prestamburgo(6), S. D'Houtard(7), K. Woods(8)

(1)Florida Institute of Technology, Biomedical Engineering, Melbourne, FL, United States, (2)Puerto Rico Spine Center, Santurce, Puerto Rico, (3)Allegheny Health Network, Pittsburgh, PA, United States, (4)The B.A.C.K Center, Melbourne, FL, United States, (5)CUF Descobertas, Lisbon, Portugal, (6)Azienda Ospedaliera - Ospedale Civile di Legnano, Legnano, Italy, (7)Clinique Du Mail, La Rochelle, France, (8)Kettering Medical Center, Kettering, OH, United States

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

Authors: P. Passias(1), G. Poorman(1), S. Horn(1), C. Jalai(1), C. Bortz(1), F. Segreto(1), D. Ge(1), C. Varlotta(1), N. Worley(1), S. Yang(1), C. Poorman(1), J. Buza(1), A. Boniello(1), A.

Lee(1), S. Vira(1), B. Diebo(2), V. Lafage(3), F. Schwab(3), T. Protopsaltis(1), T. Errico(1)
(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

11:03 am - 11:05 am

304 Predictive Model for Distal Junctional Kyphosis After Cervical Deformity Surgery
Speaker: P. Passias

Authors: P. Passias(1), D. Vasquez-Montes(1), G. Poorman(1), T. Protopsaltis(1), S. Horn(1), B. Diebo(2), C. Bortz(1), F. Segreto(1), D. Ge(1), C. Varlotta(1), C. Ames(3), J. Smith(4), V. Lafage(5), R. Lafage(5), E. Klineberg(6), C. Shaffrey(4), S. Bess(7), F. Schwab(5), International Spine Study Group
(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)University of California San Francisco, Department of Neurological Surgery, San Francisco, CA, United States, (4)University of Virginia, Department of Neurosurgery, Charlottesville, VA, United States, (5)Hospital for Special Surgery, Department of Orthopaedic Surgery, New York, NY, United States, (6)University of California Davis, Department of Orthopaedic Surgery, Sacramento, CA, United States, (7)Rocky Mountain Scoliosis and Spine, Denver, CO, United States

11:06 am - 11:08 am

470 Pelvic Compensation in Sagittal Malalignment: How Much Retroversion Can the Pelvis Accommodate?
Speaker: V. Lafage

Authors: G. Beyer(1), M. Khalifé(2), R. Lafage(3), J. Moon(4), P. Zhou(4), J. Tishelman(4), D. Vasquez-Montes(4), T. Errico(4), A. Buckland(4), F. Schwab(3), V. Lafage(3)
(1)SUNY Downstate Medical Center, New York, NY, United States, (2)Hôpital 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

Authors: T. Protopsaltis(1), S. Ramchandran(1), J. Tishelman(1), N. Stekas(1), N. Frangella(1), J. Smith(2), D. Sciubba(3), P. Passias(1), R. Lafage(4), E. Klineberg(5), V. Lafage(4), R. Hart(6), D. Burton(7), C. Shaffrey(2), F. Schwab(4), C. Ames(8), International Spine Study Group
(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

Authors: P. Passias(1), F. Segreto(1), S. Horn(1), C. Bortz(1), D. Vasquez-Montes(1), G. Poorman(1), L. Steinmetz(1), D. Ge(1), P. Zhou(1), B. Diebo(2), J. Moon(1), J. Tishelman(1), A. Sure(1), B. Beaubrun(1), S. Vira(1), C. Jalai(1), J. Buza(1), C. Wang(1), V. Lafage(3), T. Protopsaltis(1), A. Buckland(1), T. Errico(1)
(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 **541 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 **48 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 **509 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 **205 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 **298 Clinical and Radiographic Presentation and Treatment of Patients with Cervical Deformity Secondary to Thoracolumbar Proximal Junctional Kyphosis are Distinct Despite Achieving Similar Outcomes: Analysis of 123 Prospective CD Cases**
Speaker: [P. Passias](#)
Authors: P. Passias(1), S. Horn(1), G. Poorman(1), A. Daniels(2), D.K. Hamilton(3), H.J. Kim(4), C. Bortz(1), F. Segreto(1), D. Ge(1), N. Frangella(1), B. Diebo(5), D. Sciubba(6), J. Smith(7), B. Neuman(6), C. Shaffrey(7), R. Lafage(4), V. Lafage(4), C. Ames(8), R. Hart(9), G. Mundis((1)0), R. Eastlack((1)0), F. Schwab(4), International Spine Study Group
(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, ((1)0)Scripps, Department of Orthopaedics, La Jolla, CA, United States
- 11:35 am - 11:39 am **Discussion**
- 11:40 am - 11:42 am **322 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 **409 Pre-Operative Extension Lateral Cervical Radiographs are Associated with**

Osteotomy Type, Approach and Post-Operative Cervical Alignment Following Cervical Deformity Surgery

Speaker: E. Zgonis

Authors: E. Klineberg(1), R. Lafage(2), E. Zgonis(2), V. Lafage(2), M. Gupta(3), P. Passias(4), J. Smith(5), H.J. Kim(2), D. Burton(6), G. Mundis(7), F. Schwab(2), R. Hart(8), C. Shaffrey(5), C. Ames(9), International Spine Study Group (ISSG)

(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

Authors: G. Liu(1), J.H. Tan(1), S.Y.G. Fung(2), K. Chan(2), H.-K. Wong(1)

(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

Authors: A.K. Sestokas(1), E.A. Tesdahl(1), J.M. Flynn(2), S.A. Shah(3), T.S. Oswald(4), M. Beckish(5), W.B. Wilent(1), C.R. Wiggins(1), A.J. Franco(1), J. Cohen(1)

(1)SpecialtyCare, Nashville, TN, United States, (2)The Children's Hospital of Philadelphia, Philadelphia, PA, United States, (3)Nemours / A.I. duPont Hospital for Children, Wilmington, DE, United States, (4)Pediatric Orthopaedic Associates, Atlanta, GA, United States, (5)Greenville Health System, Greenville, SC, United States

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

Authors: J.A. Gomez(1), J.F. Schulz(1), O. Kubat(2), J. Hurry(3), A. Soroceanu(4), T. Flynn(5), M. Tovar(1), R. Hanstein(1), V. Lafage(6), F. Schwab(6), J. Smith(7), D. Skaggs(8), R. El-Hawary(3), CSSG & GSSG

(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

Authors: P. Passias(1), A. Pyne(1), S. Horn(1), G. Poorman(1), M. Janjua(1), D. Vasquez-Montes(1), N. Frangella(1), C. Bortz(1), F. Segreto(1), D. Ge(1), M. Siow(1), A. Sure(1), P. Zhou(1), J. Moon(1), B. Diebo(2), S. Vira(1)

(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
Authors: G. Liu(1), H. W Najjar(1), J.H. Tan(1), S.Y.G. Fung(2), L.-L. Lau(1), H.W.D. Hey(1), J. Thambiah(1), H.-K. Wong(1)
(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
Authors: P. Passias(1), S. Horn(1), G. Poorman(1), J. Tishelman(1), J. Moon(1), B. Beaubrun(1), P. Zhou(1), L. Steinmetz(1), C. Bortz(1), F. Segreto(1), N. Frangella(1), M. Vaynrub(1), D. Vasquez-Montes(1), B. Diebo(2), S. Vira(1), M. Raad(3), D. Sciubba(3), V. Lafage(4), F. Schwab(4), T. Errico(1)
(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
Authors: P. Passias(1), S. Horn(1), G. Poorman(1), J. Moon(1), P. Zhou(1), J. Tishelman(1), L. Steinmetz(1), C. Bortz(1), F. Segreto(1), D. Ge(1), B. Beaubrun(1), C. Jalai(1), M. Gerling(1), A. Buckland(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
- 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)

(1)San Francisco Orthopaedic Residency Program, San Francisco, CA, United States, (2)The Taylor Collaboration, San Francisco, CA, United States, (3)SI-BONE, Inc., San Jose, CA, United States, (4)St. Mary's Spine Center, San Francisco, CA, United States

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