

Please join us each morning at 7 a.m.
for continental breakfast on the show floor.

Wednesday, April 3

7:30 AM – 10 AM

General Session: Cervical Degeneration

Moderators: Robert Gunzburg, MD, PhD and Marek Szpalski, MD

7:40 AM – 7:45 AM

1940

Degenerative Cervical Spondylolisthesis: Does Adjacent Level Surgical Stabilization Result In Progressive Listhesis?

Presenter: Jannat Khan

Phillip Louie¹, Hollis Johanson¹, Jacob Emerson¹, Jannat Khan¹, Bryce Basques¹, Michael Nolte¹, Zayd Hayani¹, Dino Samartzis¹, Howard An¹

¹Department of Orthopaedic Surgery, Rush University Medical Center,

7:45 AM – 7:50 AM

629

Predicting the Occurrence of Post-Operative Distal Junctional Kyphosis in Cervical Deformity Patients

Presenter: Katie Pierce

Peter G. Passias¹, Samantha R. Horn¹, Katie Pierce¹, Virginie Lafage², Renaud Lafage², Justin S. Smith³, Breton G. Line⁴, Themistocles S. Protopsaltis¹, Mitsuru Yagi⁵, Cole Bortz¹, Frank A. Segreto¹, Haddy Alas¹, Avery E. Brown², Frank J. Schwab⁴, Christopher P. Ames⁶, International Spine Study Group⁷

¹Division of Spinal Surgery/Departments of Orthopaedic and Neurosurgery, NYU Medical Center, NY Spine Institute, New York, NY, USA, ²Department of Orthopaedic Surgery, Hospital for Special Surgery, New York, NY, USA, ³Department of Neurosurgery, University of Virginia Medical Center, Charlottesville, VA, USA, ⁴Denver International Spine Center, Presbyterian/St. Luke's Medical Center and Rocky Mountain Hospital for Children, Denver, CO, USA, ⁵Department of Orthopedic Surgery, Keio University School of Medicine, Keio Spine Research Group, ⁶Department of Neurological Surgery, University of California San Francisco, San Francisco, CA, USA, ⁷International Spine Study Group Foundation, Brighton, CO USA

7:50 AM – 7:55 AM

1241

Are Outpatient Revision ACDs Safe? - An Analysis of 30-Day Outcomes

Presenter: Azeem Tariq Malik

Azeem Tariq Malik¹, Safdar N Khan¹, Jeffery Kim¹, Elizabeth Yu¹

¹The Ohio State University Wexner Medical Center

7:55 AM – 8:00 AM

596

Is Osteoporosis Screening Routinely Needed to Evaluate Cervical Total Disc Replacement Patients?

Presenter: Rick Guyer

Scott L. Blumenthal¹, Richard D. Guyer¹, Jack E. Zigler¹, Donna D. Ohnmeiss¹

¹Center for Disc Replacement at Texas Back Institute

8:00 AM – 8:05 AM

2050

Clinical Significance of Bone Loss Phenomenon of Vertebral Bodies at the Operative Segment After Cervical Arthroplasty

Presenter: Choon-Keun Park

Choon Keun Park¹, Dong Hwa Heo¹

¹The Leon Wiltse Memorial Hospital

8:05 AM – 8:10 AM

Discussion

8:10 AM – 8:15 AM

606

Do Patients With Dominant Neck Pain Improve as Much as Patients with Dominant Arm Pain After Cervical Spine Surgery?

Presenter: Kris Radcliff

Kris Radcliff¹, Todd Albert², Domagoj Coric³, William Dolman⁴

¹Rothman Institute, Thomas Jefferson University, ²Hospital for Special Surgery, ³Carolinas Medical Center, Carolina Neurosurgery & Spine Associates, ⁴Zimmer-Biomet

8:15 AM – 8:20 AM

2384

Cervical Disc Arthroplasty: 10-year Results

Presenter: Matthew F. Gornet

Matthew F. Gornet¹, J. Kenneth Burkus², Mark E. Shaffrey³, Francine W. Schranck⁴, Anne G. Copay⁴

¹The Orthopedic Center of St. Louis, ²Wilderness Spine Services, ³Department of Neurosurgery, University of Virginia, ⁴SPIRITT Research

8:20 AM – 8:25 AM

779

Redefining the Cervical Disability Threshold of T1 Slope Minus Cervical Lordosis

Presenter: Edem Abotsi

Peter G. Passias¹, Dennis Vasquez-Montes¹, Samantha R. Horn¹, Cole Bortz¹, Edem Abotsi¹, Frank A. Segreto¹, Nicholas J. Frangella¹, Haddy Alas¹, Christopher Varlotta¹, Jordan Manning¹, Mohamed Moawad¹, Aaron J. Buckland¹, Themistocles S. Protopsaltis¹, Michael Gerling¹, Renaud Lafage², Virginie Lafage²

¹Department of Orthopaedics, NYU Langone Medical Center-Orthopaedic Hospital, New York, NY, USA, ²Department of Orthopaedic Surgery, Hospital for Special Surgery, New York, NY, USA,

8:25 AM – 8:30 AM

1444

Radiological Outcomes of Cervical Arthroplasty in Segmental Cervical Kyphosis

Presenter: Rui Reinas

Rui Reinas¹, Djamel Kitumba², Oscar L. Alves³

¹CHVNG/E, ²CHVNG/E; Hospital Americo Boavida, Angola, ³CHVNG/E; Hospital Lusíadas Porto

8:30 AM – 8:35 AM

Discussion

8:35 AM – 8:40 AM

1517

Sagittal Plane Alignment of a Mobile Bearing Cervical Disc Replacement Device: Does Intra-Operative Fluoroscopic Positioning Serve as a Reliable Indicator of the Final Post-Operative Alignment?

Presenter: Justin Tortolani

Abhijeet Kadam¹, David Weiner¹, Brian Gallagher¹, Bryan W Cunningham¹, Lauren S. Quattro¹, Justin Tortolani¹

¹Medstar Union Memorial Hospital

8:40 AM – 8:45 AM

413

Clinical Outcomes for 1 & 2 level ACDF utilizing an Integrated Interbody Devices: A Prospective Non-Randomized Study.

Presenter: Jad Khalil

Jad Khalil¹, Rick Sasso², Ryan Snowden³, Sheetal Vinayek², Lisa Motowski¹

¹Michigain Orthopedic Institute, ²Indiana Spine Group, ³Tennessee Orthopedic Alliance

8:45 AM – 8:50 AM

1092

Clinical and radiological outcomes of cervical disc arthroplasty: 10-year follow-up study

Presenter: Wei Tian

Wei Tian¹, Xiao Han¹, Qingpeng Song¹

¹Beijing Jishuitan Hospital

8:50 AM – 8:55 AM

590

Analysis of Re-operations after Cervical Total Disc Replacement in a Consecutive Series of 504 Patients Receiving the ProDisc-C Device

Presenter: Jack Zigler

Jack E. Zigler¹, Richard D. Guyer¹, Scott L. Blumenthal¹, Donna D. Ohnmeiss²

¹Center for Disc Replacement at Texas Back Institute, ²Texas Back Institute Research Foundation

8:55 AM – 9:00 AM

701

Predicting Extended Operative Time and Length of Inpatient Stay in Cervical Deformity Corrective Surgery

Presenter: Cole Bortz

Samantha R. Horn¹, Peter G. Passias², Cole A. Bortz¹, Katherine E. Pierce¹, Virginie Lafage³, Justin S. Smith⁶, Themistocles Protopsaltis¹, Alan H Daniels⁸, Eric O. Klineberg⁹, Douglas Burton¹⁰, Robert A. Hart¹¹, Shay Bess¹², Christopher I. Shaffrey⁶, Christopher P. Ames¹⁴, International Spine Study Group¹⁵

¹NYU Langone Orthopaedic Hospital, ²NYU Langone Orthopaedic Hospital; NY Spine Institute, ³Hospital for Special Surgery, ⁶University of Virginia Medical Center, ⁸Warren Alpert School of Medicine, Brown University, University of California, Davis, CA, ⁹University of Kansas Medical Center, ¹¹Swedish Neuroscience Institute, ¹²Rocky Mountain Scoliosis and Spine, ¹⁴University of California, San Francisco

9:00 AM – 9:05 AM

Discussion

9:05 AM – 9:10 AM

677

Fatty Infiltration of the Cervical Extensor Musculature in Adult Cervical Deformity Patients: An Increased Susceptibility to Complication Occurrence and Sagittal Malalignment

Presenter: Erik Wang

Peter G Passias¹, Frank A Segreto¹, Samantha R Horn¹, Cole A Bortz¹, Erik Wang¹, Katherine E Pierce¹, Virginie Lafage⁶, Justin S Smith⁷, Eric O Klineberg⁸, Bassel G Diebo⁹, Daniel M Sciubba¹⁰, Brian J Neuman¹⁰, D Kojo Hamilton¹², Douglas C Burton¹³, Robert A Hart¹⁴, International Spine Study Group¹⁵

¹NYU Langone Orthopedic Hospital, ⁶Hospital for Special Surgery, ⁷University of Virginia Medical Center, ⁸University of California Davis, Department of Orthopedic Surgery, ⁹SUNY Downstate Medical Center, ¹⁰John Hopkins University School of Medicine, ¹²University of Pittsburgh School of Medicine, ¹³University of Kansas Medical Center, ¹⁴Swedish Neuroscience Institute

9:10 AM – 9:15 AM

1250

Establishing Maximal Medical Improvement Following Anterior Cervical Discectomy and Fusion

Presenter: Joon S. Yoo

Dil V. Patel, BS¹, Benjamin Khechen, BA¹, Joon S. Yoo, BA¹, Eric H. Lamoutte, BS¹, Sailee S. Karmarkar, BS¹, Anirudh K. Gowd, BS¹, Joseph N. Liu, MD¹, Kern Singh, MD¹

¹Department of Orthopaedic Surgery, Rush University Medical Center,

9:15 AM – 9:20 AM

2450

Patient-Reported Outcomes Improve after Posterior Instrumented Fusion for Anterior Cervical Pseudarthrosis

Presenter: Michael Steinhaus

Michael E. Steinhaus¹, Philip J. York¹, Rachel Bronheim², Jingyan Yang¹, Francis Lovecchio¹, Han Jo Kim¹

¹Hospital for Special Surgery, ²Icahn School of Medicine at Mt. Sinai

9:20 AM – 9:25 AM

1360

Does Duration of Preoperative Radiculopathy Symptoms Impact Postoperative Outcomes and Reoperations After an ACDF?

Presenter: Dhruv Goyal

Daniel Tarazona¹, Taolin Fang¹, Matthew S. Galetta¹, Dhruv KC Goyal¹, Srikanth Divi¹, David Kaye¹, Christopher K. Kepler¹, Mark F. Kurd¹, Alan S. Hilibrand¹, Barret I. Woods MD¹, Kris E. Radcliff MD¹, Jeffery A. Rihn MD¹, D. Greg Anderson MD¹, Alexander R. Vaccaro¹, Gregory D. Schroeder¹

¹Rothman Orthopaedic Institute

9:25 AM – 9:30 AM

1386

In Which Cases Do Surgeons Specializing in Total Disc Replacement Perform Fusion in Patients with Cervical Spine Symptoms?

Presenter: Rick Guyer

Richard D. Guyer¹, Jack E. Zigler¹, Scott L. Blumenthal¹, Donna D. Ohnmeiss²

¹Center for Disc Replacement at Texas Back Institute, ²Texas Back Institute Research Foundation

9:30 AM – 9:35 AM

Discussion

9:35 AM – 9:40 AM

1807

The Effect of Surgical Decompression on Functional Balance Tests in Cervical Spondylotic Myelopathy Patients

Presenter: Ram Haddas

Ram Haddas¹, Isador Lieberman¹, Akwasi Boah¹, Theodore Belanger¹, Kevin L. Ju¹, Raj Arakal¹

¹Texas Back Institute

9:40 AM – 9:45 AM

2511

Cervical Disc Arthroplasty for Axial Neck Pain vs. Radiculopathy: Outcomes Up to 7 Years

Presenter: Matthew F. Gornet

Matthew F. Gornet¹, Katrine M. Sorensen², Anne G. Copay², Francine W. Schranck²

¹The Orthopedic Center of St. Louis, ²SPIRITT Research

9:45 AM – 9:50 AM

1584

Ten-Year Outcomes of One- and Two-Level Cervical Disc Arthroplasty: Interim Results from a U.S. Multi-Center Study

Presenter: Kee Kim

Kee D. Kim MD¹, Greg Hoffman MD², Hyun W. Bae MD³, Michael Hisey MD⁴, Andy Redmond MD⁵, David Tahernia MD⁶, Robert Jackson MD⁷

¹UC Davis Medical Center, Department of Neurological Surgery, Sacramento, CA, ²Orthopaedics Northeast, Fort Wayne, IN, ³The Spine Institute, Santa Monica, CA, ⁴Texas Back Institute, Plano, TX, ⁵Texas Spine and Joint Hospital, Tyler, TX, ⁶Desert Orthopedic Center, Rancho Mirage, CA, ⁷Orange County Neurosurgical Associates, Laguna Hills, CA

9:50 AM – 9:55 AM

704

Effect of Age Adjusted Alignment Goals and Distal Inclination Angle on the Fate of Distal Junctional Kyphosis in Cervical Deformity Surgery

Presenter: Haddy Alas

Peter G. Passias¹, Samantha R. Horn¹, Virginie Lafage³, Renaud Lafage³, Justin S. Smith⁵, Breton G. Line⁶, Themistocles S. Protopsaltis¹, Alex Soroceanu⁸, Cole Bortz¹, Frank A. Segreto¹, Avery Brown¹, Haddy Alas¹, Han Jo Kim³, Alan H. Daniels¹⁴, International Spine Study Group¹⁵

¹Department of Orthopedic Surgery, NYU Langone Orthopedic Hospital, New York, NY, ³Department of Orthopaedic Surgery, Hospital for Special Surgery, New York, NY, ⁵Department of Neurosurgery, University of Virginia Medical Center, Charlottesville, VA, ⁶Rocky Mountain Scoliosis and Spine, Denver, CO, ⁸Department of Orthopaedic Surgery, University of Calgary, Calgary, AB, Canada, ¹⁴Department of Orthopaedic Surgery, Warren Alpert School of Medicine, Brown University, Providence, RI, ¹⁵International Spine Study Group

9:55 AM – 10:00 AM

Discussion

Wednesday, April 3

10:30 AM – 12:00 PM

General Session: Biomechanics; Tumor, Trauma & Infection; Pediatrics; Outpatient

Moderators: Hans-Joachim Wilke, PhD and Donna Ohnmeiss, PhD

10:30 AM – 10:35 AM

856

Traumatic Cervical Spinal Cord Injuries with Fracture: An Investigation of Early Versus Delayed Surgery among 6 636 Propensity-Matched

Presenter: Mohamed Moawad

Frank A. Segreto¹, Cole A. Bortz¹, Samantha R. Horn¹, Dennis Vasquez-Montes¹, Avery E. Brown¹, Haddy Alas¹, Katherine E. Pierce¹, Mohamed A. Moawad¹, Bassel G. Diebo¹, Renaud Lafage¹⁰, Virginie Lafage¹⁰, Themistocles Protopsaltis¹, Aaron J. Buckland¹, Thomas J. Errico¹, Peter G. Passias¹⁵

¹Department of Orthopaedics, NYU Langone Orthopaedic Hospital, New York, NY, ¹⁰Department of Orthopaedics, Hospital for Special Surgery, New York, NY, ¹⁵NY Spine Institute; Department of Orthopaedics, NYU Langone Orthopaedic Hospital, New York, NY

10:35 AM – 10:40 AM

2602

Does Standard Surgical Preparation in Spine Surgery Eradicate Occult Species Dwelling in Skin?

Presenter: Christina Dowe

Christina Dowe¹, Tucker Callanan¹, Antonio Brecevic¹, Darren R. Lebl¹, Frank P. Cammisa¹, Celeste Abjornson¹

¹Hospital for Special Surgery

10:40 AM – 10:45 AM

668

The Association Between Frailty Status and Odontoid Fractures Following Traumatic Falls: Investigation of Varying Injury Mechanisms among 70 Elderly Odontoid Fracture Patients

Presenter: Constance Maglaras

Peter G. Passias¹, Frank A. Segreto¹, Constance Maglaras¹, Katherine E. Pierce¹, Cole A. Bortz¹, Samantha R. Horn¹, Christopher G. Varlotta¹, Joseph F. Baker²

¹NYU Langone Orthopedic Hospital, ²Mater Misericordiae University Hospital

10:45 AM – 10:50 AM

1841**Lenke 1 adolescent idiopathic scoliosis: effects of TK restoration on regional and global alignment****Presenter: Jonathan Elysee***Jonathan Elysee¹, Renaud Lafage¹, Brice Henry², Colleen Wixted², Manon Bolzinger², Han Jo Kim¹, Matthew Cunningham¹, Elie Choufani², Virginie Lafage¹, John Blanco³, Roger Widmann¹, Jean-Luc Jouve³, Sebastien Pesenti²*¹Hospital for Special Surgery, NY, USA, ²Aix-Marseille University, Marseille, France, ³Hospital d'Enfants de la Timone, Marseille, France

10:50 AM – 10:55 AM

Discussion

10:55 AM – 11:00 AM

2109**Alternative Four-Rod Techniques in Pedicle Subtraction Osteotomies (PSO) May Introduce Different Risks on Rod and Screw Strain: A Finite Element Analysis****Presenter: Wenhai Wang***Daniel E. Gelb¹, Jarid Tareen¹, Ehsan Jazini², Steven Ludwig¹, Jonathan A. Harris⁵, Wenhai Wang⁵, Bryan J. Ferrick⁷, Brandon S. Bucklen⁵*¹University of Maryland, School of Medicine, Baltimore, MD, ³Medstar Georgetown University Hospital, Washington, DC, ⁵Musculoskeletal Education and Research Center, A Division of Globus Medical Inc., Audubon, PA, ⁷Drexel University, Philadelphia, PA,

11:00 AM – 11:05 AM

1310**Supplemental rods are needed to maximally reduce rod strain across the lumbosacral junction with TLIF but not ALIF in long constructs****Presenter: Jake Godzik***Jakub Godzik¹, Randall J. Hlubek¹, Anna G.U.S Newcomb², Jennifer N. Lehrman¹, Bernardo de Andrada², S. Harrison Farber³, Lawrence Lenke³, Brian P. Kelly², Jay D. Turner¹*¹Barrow Neurological Institute, ²Spinal Biomechanics Laboratory, Barrow Neurological Institute, ³The Spine Hospital, New York Presbyterian

11:05 AM – 11:10 AM

1019**Sequential Changes in Lumbar Lordosis and Segmental Stability Following Lateral Interbody Cage Placement Smith-Peterson Osteotomy and Anterior Longitudinal Ligament Release****Presenter: Zachary Child***Richard K. Hurley, Jr.¹, Amy A. Claeson², Anup Gandhi², Zachary Child³*¹Brooke Army Medical Center, Fort Sam Houston, TX, USA, ²Zimmer Biomet, Westminster, CO, USA, ³Tahoe Orthopedic Institute, South Lake Tahoe, CA, USA

11:10 AM – 11:15 AM

2101**In Silica Comparison of Alternative 4-Rod Techniques in Pedicle Subtraction Osteotomies for Adult Spinal Deformity Correction****Presenter: Jon Harris***Ehsan Jazini¹, Daniel E. Gelb², Jarid Tareen², Steven Ludwig², Jonathan A. Harris⁵, Wenhai Wang⁵, Bryan J. Ferrick⁷, Brandon S. Bucklen⁵*¹Medstar Georgetown University Hospital, Washington, DC, ²University of Maryland, School of Medicine, Baltimore, MD, ⁵Musculoskeletal Education and Research Center, A Division of Globus Medical Inc., Audubon, PA, ⁷Drexel University, Philadelphia, PA,

11:15 AM – 11:20 AM

2107**The Effect of Total Hip Arthroplasty on Standing Regional and Global Sagittal Spinal Alignment****Presenter: Dainn Woo***Edward DelSole¹, Michael Dinzo¹, Dainn Woo¹, Jonathan Vigdorichik¹, Peter Passias¹, Charla Fischer¹, Thomas Errico¹, Aaron Buckland¹*¹NYU Langone Orthopaedic Hospital

11:20 AM – 11:25 AM

Discussion

11:25 AM – 11:30 AM

795**Impact of Presenting Patient Characteristics on Surgical Complications and Morbidity in Early Onset Scoliosis****Presenter: Jordan Manning***Frank A. Segreto¹, Samantha R. Horn¹, Cole Bortz¹, Jordan Manning¹, Dennis Vasquez-Montes¹, Bassel G. Diebo⁵, Haddy Alas¹, Avery E. Brown¹, Shaleen Vira¹, Nicholas Stekas¹, Mohamed A. Moawad¹, Renaud Lafage¹¹, Virginie Lafage¹¹, Aaron J. Buckland¹, Michael C. Gerling¹, Peter G. Passias¹*¹Division of Spinal Surgery/Departments of Orthopaedic and Neurosurgery, NYU Medical Center, NY Spine Institute, New York, NY, USA, ⁵Department of Orthopedic Surgery, SUNY Downstate New York, NY, ¹¹Department of Orthopedic Surgery, Hospital for Special Surgery, New York, NY

11:30 AM – 11:35 AM

1639**Simultaneous Surgical Treatment of Congenital Spinal Deformity Associated with Intraspinous Anomalies.****Presenter: Manoj Singrakhia***Manoj Singrakhia¹, Nikhil Malewar¹, Sonal Singrakhia¹, Shivaji Deshmukh¹*¹Shanta Spine Hospital

11:35 AM – 11:40 AM

1829

Comparison of Sublaminar Bands and All-Pedicle Screw Instrumentation for the Correction of Lenke 1 and 2 Adolescent Idiopathic Scoliosis

Presenter: Mathiew Bannwarth

Mathiew Bannwarth¹, Sebastien Pesenti², Renaud Lafage¹, Brice Henry², Colleen Wixted¹, Manon Bolzinger², Han Jo Kim¹, Tejbir Pannu¹, Matthew Cunningham¹, Elie Choufani², Virginie Lafage¹, John Blanco¹, Jean-Luc Jouve², Roger Widmann¹

¹Hospital for Special Surgery, NY, USA, ²Aix-Marseille University, Marseille, France, ³Hospital d'Enfants de la Timone, Marseille, France

11:40 AM – 11:45 AM

1371

Risk Factors for an Intensive Care Unit (ICU) Admission Following Surgery for Pediatric Spinal Deformity—An Analysis of the ACS-NSQIP Pediatric Spinal Fusion Procedure Targeted Dataset

Presenter: Azeem Tariq Malik

Azeem Tariq Malik¹, Elizabeth Yu¹, Jeffery Kim¹, Safdar N Khan¹

¹The Ohio State University Wexner Medical Center

11:45 AM – 11:50 AM

1420

Comparison Between all Level Bilateral Instrumentation and Convex Manipulation in Lenke Type 1 Scoliosis: How Much Correction is Enough?

Presenter: Leonardo Oggiano

Leonardo Oggiano¹, Sergio Sessa¹, Cloe Curri¹, Guido La Rosa¹

¹Bambino Gesù Children's Hospital, Rome

11:50 AM – 11:55 AM

1169

Comparison of Multi-level Anterior Cervical Discectomy and Fusion (ACDF) Performed in an Inpatient versus Outpatient Setting

Presenter: Sheeraz Qureshi

Avani Vaishnav¹, Patrick Hill¹, Steven McAnany¹, Catherine Gang¹, Kern Singh², Brittany Haws², Benjamin Khechen², Sheeraz Qureshi¹

¹Hospital for Special Surgery, ²Midwest Orthopaedics At Rush

11:55 AM – noon

Discussion

Wednesday, April 3

1:30 PM – 2:30 PM

General Session: Diagnostic and Imaging

Moderators: Massimo Balsano, MD and Rick Guyer, MD

1:30 PM – 1:35 PM

805

MRI Radiological Predictors of Requiring Microscopic Lumbar Discectomy after Lumbar Disc Herniation

Presenter: Christopher Varlotta

Christopher Varlotta¹, Nicholas Stekas¹, Nicholas Frangella¹, David Ge¹, Leah Steinmetz¹, Jordan Manning¹, Dennis Vasquez-Montes¹, Thomas Errico¹, John Bendo¹, Gerard Varlotta¹, Jonathan Stieber¹, Charla Fischer¹, Themistocles Protopsaltis¹, Peter Passias¹, Aaron Buckland¹

¹NYU Langone Orthopaedic Hospital

1:35 PM – 1:40 PM

933

Sagittal Alignment of Spine and Pelvis in Young Adults EOS Analysis in a Korean Population

Presenter: Yougun Won

Sang Bum Kim¹, Yougun Won¹, Byoung Hak Oh¹, Gi-Soo Lee²

¹Department of Orthopedic Surgery, Konyang University College of Medicine, Daejeon, Korea, ²Department of Orthopedic Surgery, Chung Nam University College of Medicine, Daejeon, Korea

1:40 PM – 1:45 PM

1298

The Utility of Postoperative Radiographs Following Surgical Treatment of Traumatic Cervical Spine Injuries

Presenter: Jael E. Camacho

Vishal Khatri¹, Alysa Nash¹, Noah Lessing¹, Farooq Usmani¹, Jael Camacho¹, Eugene Koh¹, Kelly Banagan¹, Daniel Gelb¹, Steven Ludwig¹

¹University of Maryland, Baltimore

1:45 PM – 1:50 PM

1783

Gait Analysis Provides an Objective Measure of Functional Deficit not Adequately Assessed by Oswestry Disability Index

Presenter: Akwasi Boah

Ram Haddas¹, Akwasi Boah¹, Isador Lieberman¹, Andrew Block¹

¹Texas Back Institute

1:50 PM – 1:55 PM

1722

PROMIS Correlates with Legacy Outcome Measures in Patients with Neck Pain and is Better than NDI at Assessing Disability in Cervical Deformity

Presenter: Constance Maglaras

Bradley Johnson¹, Nicholas Stekas¹, Ethan Ayres¹, Constance Maglaras¹, Michael Moses¹, David Jevotovsky¹, Charla Fischer¹, Aaron Buckland¹, Thomas Errico¹, Themistocles Protopsaltis¹

¹NYU Langone Hospital, Department of Orthopaedic Surgery

1:55 PM – 2:00 PM

Discussion

2:00 PM – 2:05 PM

1187**Cervical Degenerative Disc Disease and Subclinical Discitis: Cause or Contaminant?****Presenter: Louis Bivona**Amit Bhaduntia¹, Loius Bivona¹, Alysa Nash¹, Farooq Usmani¹, Jael Camacho¹, Megan Hughes¹, Daniel Gelb¹, Eugene Koh¹, Kelley Banagan¹, Steven Ludwig¹¹University of Maryland, Baltimore

2:05 PM – 2:10 PM

1062**Preoperative X-Rays Do Not Predict Reherniation or Reoperation in Lumbar Microdiscectomy Patients with Large Annular Defects at Two Years****Presenter: Christopher Varlotta**Christopher Varlotta¹, Dennis Vasquez-Montes¹, David Ge¹, Peter Vajkoczy⁴, Frederic Martens⁵, Jason Perrin⁶, Richard Bostelmann⁷, Stefan Rath⁸, William Van Den Brink⁹, Claudius Thome¹⁰, Erik Van De Kelft¹¹, Mark Arts¹², Jasper Wolfs¹², Susanne Froehlich¹⁴, Jonathan Stieber¹¹NYU Langone Orthopaedic Hospital, ⁴Charite University Hospital, ⁵OLV Ziekenhuis Aalst, ⁶University Clinic Mannheim, ⁷University Hospital Dusseldorf, ⁸Donauislar Klinikum Deggendorf, ⁹Isala, ¹⁰Medical University Innsbruck, ¹¹A.Z. Nikolaas, ¹²Haaglanden Medical Center, ¹⁴Universitätsmedizin Rostock,

2:10 PM – 2:15 PM

1652**Diagnostic value of Diffusion Tensor Imaging Study using Spinal Cord Toolbox (SCT) in Cervical Compressive Myelopathy; Principle and its clinical application.****Presenter: Seok Woo Kim**Seok Woo Kim¹, Woo-Kyung Yoo¹, Julien Cohen-Adad², Hee-Young Kim¹, Young-Mi Yang¹¹Hallym University Sacred Heart Hospital, ²Polytechnique Montreal

2:15 PM – 2:20 PM

1831**PROMIS is Superior to Established Outcome Measures in Capturing Disability Resulting from Sagittal Malalignment in Patients with Back Pain****Presenter: Brooke O'Connell**Nicholas Stekas¹, Bradley Johnson¹, David Jevotovsky¹, Brooke O'Connell¹, Michael Moses¹, Charla Fischer¹, Aaron Buckland¹, Thomas Errico¹, Themistocles Protopsaltis¹¹NYU Langone Hospital, Department of Orthopedic Surgery

2:20 PM – 2:25 PM

1069**Do Culture Positive Cervical Discs Correlates with Radiographic Changes****Presenter: M. Farooq Usmani**Charles Gordon¹, Robert Morales¹, Alysa Nash¹, Jael Camacho¹, M. Farooq Usmani¹, Jonathan Hurst¹, Sivacharan Gaddam¹, Eugene Koh¹, Kelley Banagan¹, Daniel Gelb¹, Steven Ludwig¹¹University of Maryland, Baltimore

2:25 PM – 2:30 PM

Discussion**Wednesday, April 3****2:30 pm - 3:30 pm****Oral Posters****Room: 251C****Moderator(s): Saeed Khayatzaeh, PhD**

2:30 PM

674**The Influence of Optimizable Patient Factors on Baseline Frailty in Adult Spinal Deformity****Presenter: Katie Pierce**Peter G Passias¹, Frank A Segreto¹, Justin S Smith³, Bassel G Diebo⁴, Katherine E Pierce¹, Cole A Bortz¹, D Kojo Hamilton⁷, Gregory M Mundis⁸, Richard Hostin⁹, Robert A Hart¹⁰, Frank J Schwab¹¹, Shay Bess¹², Christopher I Shaffrey³, Christopher P Ames¹⁴, International Spine Study Group¹⁵¹NYU Langone Orthopedic Hospital, ³University of Virginia Medical Center, ⁴SUNY Downstate Medical Center, ⁷University of Pittsburgh School of Medicine, ⁸San Diego Center for Spinal Disorders, Baylor ⁹Scoliosis Center, ¹⁰Swedish Neuroscience Institute, ¹¹Hospital for Special Surgery, ¹²Rocky Mountain Scoliosis and Spine, ¹⁴UCSF Medical Center

2:31 PM

1530**Patients with Osteoporosis Undergoing Deformity Correction Spinal Fusion for Adult Spinal Deformity are at Greater Risk of Developing Proximal Junctional Kyphosis****Presenter: Jannat Khan**Michael Nolte¹, Bryce Basques¹, Jannat Khan¹, Phillip Louie¹, Kamran Movassaghi¹, Jonathan Markowitz¹, Oscar Chen¹, Howard An¹, Christopher Dewald¹¹Department of Orthopaedic Surgery, Rush University Medical Center,

2:32 PM

2002**Both Bone and Muscle Quality Influence Reciprocal Change in the Thoracic Spine****Presenter: Virginie Lafage**Renaud Lafage MS¹, Jonathan Elysee¹, Jeffrey Varghese¹, Tejbir Pannu¹, Frank Schwab MD¹, Han Jo Kim MD¹, Virginie Lafage PhD¹¹Hospital for Special Surgery, NY, USA

2:33 PM

1035**Decision Tree-based Modelling for Identification of Predictors of Blood Loss and Transfusion Requirement after Adult Spinal Deformity Surgery****Presenter: Dennis Vasquez-Montes**Tina Raman¹, Christopher Varlotta¹, Dennis Vasquez-Montes¹, Jordan Manning¹, Max Egers¹, Aaron Buckland¹¹NYU Langone Orthopaedic Hospital

2:34 PM

951

Risk Factor Analysis of Proximal Junctional Kyphosis after Surgical Treatment with OLIF for Adult Spinal Deformity.

Presenter: Yoshihisa Kotani

Yoshihisa Kotani¹, Yoshinao Koike², Hiroyuki Tachi², Yumejiro Nakamura², Yusuke Kameda², Yasushi Yabuuchi²

¹Kansai Medical University Medical Center, ²Steel Memorial Murooran Hospital

2:36 PM

859

Analysis of Factors Associated with Unplanned Reoperation within 90 days of Adult Spinal Deformity Surgery

Presenter: Dainn Woo

Tina Raman¹, Peter Zhou¹, Chris Varlotta¹, Dainn Woo¹, Dennis Vasquez-Montes¹, Aaron Buckland¹, Thomas Errico¹, Jordan Manning¹

¹NYU Langone Orthopaedic Hospital

2:37 PM

943

Selection of Posterior Procedure and Clinical Outcome of Anterior-Posterior Combined Correction Surgery with Oblique Lateral Interbody Fusion (Olif) for Adult Spinal Deformity

Presenter: Yoshihisa Kotani

Yoshihisa Kotani¹, Yoshinao Koike², Hiroyuki Tachi², Yumejiro Nakamura², Yusuke Kameda², Yasushi Yabuuchi²

¹Kansai Medical University Medical Center, ²Steel Memorial Murooran Hospital

2:38 PM

1004

Correlation between multifidus muscle atrophy spinopelvic parameters and severity of deformity in patients with adult degenerative scoliosis

Presenter: Xiang-Yao Sun

Xiang-Yao Sun¹, Chao Kong¹, Shi-Bao Lu¹, Si-Yuan Sun¹, Jun-Zhe Ding¹, Ma-Chao Guo¹

¹Department of Orthopaedics, Xuanwu Hospital Capital Medical University

2:39 PM

1747

Can We Define Clinically Relevant DJK in Cervical Deformity Surgery?

Presenter: Ethan Ayres

Themistocles Protopsaltis¹, Nicholas Stekas¹, Renaud Lafage³, Ethan Ayres¹, Justin S. Smith⁴, Alex Soroceanu⁵, Daniel Sciubba⁶, Kojo Hamilton⁷, Robert Eastlack⁸, Greg Mundis⁹, Khaled Kebaish¹⁰, Eric Klineberg¹¹, Munish Gupta¹², Virginie Lafage³, Robert Hart¹⁴, Frank Schwab³

¹NYU Langone Hospital, Department of Orthopedic Surgery,

³Department of Orthopaedic Surgery, Hospital for Special Surgery,

⁴Department of Neurosurgery, University of Virginia Medical Center,

⁵Department of Orthopaedic Surgery, University of Calgary, ⁶Department of Neurosurgery, Johns Hopkins University School of Medicine,

⁷Department of Neurological Surgery, University of Pittsburgh School of Medicine, ⁸Division of Orthopaedic Surgery, Scripps Clinic, ⁹San Diego

Center for Spinal Disorders, ¹⁰Department of Orthopedic Surgery, Johns

Hopkins University School of Medicine, ¹¹Department of Orthopaedic

Surgery, University of California, Davis, ¹²Department of Orthopaedic

Surgery, Washington University, ¹⁴Department of Orthopaedic Surgery,

Swedish Neuroscience Institute

2:40 PM

1766

Can CT Based Bone Mineral Density Predict Proximal Junctional Fracture?

Presenter: William Lavelle

Swamy Kurra, MBBS¹, Francis Farhadi, MD², Vibhu K. Viswanathan, MD², Amy Minnema, MS, CCRP², Richard A. Tallarico, MD¹, William F. Lavelle, MD¹

¹SUNY Upstate Medical University, ²The Ohio State University Wexner Medical Center

2:41 PM

1289

How much lordosis to expect? Flat-Back Revision and the Influence of Dynamic Hyperlordotic Fusion Cages with Smith-Peterson Osteotomy

Presenter: Kenneth Blank

Kenneth R. Blank, MS¹, Robert M. Havey, MS¹, Muturi G. Muriuki, PhD¹, Avinash G. Patwardhan, PhD²

¹Edward Hines, Jr. VA Hospital, Hines, Illinois, USA, ²Loyola University Medical Center, Maywood, Illinois, USA

2:42 PM

1810

Comparison of Walking Sticks and a Walker during Gait in Adult Degenerative Scoliosis Patients

Presenter: Isador Lieberman

Ram Haddas¹, Jaime Villarreal¹, Isador Lieberman¹

¹Texas Back Institute

2:43 PM

2555**Early Outcomes Following Interlaminar Fixation Construct Utilization for Prevention of Proximal Junctional Kyphosis****Presenter: Shyam Patel***Shyam A. Patel, MD¹, Daniel B.c. Reid, MD¹, Burke Gao, BS¹, Jacob M. Babu, MD⁴, Eren O. Kuris, MD¹, Dominic Kleinhenz, MD¹, Alan H. Daniels, MD¹*¹The Warren Alpert Medical School of Brown University/Rhode Island Hospital

2:44 PM

1533**Does the Rod Metal Composition Affect the Odds of Developing Proximal Junctional Kyphosis in Posterior Spine Fusions for Adult Spinal Deformity?****Presenter: Clayton Maschhoff***Bryce Basques¹, Philip Louie¹, Michael Nolte¹, Jannat Khan¹, Kamran Movassaghi¹, Jonathan Markowitz¹, Jimmy Oh¹, Howard An¹, Christopher Dewald¹*¹Department of Orthopaedic Surgery, Rush University Medical Center,

2:45 PM

1931**Alignment Targets Curve Proportion and Mechanical Loading: Preliminary Analysis of an Ideal Shape Toward Reducing Proximal Junctional Kyphosis****Presenter: Virginie Lafage***Renaud Lafage MS¹, Frank Schwab MD¹, Han Jo Kim MD¹, Justin Smith MD⁴, Breton Line BS⁵, Eric Klineberg MD⁶, Peter Passias MD⁷, Virginie Lafage PhD⁸*¹Hospital for Special Surgery, NY, USA, ⁴UVA, Charlottesville, VA, USA, ⁵Denver International Spine Center, CO, USA, ⁶UC Davis, Sacramento, CA, USA, ⁷NYU Langone, NY, USA, ⁸Hospital for Special Surgery, NY, USA

2:46 PM

970**Defining Age-Adjusted Spinopelvic Alignment Thresholds: Should we Integrate BMI?****Presenter: Edem Abotsi***Peter G Passias MD¹, Frank A. Segreto BS¹, Edem Abotsi¹, Samantha R Horn BA¹, Cole Bortz BA¹, Dennis Vasquez-Montes MS¹, Leah Steinmetz BA¹, John Moon BS¹, Christopher G Varlotta BS¹, Nicholas J Frangella BS¹, Nicholas Stekas BS¹, Haddy Alas BS¹, Avery E. Brown BS¹, Jordan H Manning BA¹, Renaud Lafage MS², Virginie Lafage PhD²*¹Division of Spinal Surgery/Departments of Orthopaedic and Neurosurgery, NYU Medical Center, NY Spine Institute, New York, NY, USA, ²Department of Orthopaedic Surgery, Hospital for Special Surgery, New York City, NY, USA

2:47 PM

1693**Does Age and Pelvic Incidence Affect Development of Proximal Junctional Kyphosis in Adult Deformity Patients?****Presenter: Dainn Woo***Pawel Jankowski, MD¹, Ethan W. Ayres, MPH¹, Dennis Vasquez-Montes, MS¹, Dainn Woo¹, Themistocles S. Protopsaltis, MD¹*¹NYU Langone Orthopedic Hospital

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1897**Benefits of Medical Optimization before Thoracolumbar Three-Column Osteotomies: An Analysis of 618 Patients****Presenter: Noor Maza***Andre Samuel¹, Francis Lovecchio¹, Avani Vaishnav¹, Catherine Gang¹, Steven Mcanany¹, Todd Albert¹, Sheeraz Qureshi¹*¹Hospital for Special Surgery

2:49 PM

498**Minimally Invasive Scoliosis Surgery with Oblique Lateral Lumbar Interbody Fusion: Single Surgeon Feasibility Study****Presenter: Hamid Abbasi***Hamid Abbasi¹, Lynn Miller², Ali Abbasi³, Vali Orandi⁴*¹Inspired Spine, ²Minnesota Disc Replacement and Spine Restoration Center, ³The University of Chicago School of Medicine, ⁴Vascular and Interventional Radiology, Lake Region Healthcare

2:51 PM

1196**Same-day Discharge versus Inpatient Lumbar Fusion: A Matched Cohort Comparison of Four Surgical Approaches****Presenter: Avani Vaishnav***Eric Feuchtbaum¹, Avani Vaishnav¹, Evan Sheha¹, Andre Samuel¹, Steven Mcanany¹, Catherine Gang¹, Todd Albert¹, Sheeraz Qureshi¹*¹Hospital for Special Surgery

2:52 PM

1563

Baseline Opioid Use Prior to Posterior Lumbar Fusion is Associated with Adverse Pre- and Postoperative Patient Outcomes

Presenter: Clayton Maschhoff

Jannat Khan¹, Bryce Basques¹, Michael Nolte¹, Jessica Gosse¹, Christian Vetter¹, Karishma Kadakia¹, Kevin Alter¹, Matthew Colman¹, Howard An¹

¹Department of Orthopaedic Surgery, Rush University Medical Center

2:53 PM

1819

The Effect of Lumbar Decompression and Interbody Fusion on Gait in Degenerative Lumbar Spondylolisthesis Patients

Presenter: Ram Haddas

Ram Haddas¹, Isador Lieberman¹

¹Texas Back Institute

2:54 PM

1635

Is Routine Use of a Drain Really Necessary for Lumbar Spinal Fusion Surgery? 165 Consecutive Cases of PLIF Without Drain

Presenter: Jae Chul Lee

Hae-Dong Jang¹, Jae Chul Lee¹, Sung-Woo Choi¹, Chungwon Bang¹, Jae-Wan Soh¹, Byung-Joon Shin¹, Deokwon Kang¹, Hyeung-Kyu Cho¹

¹Department of Orthopaedic Surgery, Soonchunhyang University Hospital

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593

Spike vs. Keel: Does Endplate Design of Lumbar Artificial Discs Affect Radiographic Outcomes?

Presenter: Jack Zigler

Richard D. Guyer, MD¹, Scott L. Blumenthal, MD¹, Jack E. Zigler, MD¹, Donna D. Ohnmeiss, Dr.Med.², Andrea Vovk³

¹Center for Disc Replacement at Texas Back Institute, ²Texas Back Institute Research Foundation, ³AAesculap Implant Systems, Center Valley, PA

2:56 PM

2378

Lumbar total disc replacement by the lateral approach—up to 10-year follow-up

Presenter: Gabriel Henrique De Pokorny

Luis Marchi¹, Gabriel Pokorny¹, Rodrigo Amaral¹, Rubens Jensen¹, Luiz Pimenta²

¹Instituto de Patologia da Coluna, ²Instituto de Patologia da Coluna; UCSD

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1271

Motion Analysis of Cervical Disc Arthroplasty Utilizing a Restrained Compressible-Core Cervical Disc Prosthesis: Quality of Flexion-Extension Motion

Presenter: Avinash Patwardhan

Avinash G. Patwardhan, PhD¹, Robert M. Havey, MS², Saeed Khayatzadeh, PhD²

¹Loyola University Medical Center, Maywood, Illinois, USA, ²Edward Hines, Jr. VA Hospital, Hines, Illinois, USA

2:58 PM

2493

Effect of Myelopathy on Outcomes After Cervical Disc Replacement: A Study of a Local Patient Cohort and a Large National Cohort

Presenter: Noor Maza

Andre Samuel¹, Avani Vaishnav¹, Steven Mcanany¹, Sravisht Iyer¹, Todd Albert¹, Catherine Gang¹, Sheeraz Qureshi¹

¹Hospital for Special Surgery

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2508

Clinical Outcome of Cervical Hybrid Surgery Using a Stand-alone Device at the Fusion Level

Presenter: Rick Guyer

Jack E. Zigler, MD¹, Richard D. Guyer, MD¹, Scott L. Blumenthal, MD¹, Donna D. Ohnmeiss, Dr.Med.²

¹Center for Disc Replacement at Texas Back Institute, ²Texas Back Institute Research Foundation



3:01 PM

728**Quantitative Age-Adjusted Targets for Ideal Cervicothoracic Sagittal Alignment in Asymptomatic Adults****Presenter: Cole Bortz***Peter G. Passias¹, Cole Bortz¹, Dennis Vasquez-Montes¹, Frank A Segreto¹, Samantha R. Horn¹, Avery Brown¹, Haddy Alas¹, Nicholas J. Frangella¹, Nicholas Stekas¹, Peter L. Zhou¹, Christopher Varlotta¹, Jordan H. Manning¹, Shaleen N Vira¹, Michael C. Gerling¹, Aaron J Buckland¹*¹Department of Orthopedic Surgery, NYU Langone Orthopedic Hospital, New York, NY

3:02 PM

963**Spinal Stenosis on Preoperative Magnetic Resonance Imaging Does Not Predict Hand Strength Improvement Following Anterior Cervical Discectomy and Fusion****Presenter: Dil V. Patel***Dil V. Patel, BS, BA¹, Joon S. Yoo, BA¹, Sailee S. Karmarkar, BS¹, Eric H. Lamoutte, BS¹, Andrew M. Block, BS¹, Jonathan A. Guntin, BA², Matthew W. Colman, MD¹, Frank M. Phillips, MD¹, Kern Singh, MD¹*¹Department of Orthopaedic Surgery, Rush University Medical Center

3:03 PM

1193**Predictive Factors of Postoperative Dysphagia in 1- and 2-level Anterior Cervical Discectomy and Fusion (ACDF)****Presenter: Avani Vaishnav***Avani Vaishnav¹, Phil Saville¹, Steven Mcanany¹, Catherine Gang¹, Kern Singh², Brittany Haws², Benjamin Khechen², Sheeraz Qureshi¹*¹Hospital for Special Surgery, ²Midwest Orthopaedics At Rush

3:04 PM

1357**C2 Tilt: Does it Matter in Patients Undergoing an ACDF for Routine Degenerative Cervical Pathology?****Presenter: Druv Goyal***Daniel Tarazona, MD¹, Taolin Fang MD¹, Matthew S. Galetta, BA¹, Dhruv Kc Goyal, BA¹, Srikanth Divi, MD¹, David Kaye, MD¹, Christopher K. Kepler, MD, MBA¹, Mark F. Kurd, MD¹, Alan S. Hilibrand, MD¹, Barret I. Woods, MD¹, Kris E. Radcliff, MD¹, Jeffery A. Rihn, MD¹, D. Greg Anderson, MD¹, Alexander R. Vaccaro, MD, PhD, MBA¹, Gregory D. Schroeder, MD¹*¹Rothman Orthopaedic Institute

3:05 PM

1502**Which Patients with Radiographic Evidence of Adjacent Segment Degeneration Following an Anterior Cervical Discectomy and Fusion Develop Clinical Symptoms at these Adjacent Levels?****Presenter: Jannat Khan***Bryce Basques¹, Jannat Khan¹, Philip Louie¹, Michael Nolte¹, Victor Lee¹, Jeremy Mormal¹, Steve Heidt¹, Edward Goldberg¹, Howard An¹*¹Department of Orthopaedic Surgery, Rush University Medical Center

3:06 PM

562**Effect of Decompression Range on Decompression Limit of Cervical Laminoplasty****Presenter: Yinze Diao***Yinze Diao¹*¹Peking University Third Hospital

3:07 PM

378**Cervical Spinal Deformity Correction Utilizing Integrated Interbody Fusion Devices From a Single Anterior Approach****Presenter: Jason Garber***Jason Garber, MD, FAANS, FACS¹*¹Las Vegas Neurosurgical Institute

3:08 PM

870**Platysma Sparing Approach to Anterior Cervical Spine Surgery: A Less Exposure Surgery Technique****Presenter: Fabio Pencil***Fabio Pencil¹, Kingsley Chin¹, Amala Benny¹, Jason A. Seale¹*¹Less Exposure Surgery Society

3:09 PM

2250**Anterior Cervical Discectomy and Fusion is Safe and Effective as a Revision Procedure for Cervical Pseudarthrosis****Presenter: Dil V. Patel***Dil V. Patel, BS¹, Benjamin Khechen, BA¹, Brittany E. Haws, MD¹, Joon S. Yoo, BA¹, Sravisht Iyer, MD¹, Eric H. Lamoutte, BS¹, Sailee S. Karmarkar, BS¹, Kern Singh, MD¹*¹Department of Orthopaedic Surgery, Rush University Medical Center

3:10 PM

1763**Can Post-Operative cSVA C2 Slope and T1 Slope be Predicted Accurately in Cervical Deformity Surgery?****Presenter: Ethan Ayres***Nicholas Stekas¹, Themistocles Protopsaltis¹, Justin S. Smith³, Ethan Ayres¹, Alex Soroceanu⁴, Renaud Lafage⁵, Brian J. Neuman⁶, Han Jo Kim⁵, Peter Passias¹, Gregory Mundis⁹, Eric Klineberg¹⁰, Kojo Hamilton¹¹, Munish Gupta¹², Virginie Lafage⁵, Robert Hart¹⁴, Frank Schwab⁵*¹NYU Langone Hospital, Department of Orthopedic Surgery, ³University of Virginia Medical Center, Department of Neurosurgery, ⁴University of Calgary, Department of Orthopaedic Surgery, ⁵Hospital for Special Surgery, Department of Orthopaedic Surgery, ⁶Johns Hopkins Medical Center, Department of Orthopedic, ⁹San Diego Center for Spinal Disorders, ¹⁰Department of Orthopaedic Surgery, University of California, Davis, ¹¹Department of Neurological Surgery, University of Pittsburgh School of Medicine, ¹²Department of Orthopaedic Surgery, Washington University, ¹⁴Department of Orthopaedic Surgery, Swedish Neuroscience Institute

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1363

Does Duration of Surgery Affects Outcomes After ACDF?

Presenter: Druv Goyal

Daniel Tarazona, MD¹, Taolin Fang, MD¹, Matthew S. Galetta, BA¹, Dhruv Kc Goyal, BA¹, Srikanth Divi, MD¹, David Kaye, MD¹, Christopher K. Kepler, MD, MBA¹, Mark F. Kurd, MD¹, Alan S. Hilibrand, MD¹, Barret I. Woods, MD¹, Kris E. Radcliff, MD¹, Jeffery A. Rihn, MD¹, D. Greg Anderson, MD¹, Alexander R. Vaccaro, MD, PhD, MBA¹, Gregory D. Schroeder, MD¹

¹Rothman Orthopaedic Institute

3:12 PM

565

Two-year follow-up of axial pain in patients with cervical spondylotic myelopathy treated with posterior decompression surgery—A comparison with healthy volunteers

Presenter: Kawakami Mamoru

Mamoru Kawakami¹, Masatoshi Teraguchi¹, Masahumi Nakagawa¹, Tomoko Kitagawa¹, Ryohei Kagotani¹, Yoshiaki Mera¹, Yukihiro Nakagawa¹

¹Spine Care Center, Wakayama Medical University Kihoku Hospital

3:13 PM

2617

Radiological Outcomes of a Novel 3-Dimensional Printed Titanium Cervical Interbody Cage following Single and Multi-level Anterior Cervical Discectomy and Fusion: A Case Series of 108 Operated Levels

Presenter: Antonio Breceovich

Callanan, TC¹, Breceovich, AT¹, Walker, BR¹, Abjornson, C¹, Cammisa, FP¹

¹Integrated Spine Research Program, Hospital for Special Surgery, New York, NY, United States

3:14 PM

692

Bariatric Surgery Population at Significantly Increased Risk of Spinal Disorders and Surgical Intervention Compared to Morbidly Obese Patients

Presenter: Peter Passias

Samantha R. Horn¹, Dennis Vasquez-Montes¹, Frank A. Segreto¹, Cole A. Bortz², Katherine E. Pierce¹, John A. Buza Iii¹, Avery Brown¹, Leah Steinmetz², Christopher G. Varlotta¹, Bassel Diebo¹, Jason Horowitz², Hamid Hassanzadeh², Renaud Lafage³, Virginie Lafage³, Peter G. Passias⁴

¹NYU Langone Orthopaedic Hospital, ²University of Virginia Medical Center, ³Hospital for Special Surgery, ⁴NYU Langone Orthopaedic Hospital; NY Spine Institute

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568

The Influence of Lumbar Spinal Stenosis Knee Osteoarthritis and Loss of Lumbar Lordosis on Quality of Life: Findings From the Katsuragi Low Back Pain Study

Presenter: Yuyu Ishimoto

Yuyu Ishimoto¹, Mamoru Kawakami², Masatoshi Teraguchi², Kayoko Horie², Yukihiro Nakagawa²

¹Spine Care Center, Wakayama Medical University Kihoku Hospital, Department of Orthopaedic Surgery, Kinan Hospital, ²Spine Care Center, Wakayama Medical University Kihoku Hospital

3:16 PM

875

Injury Prevention in Adult Track and Field Athletes: A Systematic Review

Presenter: Fabio Pencil

Fabio Pencil¹, Zaid Sheikh², Moawiah M. Mustafa², Luai M. Mustafa², Omar Viqar², Kingsley Chin¹

¹Less Exposure Surgery Society, ²Florida International University

3:17 PM

2403

Accurate Diagnosis of Low Back Pain in Adult Elite Athletes

Presenter: Kazuta Yamashita

Kazuta Yamashita¹, Kosuke Sugiura¹, Yoshihiro Ishihama¹, Hiroaki Manabe¹, Fumitake Tezuka¹, Yoichiro Takata¹, Toshinori Sakai¹, Koichi Sairyo¹

¹Tokushima University

3:18 PM

915

Less Exposure Surgery Modified Midline Pars Trajectory Lumbar Fusion

Presenter: Fabio Pencil

Fabio Pencil¹, Kingsley Chin¹, Moawiah M. Mustafa², Luai M. Mustafa², Zaid Sheikh², Omar Viqar²

¹Less Exposure Surgery Society, ²Florida International University

3:19 PM

2400

Reducing Mechanical Stress in Immature Pediatric Spondylolisthesis can Make Modification of Sacral Dome: A Study of Spondylolisthesis Rat Model

Presenter: Kazuta Yamashita

Kazuta Yamashita¹, Kosaku Higashino¹, Hiroaki Manabe¹, Toshinori Sakai¹, Yoichiro Takata¹, Fumitake Tezuka¹, Yoshihiro Ishihama¹, Koichi Sairyo¹

¹Tokushima University

3:20 PM

707

Incidence of VACTERL Associations in the United States Pediatric Population and Associated Frequency Among Congenital Spinal Diagnoses

Presenter: Erik Wang

Peter G Passias¹, Samantha R Horn¹, Frank A. Segreto¹, Erik Wang¹, Cole Bortz², Dennis Vasquez-Montes¹, Nicholas Stekas¹, Aaron Hockley¹, Shaleen Vira¹, Bassel G. Diebo³, Avery Brown¹, Haddy Alas¹, Jason A Horowitz¹, Hamid Hassanzadeh¹³, Mohamed A Moawad¹, Renaud Lafage¹⁵

¹Department of Orthopedic Surgery, NYU Langone Orthopedic Hospital, New York, NY, ²Department of Orthopedic Surgery, SUNY Downstate, New York, NY, ³Department of Orthopaedic Surgery, University of Virginia, ¹⁵Department of Orthopaedic Surgery, Hospital for Special Surgery, New York, NY

3:21 PM

1472

Magnetic Controlled Growing Rods for Early-Onset Scoliosis (EOS): Considerations After 7 Years of Experience

Presenter: Leonardo Oggiano

Sessa Sergio¹, Oggiano Leonardo¹, Curri Cloe¹, La Rosa Guido¹

¹Bambino Gesù Children's Hospital

3:22 PM

1330

The Addition of Intrathecal Morphine for Analgesia in Pediatric Spine Surgery: A Meta-analysis

Presenter: Arif Musa

Arif Musa¹, Frank Acosta², Alexander Tuchman³, Rana Movahedi², Kasim Pendi², Leila Nassif², Saifal-Deen Farhan⁷, Emile Mualllem⁸, Gligor Gucev²

¹Wayne State University School of Medicine, ²University of Southern California, ³Columbia University, ⁵William Carey University, ⁶Amgen Incorporated, ⁷University of California Irvine, ⁸Oakland University

3:23 PM

743

Efficacy of Epidural Steroid Injections in Cervical Spinal Disease with Moderate Disability.

Presenter: Jaeyoung Hong

Jaeyoung Hong¹, Jin-Sung Park¹, Seung-Woo Suh², Jae-Hyuk Yang², Si-Young Park³, Jungheum Baek¹

¹Korea University Ansan Hospital, ²Korea University Guro Hospital, ³Korea University Anam Hospital

3:24 PM

555

Seven Cases of Blood Injection Therapy for the Treatment of Cerebrospinal Fluid Leakage Following Lumbar Surgery

Presenter: Yuyu Ishimoto

Yuyu Ishimoto¹, Mamoru Kawakami¹, Masatoshi Teraguchi¹, Nami Moriguchi¹, Yukihiro Nakagawa¹

¹Spine Care Center, Wakayama Medical University Kihoku Hospital

3:25 PM – 3:30 PM

Discussion



Wednesday, April 3

2:30 pm - 3:30 pm

Oral Posters

Room: 252B

Moderator: Larry Khoo, MD

2:30 PM

2649

Use of Routine Motor-Evoked Potentials (MEPs) is superior to routine running Electromyographic (EMG) and Somatosensory Evoked Potential (SSEP) monitoring during Lateral Lumbar Interbody Fusion (LLIF) procedures for intraoperative detection of postoperative neurological deficits.

Presenter: Larry Khoo

Larry T. Khoo¹, Payman Emmanuel¹, Ji Hyun Lee¹, Roya Gheissari²

¹The Spine Clinic of Los Angeles, ²Columbia University

2:32 PM

495

The Assessment of Fusion Following Sacroiliac Joint Fusion Surgery

Presenter: Hamid Abbasi

Hamid Abbasi¹, John A Hipp²

¹Inspired Spine

2:33 PM

626

Chiari Malformation Clusters Describe Differing Presence of Concurrent Anomalies based on Chiari Type

Presenter: Haddy Alas

Peter G Passias¹, Samantha R Horn¹, Dennis Vasquez-Montes¹, Haddy Alas¹, Nicholas A Shepard¹, Cole A Bortz¹, Katherine E Pierce¹, Frank A Segreto¹, Christopher G Varlotta¹, Aaron Hockley¹, Bassel G Diebo², Shaleen Vira¹, Brian J Neuman¹², Daniel M. Scuibba¹², Renaud Lafage⁴

¹NYU Langone Orthopedic Hospital, ²SUNY Downstate Medical Center,

¹²John Hopkins, Department of Orthopedic Surgery, ⁴Hospital for Special Surgery

2:34 PM

907

Radiographic Evaluation of Minimally Invasive Instrumentation and Fusion for Treating Unstable Spinal Column Injuries

Presenter: Jael Camacho

Daniel Cavanaugh¹, Tristan Weir¹, Farooq Usmani¹, Jael Camacho¹, Joanna Kim¹, Mark Shasti¹, Vishal Khatri¹, Louis Bivona¹, Eugene Koh¹, Kelley Banagan¹, Daniel Gelb¹, Steven Ludwig¹

¹University of Maryland, Baltimore

2:35 PM

2609

Machine-Vision Image Guided Surgery (MvIGS): The Surgical Learning Curve Cohort Analysis

Presenter: Antonio Breceovich

Brecevich, AT¹, Dowe, C¹, Lebl, DR¹, Abjornson, C¹, Cammisa, FP¹

¹Integrated Spine Research Program, Hospital for Special Surgery, New York, NY, United States.

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2229

How Virtual Reality and Mixed Reality is helping spine surgeons?

Presenter: Wataru Narita

Wataru Narita¹

¹Fgoyal

2:37 PM

1274

Surgeon Staff and Patient Radiation Exposure in Minimally Invasive Spinal Surgery: Prospective Series Using a Personal Device

Presenter: George Mastorakos

Jakub Godzik¹, George M. Mastorakos², Tom Nayar³, William Hunter⁴, Luis Tumialan¹

¹Barrow Neurological Institute, ²Mayo Clinic School of Medicine, ³Duke University School of Medicine, ⁴CaroMont Health Regional Medical Center

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2548

Evaluation of Novel PEEK-Zeolite Composite in an Ovine Fusion Model

Presenter: Isaac Swink

Isaac Swink¹, Jake Carbone¹, Thomas Muzzonigro¹, Daniel Diehl¹, Sriram Sankar², Boyle Cheng¹

¹Allegheny Health Network, ²DiFusion Technologies

2:39 PM

1094

Shear Wave Elastography for the Evaluation of Spinal Cord Function in Patients with Cervical Degenerative Disease

Presenter: Wei Tian

Wei Tian¹, Xiao Han¹, Zuchang Li¹

¹Beijing Jishuitan Hospital,

2:40 PM

2225

Long-Term Clinical Outcomes with the Activ-L Lumbar Arthroplasty

Presenter: Rolando Garcia

John Paul G. Kolcun, BS¹, Jean-Paul Bryant, BS¹, Rolando Garcia Jr., MD, MPH²

¹Department of Neurosurgery, University of Miami Miller School of Medicine, Miami, FL, USA, ²Orthopedic Care Center, Miami, FL, USA

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1454

Machine Learning (ML) and Time Series Motion Classification: Is it possible to write real-world single sensor algorithms to detect the activities of daily living used patient reported outcome (PRO) questionnaires?

Presenter: Nick Benson

Nicholas Benson, PhD¹, Andrew Fields, M.Eng¹, Arjun Siby Kurian, M.Eng¹, Newton Metcalf, BS¹, Wing Au, MS², Seth Georgian, BS², Domagoj Coric, MD³, Shane Burch, MD⁴, Steven Glassman, MD⁵

¹Medtronic, ²Totem Spark, ³Carolina Neurosurgery & Spine Associates, ⁴UCSF, ⁵Norton Healthcare

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393

Two-Year Outcomes of Patients Treated with BVN Ablation for the Relief of Chronic Low Back Pain: Results of the SMART Trial

Presenter: Alfred Rhyne

Kevin Macadaeg, MD¹, Jeffrey Fischgrund, MD², Rick Sasso, MD¹, Hyun W. Bae, MD³, Alfred L. Rhyne, MD⁴

¹Indiana Spine Group, ²Oakland University William Beaumont School of Medicine, ³Cedars Sinai Medical Center, Los Angeles, CA, ⁴OrthoCarolina Spine Center

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575

Facet Joint Angulation in Minimally Invasive Contralateral Facet-Sparing Decompression for Lumbar Stenosis

Presenter: Artsiom Klimko

Artsiom Klimko¹, Stefan Mindea²

¹Carol Davila University of Medicine, ²Medstar Hospital

2:44 PM

1708

American Society of Anesthesiologists Score Does Not Predict Risk for Revision Procedures after Minimally Invasive Transforaminal Lumbar Interbody Fusion

Presenter: Eric Lamoutte

Dil V. Patel, BS¹, Ankur S. Narain, MD¹, Fady Y. Hijji, MD¹, Brittany E. Haws, MD¹, Joon S. Yoo, BA¹, Eric H. Lamoutte, BS¹, Sailee S. Karmarkar, BS¹, Kern Singh, MD¹

¹Department of Orthopaedic Surgery, Rush University Medical Center

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1864**A Novel Single Step Technique to Percutaneously Insert Lumbar Pedicle Screws Significantly Reduces Surgical Time and Radiation Exposure to the Patient and the Surgeon.****Presenter: Steven DeLuca**Steven DeLuca, DO, MS¹¹Orthopedic Institute of Pennsylvania

2:46 PM

2391**Approach Related Paresthesia Following Transposas Lumbar Interbody Fusion with VTI Implant****Presenter: Reginald Knight**Reginald Q Knight, MD¹, Scott Grainger, BSRN¹, Jennifer Victory, BSRN²¹Bassett Healthcare Network - Spine Care Institute, ²Bassett Healthcare Network - Research Institute

2:47 PM

539**Vertebral Body Fracture after Oblique Lumbar Interbody Fusion in 2 Patients - A Case Report -****Presenter: Young Ki Min**Sang-Bum Kim, M.D.¹, Yougun Won, M.D.¹, Jae-Sung Ahn, M.D.², Young-Ki Min, M.D.¹, Jae-Shin Lee, M.D.¹¹Department of Orthopedic Surgery, Konyang University College of Medicine, ²Department of Orthopaedic Surgery, Chungnam National University School of Medicine

2:48 PM

689**Results of Large Cannular Vertebroplasty for Osteoporotic Vertebral Compression Fractures— Comparison with Conventional Vertebroplasty****Presenter: Ho-jin Lee**Ho-Jin Lee¹, Jae-Sung Ahn¹, Eugene Park¹, Seokhwan Song¹¹Chungnam National University Hospital

2:49 PM

2372**Establishing Maximal Medical Improvement After Minimally Invasive Transforaminal Lumbar Interbody Fusion****Presenter: Sailee Karmarkar**Dil V. Patel, BS¹, Benjamin Khechen, BA¹, Anirudh K. Gowd, BS¹, Sailee S. Karmarkar, BS¹, Eric H. Lamoutte, BS¹, Joseph N. Liu, MD¹, Kern Singh, MD¹¹Department of Orthopaedic Surgery, Rush University Medical Center

2:50 PM

2092**HADS Brief Score Can Prevent Unnecessary Spinal Procedures****Presenter: Andreas Veihelmann**Andreas Veihelmann, PhD, MD¹, Florian Beck², Christof Birkenmaier³¹SRH-Gesundheitszentrum Bad Herrenalb, ²Sportklinik Stuttgart, ³LMU-University of Munich, Campus Grosshadern

2:51 PM

2502**Patient-Reported Outcomes Comparing Predominant Back Pain or Radiculopathy at Baseline: 12-month Trial Results of a Novel Expandable Mesh Lumbar Interbody Grafting Device****Presenter: Faheem Sandhu**Faheem Sandhu¹, J Chi², P Nunley³, M Stone³¹Medstar Georgetown University Hospital, ²Brigham and Women's Hospital, ³Spine Institute of Louisiana

2:52 PM

1343**Clinical Results of Posterior Cervical Microendoscopic Surgery for Cervical Spondylotic Amyotrophy****Presenter: Yukihiro Nakagawa**Yukihiro Nakagawa¹, Mamoru Kawakami¹, Masatoshi Teraguchi¹, Ryohei Kagotani¹, Hiroshi Yamada², Akihito Minamide², Hiroshi Iwasaki², Shunji Tsutsui², Masanari Takami², Hiroshi Hashizume², Yasutsugu Yukawa²¹Department of Orthopaedic Surgery, Wakayama Medical University Kihoku Hospital, ²Department of Orthopaedic Surgery, Wakayama Medical University

2:53 PM

1392**Percutaneous Transforaminal Endoscopic Discectomy Versus Microendoscopic Discectomy for Lumbar Disc Herniation: Two-Year Results of an Ongoing Randomized Controlled Trial****Presenter: Limin Rong**Limin Rong¹, Zihao Chen¹, Liangming Zhang¹, Peigen Xie¹, Feng Feng¹¹The Third affiliated hospital of Sun Yat-sen University

2:54 PM

1812**Long Term Results of Minimally Invasive In Line Posterior Inferior iliac Spine (PIIS) Screw fixation for CMIS Correction of ASD- A Simple Alternative to S2A1 Screws for Iliac Fixation****Presenter: Michael McGinity**Neel Anand, MD¹, Edward Nomoto, MD¹, Christopher Kong, MD¹, Babak Khandehroo, MD¹, Sheila Kahwaty, PA-C¹¹Cedars Sinai Medical Center

2:55 PM

617**Lumbar Deuk Laser Disc Repair: Long-Term Outcomes****Presenter: Ara Deukmedjian**Ara Deukmedjian¹, Eric Mason¹, Arias Deukmedjian¹¹Deuk Spine Institute

2:56 PM

1425

Microendoscopic Discectomy Combined with Piezosurgery and High-speed Drill in the Treatment of Ossification of Ligamenta Flava

Presenter: Gedong Meng

Gedong Meng¹, Heping Yin¹

¹The Second Affiliated Hospital of Inner Mongolia Medical University,

2:57 PM

1877

Endoscopic discectomy and reconfiguration at L5-S1 - Long Term Follow-up

Presenter: David Ditsworth

David A. Ditsworth, M.D.¹, Gregory Geer, J.D.¹

¹Back Institute

2:58 PM

488

Spinal Endoscopic Surgery for Revision of Open Operation: Retrospective Analysis of Consecutive Cases in 13 years

Presenter: Jianwei Du

Xifeng Zhang¹, Xiangyu Tang²

¹Chinese People's Liberation Army General Hospital (³⁰¹ Hospital),

²Chinese People's Liberation Army 264th Hospital

2:59 PM

2442

Combined Magnetic Field is Superior to Pulsed Electromagnetic Field Bone Stimulation after Thoracolumbar Fusion Surgery

Presenter: Barry Cheaney

Barry Cheaney II, BS¹, Mahboub El Hashemi, MD, MACS¹, James Obayashi, BS¹, Khoi D. Than, MD¹

¹Oregon Health & Science University

3:00 PM

662

Preliminary Results of a Single-Center Randomized Controlled Trial on the Effect of Psychological Intervention Prior to Cervical Spine Surgery

Presenter: Avery Brown

Peter G Passias MD¹, Samantha R Horn BA¹, Mohamed A Moawad MPH¹, Cole Bortz BA¹, Frank A. Segreto BS¹, Dennis Vasquez-Montes MS¹, Haddy Alas BS¹, Avery E. Brown BS¹, Renaud Lafage MS², Virginie Lafage PhD²

¹Department of Orthopaedics, NYU Langone Medical Center-Orthopaedic Hospital, New York, NY, USA, ²Department of Orthopedic Surgery, Hospital for Special Surgery, New York, NY

3:01 PM

833

Modifiable and Non-Modifiable Factors Associated with Patient Satisfaction in Spine Surgery Patients and Other Orthopedic Subspecialties

Presenter: Mohamed Moawad

Leah Steinmetz¹, Dennis Vasquez-Montes¹, Bradley Johnson¹, Mohamed Moawad¹, Aaron Buckland¹, Jeffrey Goldstein¹, John Bendo¹, Thomas Errico¹, Charla Fischer¹

¹NYU Langone Orthopaedic Hospital

3:02 PM

1267

All Disclosure is Good Disclosure: Patient Awareness of the Sunshine Act and Perceptions of Surgeon-Industry Relationships

Presenter: Eric Lamoutte

Dil V. Patel, BS¹, Sravisht Iyer, MD¹, Benjamin Khechen, BA¹, Brittany E. Haws, MD¹, Joon S. Yoo, BA¹, Michael T. Nolte, MD¹, Eric H. Lamoutte, BS¹, Sailee S. Karmarkar, BS¹, Frank M. Phillips, MD¹, Kern Singh, MD¹

¹Department of Orthopaedic Surgery, Rush University Medical Center

3:03 PM

1720

Does Day of Surgery Affect Length of Stay and Hospital Charges Following Lumbar Decompression?

Presenter: Sailee Karmarkar

Dil V. Patel, BS¹, Benjamin Khechen, BA¹, Brittany E. Haws, MD¹, Fady Y. Hijji, MD¹, Ankur S. Narain, MD¹, Joon S. Yoo, BA¹, Sailee S. Karmarkar, BS¹, Eric H. Lamoutte, BS¹, Kern Singh, MD¹

¹Department of Orthopaedic Surgery, Rush University Medical Center

3:04 PM

510

Economic Performance of Oblique Lateral Lumbar Interbody Fusion (OLLIF) with a Focus on Hospital Throughput Efficiency

Presenter: Hamid Abbasi

Hamid Abbasi¹, Christopher Murphy²

¹Inspired Spine, ²AMW, LLC



3:05 PM

1060**The Prevalence of Risk Factors for Hospital-Acquired Venous Thromboembolism in Neurosurgery and Orthopedic Surgery Patients****Presenter: Erik Wang***Charla R. Fischer¹, Erik Wang¹, Leah Steinmetz¹, Dennis Vasquez-Montes¹, Aaron Buckland¹, John Bendo¹, Anthony Frempong-Boadu¹, Thomas Errico¹*¹NYU Langone Orthopaedic Hospital

3:06 PM

1066**Preoperative Oswestry Disability Index as a Predictor for Reherniation in High-Risk Microdiscectomy Patients: Implications for Annular Closure****Presenter: Christopher Varlotta***Christopher Varlotta¹, Dennis Vasquez-Montes¹, David Ge¹, Peter Vajkoczy⁴, Frederic Martens⁵, Jason Perrin⁶, Richard Bostelmann⁷, Stefan Rath⁸, William Van Den Brink⁹, Claudius Thome¹⁰, Erik Van De Kelft¹¹, Mark Arts¹², Jasper Wolfs¹³, Susanne Froehlich¹⁴, Jonathan Stieber¹*¹NYU Langone Orthopaedic Hospital, ⁴Charite University Hospital, ⁵OLV Ziekenhuis Aalst, ⁶University Clinic Mannheim, ⁷University Hospital Dusseldorf, ⁸Donauislar Klinikum Deggendorf, ⁹Isala, ¹⁰Medical University Innsbruck, ¹¹A.Z. Nikolaas, ¹²Haaglanden Medical Center, ¹³Haaglanden Medical Center, ¹⁴Universitätsmedizin Rostock,

3:07 PM

1113**Application of Transiliac Approach to Intervertebral Endoscopic Discectomy in L5/ S1 Intervertebral Disc Herniation****Presenter: Wei Zhang***Wei Zhang¹*¹The Third Hospital of Hebei Medical University

3:08 PM

1160**True Anteroposterior View Pedicle Screw Insertion Technique****Presenter: Wei Zhang***Wei Zhang¹*¹The Third hospital of Hebei Medical University

3:09 PM

1416**Financial Relationships Between Principal Investigators and Industry do not Influence Patient Outcomes From a Randomized Multi-Center Clinical Trial on Lumbar Total Disc Replacement****Presenter: Rolando Garcia***Rolando Garcia Jr, MD, MPH¹, Andrea Vovk²*¹Orthopedic Care Center, ²Aesculap Implant Systems

3:10 PM

2057**The Influence of Added Compression on Sagittal Plane Lumbosacral Junction Rod Strain and Sacral Screw Bending Moments During In-Vitro Loading****Presenter: Brian Kelly***Brian P. Kelly¹, Anna G. Newcomb¹, Jennifer Lehrman¹, Bernardo De Andrada Pereira¹, Jake Godzik⁵, Jay D. Turner⁵, Randall J. Hlubek⁵*¹Barrow Neurological Institute, ⁵Barrow Brain and Spine

3:11 PM

2104**The Regional Effects of Lumbosacral Anterior Column Support on Rod and Screw Strain in a Pedicle Subtraction Osteotomy Model: An In Silica Investigation****Presenter: Jon Harris***Ehsan Jazini, MD¹, Daniel E. Gelb, MD², Jarid Tareen, MD², Steven Ludwig, MD², Jonathan A. Harris, MS³, Wenhai Wang, PhD³, Bryan J. Ferrick, BS⁴, Brandon S. Bucklen, PhD³*¹Medstar Georgetown University Hospital, Washington DC, ²University of Maryland, School of Medicine, Baltimore, MD, ³Musculoskeletal Education and Research Center, A Division of Globus Medical Inc., Audubon, PA, ⁴Drexel University, Philadelphia, PA

3:12 PM

2557**Biomechanical Fatigue Evaluation of Anterior Lumbar Interbody Fusion Devices with Respect to Flexion-Extension Loading****Presenter: Isaac Swink***Isaac Swink¹, John Carbone¹, Thomas Muzzonigro¹, Daniel Diehl¹, Daniel Cook¹, Boyle Cheng¹*¹Allegheny Health Network

3:13 PM

1041**Lumbar Spine Degeneration and Flatback Deformity alter Sitting-Standing Spinopelvic Mechanics: A Detailed Analysis of Segmental Spinal Alignment Change****Presenter: Edem Abotsi***Aaron Buckland¹, Peter Zhou¹, Edem Abotsi¹, Leah Steinmetz¹, Nicholas Frangella¹, Dennis Vasquez-Montes¹, Nicholas Stekas¹, Christopher Varlotta¹, David Ge¹, Renaud Lafage², Virginie Lafage², Peter Passias¹, Themistocles Protopsaltis¹, Jonathan Vigdorichik¹*¹NYU Langone Orthopaedic Hospital, ²Hospital for Special Surgery,

3:14 PM

2064

Influence of Lumbar Lordosis on Posterior Rod Strain in Long-Segment Pedicle Screws and Rods Instrumentation and Anterior Column Realignment: Cadaveric Study

Presenter: Brian Kelly

Bernardo De Andrada¹, Jakub Godzik², Anna Newcomb¹, Jennifer Lehrman¹, Randall Hlubeck², Juan Uribe², Brian P. Kelly¹, Jay D. Turner²

¹Spinal Biomechanics Laboratory, Barrow Neurological Institute, Saint Joseph Hospital and Medical Center, ²Department of Neurosurgery, Barrow Neurological Institute, Saint Joseph Hospital and Medical Center

3:15 PM

2098

The Interaction of Satellite Rod Reconstruction Rod Material and Rod Diameter on Posterior Rod Strain in Pedicle Subtraction Osteotomies for Adult Spinal Deformity Correction: A Finite Element Analysis

Presenter: Wenhai Wang

Daniel E. Gelb, MD¹, Jarid Tareen, MD¹, Ehsan Jazini, MD³, Steven Ludwig, MD¹, Jonathan A. Harris, MS⁵, Wenhai Wang, PhD⁵, Bryan J. Ferrick, BS⁷, Brandon S. Bucklen, PhD⁵

¹University of Maryland, School of Medicine, Baltimore, MD, ³Medstar Georgetown University Hospital, Washington DC, ⁵Musculoskeletal Education and Research Center, A Division of Globus Medical Inc., Audubon, PA, ⁷Drexel University, Philadelphia, PA,

3:16 PM

1960

Evaluation of a Minimally Invasive Procedure for Sacroiliac Joint Fusion—An In Vitro Biomechanical Analysis of Initial and Post-Revision Properties

Presenter: John Carbone

Jake Carbone¹, Isaac Swink¹, Tj Muzzonigro¹, Daniel Diehl¹, Daniel Cook¹, Boyle Cheng¹

¹Allegheny Health Network

3:17 PM

2321

Neurological outcome in patients with metastatic spinal cord compression

Presenter: Jae Woo Park

Jae-Woo Park¹, Jae Hwan Cho¹, Chang Ju Hwang¹, Choon Sung Lee¹, Dong-Ho Lee¹

¹Department of Orthopedic Surgery, University of Ulsan College of Medicine, Asan Medical Center

3:18 PM

2422

Comparative study of percutaneous pedicle screw fixation after direct decompression with anterior column reconstruction for thoracolumbar burst fracture

Presenter: Seul Kee Lee

Jung-Kil Lee¹, Jae-Young Kim²

¹Chonnam National University, Department of Neurosurgery

3:19 PM

1261

Biomechanical Investigation of the Potential Development and Prevention of Scoliosis Following Various Sizes of Chest Wall Resection

Presenter: Zach Witte

Zack Witte, MD¹, Jonathan M. Mahoney, BS², Jonathan A. Harris, MS², Hassaan P. Sheikh, BS³, Brandon S. Bucklen, PhD², Rex A. Marco, MD¹

¹Spine Surgery and Musculoskeletal Oncology, Houston Methodist Hospital, Houston, TX, ²Musculoskeletal Education and Research Center, A Division of Globus Medical Inc., Audubon, PA, ³School of Biomedical Engineering, Science and Health Systems, Drexel University, Philadelphia, PA

3:20 PM

1001

Risk Factor Analysis for Predicting Kyphosis Reoccurrence After Posterior Short-Segment Fixation in Thoracolumbar Burst Fracture

Presenter: Xiang-Yao Sun

Xiang-Yao Sun¹, Chao Kong¹, Shi-Bao Lu¹, Qing-Ming Zhang¹, Yong Hai⁵, Yi Hong⁶, Fang Li⁷, Xue-Ming Chen⁸

¹Department of Orthopedics, Xuanwu Hospital Capital Medical University, ⁵Department of Orthopedics, Beijing Chao-Yang Hospital, ⁶Department of Orthopedics, Beijing Charity Hospital, ⁷Department of Orthopedics, Chinese PLA Ground Force General Hospital, ⁸Department of Orthopedics, Beijing Luhe Hospital, Capital Medical University

3:21 PM

1476

The Use of Vacuum-Assisted Closure in Early Post-Operative Infections of Surgical Treatment of Neuromuscular Scoliosis.

Presenter: Cloe Curri

Cloe Curri MD¹, Leonardo Oggiano¹, Sergio Sessa¹, Guido La Rosa¹

¹Department of Surgery, Orthopedic Unit. Bambino Gesù Children's Hospital, Palidoro (Rome), Italy

3:22 PM

1894

Radiologist Interpretation of Cervical CT Scans have only Slight Agreement with Torg-Pavlov Ratio for Degree of Stenosis

Presenter: John Koerner

John Koerner, MD¹, Melissa Blatt¹, Tania Zielonka¹, Jyoti Sharma, MD¹, Sanjeev Kaul, MD¹

¹Hackensack University Medical Center

3:23 PM

760

Asymptomatic Construct Failure After Metastatic Spine Tumour Surgery: A New Entity or a Continuum With Symptomatic Failure?

Presenter: Naresh Kumar

Naresh Kumar¹, Ravish Shammi Patel¹, Wei Loong Barry Tan¹, Aditya Parkash Singla¹, Lay Wai, Khin⁵, Nivetha Ravikumar¹, Helena Milavec¹, Aravind Kumar⁸, Hwee Weng Dennis Hey¹, Leok-Lim Lau¹, Joseph Thambiah¹, Gabriel Liu¹

¹ Department of Orthopaedic Surgery, National University Hospital, Singapore 119228., ⁵ Investigational Medicine Unit, Dean's Office, Yong Loo Lin, School of Medicine, National University of Singapore, Singapore 119228., ⁸ Department of Orthopaedic Surgery, Ng Teng Fong General Hospital, Singapore 609606.

3:24 PM – 3:30 PM

Discussion



Please join us each morning at 7 a.m.
for continental breakfast on the show floor.

Thursday, April 4

7:30 – 9 AM

General Session: Robotics, Biologics and Cervical Deformities

Moderators: Keung-Nyun Kim, MD, PhD and Barton Sachs, MD, MBA

7:30 AM – 7:35 AM

2689

Initial Single-Institution Experience with a Novel Robotic-Guided System for Thoracolumbar Pedicle Screw and Pelvic Screw Placement with 643 Screws

Presenter: Jeffrey Goldstein

Deeptee Jain¹, Jordan Manning¹, Elizabeth Lord¹, Themistocles Protopsaltis¹, Aaron Buckland¹, John Bendo¹, Charla Fischer¹, Jeffrey Goldstein¹

¹NYU Langone Health Dept of Orthopedics

7:35 AM – 7:40 AM

2216

Predictive Accuracy of Surgical Planning Using Robotic Guidance System in the Cervical and Thoracolumbar Spinal Regions

Presenter: Isadore H. Lieberman

Isador H. Lieberman¹, Xiaobang Hu¹

¹Texas Back Institute

7:40 AM – 7:45 AM

1285

A Quantitative Assessment of the Accuracy and Reliability of Robotically Guided Percutaneous Pedicle Screw Placement: Technique and Application Accuracy

Presenter: Jake Godzik

Jakub Godzik¹, Corey Walker¹, Cory Hartman¹, Clinton D. Morgan¹, Steven Chang¹, Randall Porter¹, Laura Snyder¹, Juan Uribe¹

¹Barrow Neurological Institute,

7:45 AM – 7:50 AM

1389

Ultrasound-MR Image Fusion with Real-Time Navigation Assisted Percutaneous Transforaminal Endoscopic Discectomy

Presenter: Limin Rong

Limin Rong¹, Feng Feng¹, Peigen Xie¹, Zihao Chen¹

¹The third affiliated hospital of Sun Yat-sen University,

7:50 AM – 7:55 AM

9002

Double Blind Placebo Controlled Clinical Trial of Universal Donor Fibroblast Product CybroCell™ for Treatment of Disc Degenerative Disease

Presenter: Pete O'Heeron

Jesus Perez¹, Thomas E Ichid², Amit N Patel³, Courtney Barlett³, Pete O'Heeron²

¹Regenerative Medicine Institute, Tijuana, Mexico; ²SpinalCyte LLC, Houston, Texas; ³University of Miami School of Medicine, Miami, Florida

7:55 AM – 8:00 AM

1993

Progressive Pedicle Screw Accuracy in Clinical Utilization of Navigated-Robot-Assisted Spine Surgery

Presenter: David J. Wallace

David J. Wallace¹, Arnold B. Vardiman¹, Neil Crawford², Leigh A. Ahrendtsen², Jessica R. Riggleman², Saif Khalil², Charles Ledonio²

¹Department of Neurosurgery, University of Texas Health San Antonio, San Antonio, TX, ²Musculoskeletal Education and Research Center, A Division of Globus Medical Inc., Audubon, PA,

8:00 AM – 8:05 AM

Discussion

8:05 AM – 8:10 AM

1314

Self-Assembling QL6 Peptide Biomaterial Optimizes Human Neural Stem Cell Therapy for Cervical Spinal Cord Injury

Presenter: Christopher Ahuja

Christopher Ahuja¹, Mohamad Khazaei², Yao Yao², Jacky Lou², Priscilla Chan¹, Nayaab Punjani², Sohanthen Udayashankar², William Luong¹, Suyue Lyu², Vjura Senthilnathan², Inaara Walji², Ali Hasan², Jian Wang², Michael Fehlings²

¹University of Toronto, ²University Health Network

8:10 AM – 8:15 AM

2614

3-Dimensional Titanium Surface Optimization: A Quantitative Mesenchymal Stem Cell Analysis

Presenter: Antonio T. Brecevic

Brecevic¹, Dowe¹, Lebl¹, Cammisa¹, Abjornson¹

¹Integrated Spine Research Program, Hospital for Special Surgery, New York, NY, United States

8:15 AM – 8:20 AM

2652

Comparative Outcomes of Umbilical Cord Derived Stem Cells (UBSC) as an adjunct lumbar interbody arthrodesis during Minimally Invasive Transforaminal Lumbar Interbody Fusion (MI-TLIF) versus historical institution controls.

Presenter: Larry T. Khoo

Larry T Khoo¹, Roya Gheissari², Payman Emmanuel¹

¹The Spine Clinic of Los Angeles, ²Columbia University

8:20 AM – 8:25 AM

1622

PLLa Electrospun Fibrous Scaffold Modified with CD80 Monoclonal Antibody Promote Neurological Recovery in Rat Spinal Cord Injury

Presenter: Qin Shi

Junchao Luo¹, Wenguo Cui¹

¹The First Affiliated Hospital of Soochow University

8:25 AM – 8:30 AM

Discussion

8:30 AM – 8:35 AM

680

The Impact of Osteotomy Grade and Location on Regional and Global Alignment Following Cervical Deformity Surgery

Presenter: Ethan Ayres

Peter G. Passias¹, Samantha R. Horn², Cole A. Bortz², Ethan Ayres¹, Katherine E. Pierce², Renaud Lafage⁵, Justin S. Smith⁶, Breton Line⁷, Bassel G. Diebo⁸, Alan Daniels⁹, Alex Soroceanu¹⁰, Frank Schwab⁵, Shay Bess¹², Christopher I. Shaffrey¹³, Christopher P. Ames¹⁴, International Spine Study Group¹⁵

¹NYU Langone Orthopaedic Hospital; NY Spine Institute, ²NYU Langone Orthopaedic Hospital, ⁵Hospital for Special Surgery, ⁶University of Virginia Medical Center, ⁷International Spine Study Group, ⁸SUNY Downstate, ⁹Warren Alpert School of Medicine, Brown University, ¹⁰University of Calgary, ¹²Rocky Mountain Scoliosis and Spine, ¹³University of Virginia Medical Center, ¹⁴University of California, San Francisco

8:35 AM – 8:40 AM

1798

What is Actually Happening inside the “Cone of Economy:” An Advanced Method to Quantify the “Cone of Economy”

Presenter: Isador Lieberman

Ram Haddas¹, Isador Lieberman¹

¹Texas Back Institute

8:40 AM – 8:45 AM

2676

Fusion Rates and Incidence of Inner and Outer Vertebral Bone Bridge Following Lateral Lumbar Interbody Fusion in Multilevel Instrumented Spinal Surgery.

Presenter: Yu Moriguchi

Yu Moriguchi¹, Hiroyasu Fujiwara¹, Takenori Oda¹, Shinichi Nakagawa², Hiroyuki Tsukazaki², Takashi Kaito²

¹Osaka Minami Medical Center, Dept. of Orthopaedic Surgery, ²Osaka University, Dept. of Orthopaedic Surgery,

8:45 AM – 8:50 AM

2338

Single-Position Adult Spinal Deformity (ASD) Surgery with Minimally Invasive Lateral Lumbar Interbody Fusion (LLIF) and Lateral Segmental Screw-Rod Fixation

Presenter: William Smith

Joseph L. Laratta¹, Karishma Gupta², Raymond Suen², William D. Smith³

¹Leatherman Spine Center, Louisville, KY, USA; University of Louisville Medical Center, Louisville, KY, USA, ²Western Regional Center for Brain and Spine Surgery, Las Vegas, NV, USA, ³Western Regional Center for Brain and Spine Surgery, Las Vegas, NV, USA; University Medical Center of Southern Nevada, Las Vegas, NV, USA

8:50 AM – 8:55 AM

1022

The Influence of Surgical Intervention and Sagittal Alignment on Postoperative Frailty Status in Cervical Deformity Patients

Presenter: Edem Abotsi

Frank A. Segreto¹, Peter G. Passias¹, Virginie Lafage³, Renaud Lafage³, Justin S. Smith⁵, Edem Abotsi¹, Breton G. Line⁶, Haddy Alas¹, Avery E. Brown¹, Bassel G. Diebo⁹, Frank J. Schwab³, Shay Bess⁶, Christopher I. Shaffrey¹², Christopher P. Ames¹³, Themistocles S. Protopsaltis¹, International Spine Study Group¹⁵

¹Division of Spinal Surgery/Departments of Orthopaedic and Neurosurgery, NYU Medical Center, NY Spine Institute, New York, NY, USA, ³Department of Orthopaedic Surgery, Hospital for Special Surgery, New York, NY, USA, ⁵University of Virginia School of Medicine Department of Neurosurgery, Charlottesville, Virginia, ⁶Department of Orthopaedic Surgery, Denver International Spine Center, Denver, Colorado, ⁹Department of Orthopaedics, SUNY Downstate Medical Center, Brooklyn, New York, ¹²Department of Neurosurgery, University of Virginia Medical Center, Charlottesville, Virginia, ¹³Department of Orthopaedics, University of California, San Francisco, California,

8:55 AM – 9:00 AM

Discussion



Thursday, April 4

10:45 AM – noon

General Session: MIS

Moderators: Frank Phillips, MD, and Huilin Yang, MD, PhD

10:45 AM – 10:50 AM

1340

Posterior Cervical Microendoscopic Surgery for the Treatment of Radiculopathy and Myelopathy in the Athlete

Presenter: Yukihiko Nakagawa

Yukihiko Nakagawa¹, Mamoru Kawakami¹, Masatoshi Teraguchi¹, Ryohei Kagotani¹, Hiroshi Yamada², Akihito Minamide², Hiroshi Iwasaki², Shunji Tsutsui², Masanari Takami², Hiroshi Hashizume², Yasutsugu Yukawa²

¹Department of Orthopaedic Surgery, Wakayama Medical University Kihoku Hospital, ²Department of Orthopaedic Surgery, Wakayama Medical University

10:50 AM – 10:55 AM

2273

Is the Surgical Invasiveness Index valid in Minimally Invasive Spine Surgery?

Presenter: Avani Vaishnav

Avani Vaishnav¹, Anthony Jung Mok¹, Steven McAnany¹, Todd Albert¹, Sravisht Iyer¹, Catherine Himo Gang¹, Sheeraz Qureshi¹

¹Hospital for Special Surgery

10:55 AM – 11:00 AM

1085

Percutaneous Endoscopic Lumbar Discectomy; Rotate-to-Retract Technique for Foraminal Disc Herniation

Presenter: Sang Soo Eun

Sang Soo Eun¹, Sang Ho Lee²

¹Wooridul Spine Hospital, Seoul, Korea

11:00 AM – 11:05 AM

2658

Anterior Column Release (ACR) during Lateral Interbody Fusion for Hyperlordotic Segmental Correction

Presenter: Larry T. Khoo

Larry T Khoo¹, Ji Hyun Lee¹, Roya Gheissari², Payman Emmanuel¹

¹The Spine Clinic of Los Angeles, ²Columbia University

11:05 AM – 11:10 AM

Discussion

11:10 AM – 11:15 AM

1838

Low Perioperative Complications and Good Short-Term Outcomes After Revision Spine Surgery Using Minimally Invasive (MIS) Techniques

Presenter: Noor Maza

Andre Samuel¹, Avani Vaishnav¹, Catherine Gang¹, Steven McAnany¹, Todd Albert¹, Sheeraz Qureshi¹

¹Hospital for Special Surgery

11:15 AM – 11:20 AM

2169

A Comparison of Inpatient Pain Scores and Narcotic Consumption Following Minimally Invasive Transforaminal Lumbar Interbody Fusion

Presenter: Sailee S. Karmarkar

Dil V. Patel BS¹, Benjamin C. Mayo MD¹, Dustin H. Massel MD¹, Daniel D. Bohl MD MPH¹, Sailee S. Karmarkar BS¹, Eric H. Lamoutte BS¹, Kern Singh MD¹

¹Department of Orthopaedic Surgery Rush University Medical Center

11:20 AM – 11:25 AM

599

Multifidus Muscle Changes After Biportal Endoscopic Spinal Surgery (Bess); Magnetic Resonance Imaging Evaluation

Presenter: Eugene Park

Ho-Jin Lee¹, Jae-Sung Ahn¹, Eugene Park¹, Seokhwan Song¹

¹Chungnam National University Hospital

11:25 AM – 11:30 AM

2088

Transumbilical Anterior Lumbar Interbody Fusion for Degenerative Lumbar Disease

Presenter: Junseok Bae

Junseok Bae¹, Young-Sik Bae¹, Sang-Hyup Jeon¹, Sang-Ho Lee¹

¹Wooridul Spine Hospital

11:30 AM – 11:35 AM

Discussion

11:35 AM – 11:40 AM

2588

Factors Associated with Achieving a Clinically Significant Improvement in Patients Undergoing Minimally Invasive Lumbar Decompression Surgery

Presenter: Avani Vaishnav

Avani Vaishnav¹, Catherine Gang¹, Steven McAnany¹, Sravisht Iyer¹, Todd Albert¹, Sheeraz Qureshi¹

¹Hospital for Special Surgery

11:40 AM – 11:45 AM

542

Reliability Measurement of EOS for Spinal Pelvic Index on the Sagittal Plane of Spine and Pelvis

Presenter: Yougun Won

Sang Bum Kim¹, Youn Moo Heo¹, Cheol Mog Hwang², Tae Gyun Kim¹, Jee Young Hong³, Yougun Won¹, Chang Uk Ham¹, Young Ki Min¹, Jin Woong Yi¹

¹Department of Orthopedic Surgery, Konyang University Hospital, Daejeon, Korea, ²Department of Radiology, Konyang University Hospital, Daejeon, Korea, ³Department of Preventive Medicine, Konyang University College of Medicine, Daejeon, Korea

11:45 AM – 11:50 AM

2193

Risk Factors for a Long Hospital Stay Following Transforaminal Lumbar Interbody Fusion

Presenter: Dil V. Patel

Dil V. Patel, BS¹, Benjamin C. Mayo, MD¹, Dustin H. Massel, MD¹, Joon S. Yoo, BA¹, Sailee S. Karmarkar, BS¹, Eric H. Lamoutte, BS¹, Kern Singh, MD¹

¹Department of Orthopaedic Surgery, Rush University Medical Center

11:50 AM – 11:55 AM

358

Patient satisfaction with simple posterior decompression for cervical compressive myelopathy

Presenter: Masatoshi Teraguchi

Masatoshi Teraguchi¹, Mamoru Kawakami², Yuyu Ishimoto³, Keiji Nagata⁴, Ryohei Kagotani¹, Tomoko Kitano¹, Yoshimasa Mera¹, Yukihiro Nakagawa¹

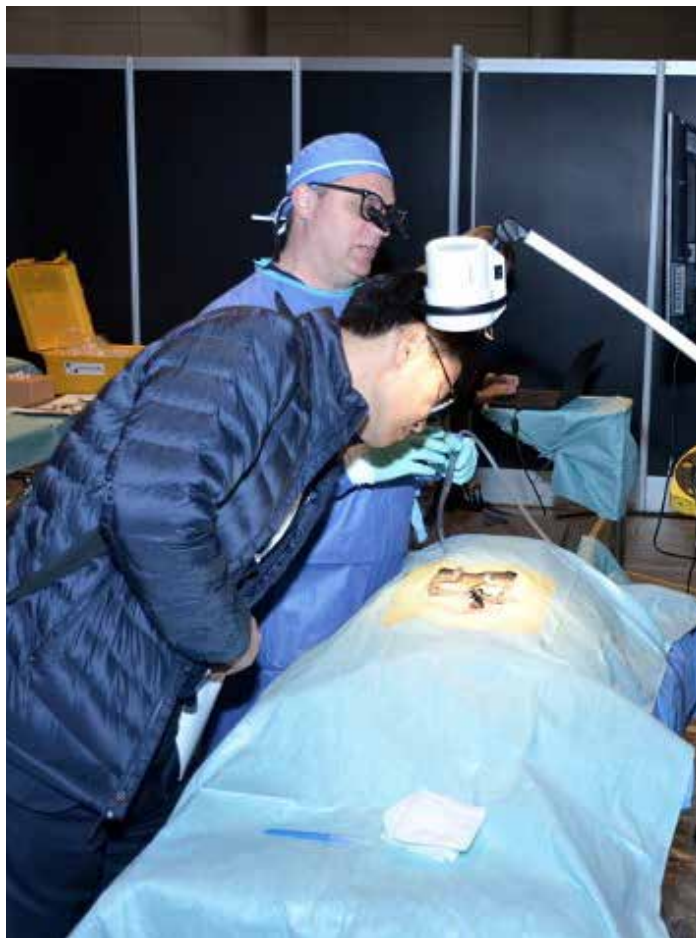
¹Spine Care Center, Wakayama Medical University Kihoku Hospital,

²Spine Care Center, Wakayama Medical University Kihoku Hospital,

³Kinan hospital, ⁴Department orthopaedic surgery, Wakayama Medical University

11:55 AM – noon

Discussion



Thursday, April 4

2:30 PM – 3:30 PM

General Session: MIS

Moderators: Jeffrey A. Goldstein, MD, FACS, FAOA and Rolando Garcia, MD

2:30 PM – 2:35 PM

1588

Minimally Invasive Multilevel Oblique Lumbar Interbody Fusion (OLIF): An Anatomical Single Position Approach for CMIS Correction of Adult Spinal Deformity (ASD)

Presenter: Chris Kong

Neel Anand¹, Edward Nomoto¹, Christopher Kong¹, Babak Khandehroo¹, Sheila Kahwaty¹

¹Cedars Sinai Medical Center

2:35 PM – 2:40 PM

602

Combination of Minimally Invasive Spinal Surgery: Oblique Lumbar Interbody Fusion and Biportal Endoscopic Spinal Surgery for Lumbar Spinal Stenosis - Pilot Study

Presenter: Eugene Park

Ho-Jin Lee¹, Jae-Sung Ahn¹, Eugene Park¹, Seokhwan Song¹

¹Chungnam National University Hospital

2:40 PM – 2:45 PM

1202

Effect of Cage Type on Immediate Post-operative Radiographic Outcomes in Single-level Minimally Invasive Transforaminal Lumbar Interbody Fusion (MI-TLIF)

Presenter: Sheeraz Qureshi

Avani Vaishnav¹, Joshua Wright-Chisem¹, Michael Steinhaus¹, Joshua Meaike², Robert Merrill², Catherine Gang¹, Steven McAnany¹, Todd Albert¹, Sheeraz Qureshi¹

¹Hospital for Special Surgery, ²Icahn School of Medicine at Mount Sinai

2:45 PM – 2:50 PM

2160

Treatment of Grade II Isthmic Spondylolisthesis: Comparison of Minimally Invasive Transforaminal and Anterior Lumbar Interbody Fusion

Presenter: Dil V. Patel

Dil V. Patel, BS¹, Benjamin C. Mayo, MD¹, Dustin H. Massel, MD¹, Joon S. Yoo, BA¹, Eric H. Lamoutte, BS¹, Sailee S. Karmarkar, BS¹, Kern Singh, MD¹

¹Department of Orthopaedic Surgery, Rush University Medical Center

2:50 PM – 2:55 PM

2696

MIS Posterior-Inferior Approach for Sacroiliac Joint Fusion: Finite Element Analysis of Joint Stability Using Novel Implant Designs Orientation and Number

Presenter: E. Jeffrey Donner

E. Jeffrey Donner¹, Scott Lovald², Kevin Ong³, Tristan Giesa⁴, Hai Trieu⁵, Christopher T. Donner⁶

¹Colorado Spine Institute PLLC, Johnstown, CO, United States, ²Exponent Inc, Menlo Park, CA, United States, ³Exponent Inc, Philadelphia, PA, United States, ⁴Exponent GmbH, Dusseldorf, Germany, ⁵Trieu Consulting LLC, Cordova, TN, United States, ⁶SI-TECHNOLOGY LLC, Fort Collins, CO, United States

2:55 PM – 3:00 PM

Discussion

3:00 PM – 3:05 PM

1864

A Novel single Step Technique to Percutaneously Insert Lumbar Pedicle Screws Significantly Reduces Surgical Time and Radiation Exposure to the Patient and the Surgeon

Presenter: Steven DeLuca

Steven DeLuca DO MS¹

¹Orthopedic Institute of Pennsylvania

3:05 PM – 3:10 PM

2436

5-Year Prospective Follow-Up After SI Joint Fusion with Triangular Titanium Implants

Presenter: Abhineet Chowdhary

S. Craig Meyer¹, Clay Frank², Abhineet Chowdhary³, Philip Ploska⁴, Harry Lockstadt⁵, Emily Darr⁶, Andy Redmond⁷, Daniel Cher⁸, Peter Whang⁹

¹Columbia Orthopedics, ²Integrated Spine, ³Overlake Medical Center, ⁴Regenerative Orthopaedics & Spine Institute, ⁵Bluegrass Orthopedics, ⁶Medical University of South Carolina, ⁷Precision Spine Care, ⁸SI-BONE, ⁹Yale University

3:10 PM – 3:15 PM

484

Revision Surgery After Spinal Endoscopic Operation: Analysis of 15 Years Consecutive Cases

Presenter: Jianwei Du

Xifeng Zhang¹, Xiangyu Tang², Jinwei Du³

¹Chinese People's Liberation Army General Hospital (301 Hospital),

²Chinese People's Liberation Army the 264 Hospital ³Yangzhou University affiliated Hospital

3:15 PM – 3:20 PM

1326

Using a Percutaneous Spinal Endoscopy Unilateral Posterior Approach to Perform Bilateral Decompression for Patients with Lumbar Lateral Recess Stenosis: Focus on Clinical Results and Technical Notes

Presenter: Jianwei Du

Zhijun Xin¹, Xifeng Zhang¹, Guoquan Zheng¹, Peng Huang¹, Yan Wang¹

¹Department of Orthopaedic Surgery, Chinese People's Liberation Army General Hospital,

3:20 PM – 3:25 PM

2053

Contralateral Sublaminar Approach for Lumbar Degenerative Disease Using Percutaneous Biportal Endoscopic Surgery. Clinical and Radiological Results.

Presenter: Choon-Keun Park

Choon Keun Park¹, Dong Hwa Heo¹

¹The Leon Wiltse Memorial Hospital

3:25 PM – 3:30 PM

Discussion



Please join us each morning from at 7 a.m. for continental breakfast on the show floor.

Friday, April 5

7:30 AM – 10:00 AM

General Session: Adult Deformity, Thoraco-Lumbar Degenerative

Moderators: Liang Chen, MD and Alex Vaccaro, MD, PhD, MBA

7:30 AM – 7:35 AM

1560

Duration of Preoperative Symptoms Does Not Affect Clinical Outcome after Lumbar Arthrodesis

Presenter: Arash Sayari

Jannat Khan¹, Arash Sayari¹, Bryce Basques¹, David Hong¹, Jessica Gosse¹, Kevin Alter¹, Landan Banks¹, Ahish Chitneni¹, Matthew Colman¹, Howard An¹

¹Department of Orthopaedic Surgery, Rush University Medical Center

7:35 AM – 7:40 AM

2280

Does Pre-Operative Muscle Health Impact Pre-Operative Health Related Quality of Life Scores for Patients With Lumbar Pathology?

Presenter: Sohrab Virk

Sohrab Virk¹, Avani Vaishnav¹, Steven McAnany¹, Todd Albert¹, Sravisht Iyer¹, Catherine Himo Gang¹, Sheeraz Qureshi¹

¹Hospital for Special Surgery

7:40 AM – 7:45 AM

1642

Comparison of Lumbar Pedicle Morphology and Vertebral Dimensions in Isthmic and Degenerative Spondylolisthesis

Presenter: Dhruv Goyal

Daniel Tarazona¹, Taolin Fang¹, Matthew S. Galetta¹, Dhruv KC Goyal¹, Srikanth Divi¹, David Kaye¹, Christopher K. Kepler¹, Mark F. Kurd¹, Alan S. Hilibrand¹, Barret I. Woods¹, Kris E. Radcliff¹, Jeffery A. Rihn¹, D. Greg Anderson¹, Alexander R. Vaccaro¹, Gregory D. Schroeder¹

¹Rothman Orthopaedic Institute

7:45 AM – 7:50 AM

1460

The Use of a Bone-Anchored Anular Closure Device in a Large Defect Population Following Lumbar Discectomy: Two-Year Results From a Single-Center Registry Trial

Presenter: Ardeshir Ardeshiri

Ardeshir Ardeshiri¹

¹Section for Spine Surgery, Klinikum Itzehoe

7:50 AM – 7:55 AM

1912

Do Clinical and Radiographic Outcomes Differ Between Diabetics and Non-Diabetics following Posterior Lumbar Spinal Fusion?

Presenter: Kevin Adler

Bryce Basques¹, Jannat Khan¹, Oscar Chen¹, Joseph Michalski¹, Zayd Hayani¹, Jennifer Hwang¹, Chaim Kalish¹, Howard An¹, Matthew Colman¹

¹Department of Orthopaedic Surgery, Rush University Medical Center

7:55 AM – 8:00 AM

Discussion

8:00 AM – 8:05 AM

1890

Acute Readmission and Reoperation after Lumbar Decompression Surgery: An Analysis of 81 365 patients

Presenter: Yahya Othman

Andre Samuel¹, Francis Lovecchio¹, Avani Vaishnav¹, Catherine Gang¹, Steven McAnany¹, Todd Albert¹, Sheeraz Qureshi¹

¹Hospital for Special Surgery

8:05 AM – 8:10 AM

1906

Discharge to a Facility Following Posterior Lumbar Fusion: Risk Factors and the Development of a Predictive Scoring System

Presenter: Jannat Khan

Bryce Basques¹, Philip Louie¹, Jannat Khan¹, Oscar Chen¹, Joseph Michalski¹, Kyle Kunze¹, Matthew Colman¹, Dino Samartzis¹, Howard An¹

¹Department of Orthopaedic Surgery, Rush University Medical Center

8:10 AM – 8:15 AM

901

Percutaneous Transforaminal Endoscopic Surgery (PTES) and OLIF combined with Anterior Screw Fixation for Surgical Treatment of Lumbar Spine Spondylolisthesis

Presenter: YuTong Gu

Yu-tong Gu¹, Liang Zhang¹, Yi-chao Wang¹, Jian Dong¹

¹Zhongshan Hospital of Fudan University

8:15 AM – 8:20 AM

1903

Patients with Isolated Back Pain at the Time of Posterior Lumbar Fusion Experience Similar Clinical Improvement to Patients with Leg Pain with or without Back Pain

Presenter: Kevin Adler

Jannat Khan¹, Arash Sayari¹, Bryce Basques¹, Young Soo Hong¹, Jessica Gosse¹, Oscar Chen¹, Landan Banks¹, Ahish Chitneni¹, Matthew Colman¹, Howard An¹

¹Department of Orthopaedic Surgery, Rush University Medical Center

8:20 AM – 8:25 AM

1450

Prospective Enumeration of Opioid Consumption Patterns after Lumbar Decompression or Microdiscectomy Using a Novel Text-Messaging Data Collection Platform: Moving Toward Evidence-Based National Opioid Prescribing Guidelines

Presenter: Francis Lovecchio

Francis Lovecchio¹, Ajay Premkumar¹, Jeffrey G Stepan¹, Dianna Mejia¹, Daniel Stein¹, Dil V Patel², Benjamin Khechen², Darren Lebl¹, Sheeraz Qureshi¹, Russel Huang¹, Kern Singh², Todd Albert¹

¹Hospital for Special Surgery, ²Midwest Orthopaedics at Rush

8:25 AM – 8:30 AM

Discussion

8:30 AM – 8:35 AM

1566

Does Obesity Impact Clinical Outcomes and Lumbar Sagittal Alignment after a Posterior Lumbar Spine Fusion?

Presenter: Fadi Hamati

Jannat Khan¹, Bryce Basques¹, Zayd Hayani¹, Coralie Pardo¹, Landan Banks¹, David Hong¹, Konstantin Tchalukov¹, Matthew Colman¹, Howard An¹

¹Department of Orthopaedic Surgery, Rush University Medical Center

8:35 AM – 8:40 AM

1081

Unilateral Laminotomy for Bilateral Decompression versus Decompression with Instrumented Fusion for Lumbar Degenerative Spondylolisthesis at 5-Year Follow-Up

Presenter: Ravi S. Bain

Calvin C. Kuo¹, Maqdooda Merchant¹, Mayur Kardile¹, Alem Yacob¹, Kamran Majid¹, Ravi S. Bains¹

¹Kaiser Permanente

8:40 AM – 8:45 AM

2301

Does the Actual Lordosis Gain Following Use of Interbody Grafts in Fusion Operations match the Expected Gain Based on the Lordosis of Graft Itself?

Presenter: Yahya Othman

Yahya Othman¹, Virginie Lafage¹, Renaud Lafage¹, Jonathan Elysee¹, Avani Vaishnav¹, Steven McAnany¹, Todd Albert¹, Sravisht Iyer¹, Catherine Himo Gang¹, Sheeraz Qureshi¹

¹Hospital for Special Surgery

8:45 AM – 8:50 AM

1551

Equivalent Outcomes in Patients Undergoing Open Posterior Lumbar Fusion With and Without a History of Prior Lumbar Laminectomy

Presenter: Arash Sayari

Jannat Khan¹, Bryce Basques¹, Christian Vetter¹, Kyle Kunze¹, Coralie Pardo¹, Oscar Chen¹, Jeremy Mormal¹, Howard An¹, Matthew Colman¹

¹Department of Orthopaedic Surgery, Rush University Medical Center

8:50 AM – 8:55 AM

Discussion

8:55 AM – 9:00 AM

2114

The Higher Frailty Score and Lower Self-Care Activity are Associated With Higher Grades of Sagittal Spinopelvic Malalignment in the Elderly Population

Presenter: Tae Woo Kim

Tae Woo Kim¹, Dong A Shin¹, Seong Yi¹, Yoon Ha¹, Keung-Nyun Kim¹, Do-Heum Yoon¹

¹Department of Neurosurgery, Spine and Spinal Cord Research Institute, Yonsei University College of Medicine, Seoul, Korea

9:00 AM – 9:05 AM

2149

Gillet Technique for Treatment of Lumbar Symptomatic Spondylolysis (3 Years Follow up)

Presenter: Xingkai Zhang

Xingkai Zhang¹, Yu Liang¹, Peng Cao¹

¹Dept. Orthopedics, Shanghai Jiaotong University School of Medicine, Ruijin Hospital

9:05 AM – 9:10 AM

1557

Do Clinical Outcomes and Sagittal Parameters Differ Between Transforaminal Lumbar Interbody Fusion and Posterolateral Lumbar Fusion for Degenerative Spondylolisthesis?

Presenter: Clayton Maschhoff

Bryce Basques¹, Jannat Khan¹, Kyle Kunze¹, Ian Chen¹, Jessica Gosse¹, Lindsay Friedman¹, Clayton Maschhoff¹, Matthew Colman¹, Howard An¹

¹Department of Orthopaedic Surgery, Rush University Medical Center

9:10 AM – 9:15 AM

2085

The Impact of Lumbar Stenosis with Neurogenic Claudication on Concomitant Sacroiliac Joint Pain: Short-Term and Preliminary Long-Term Results.

Presenter: Thomas Freeman

Konrad Bach¹, Thomas Freeman¹

¹USF Department of Neurosurgery and Brain Repair

9:15 AM – 9:20 AM

2472

Patients with Predominantly Back Pain at the Time of Posterior Lumbar Fusion Experience Similar Clinical Improvement To Patients With Predominantly Leg Pain

Presenter: Clayton Maschhoff

Bryce Basques¹, Michael Nolte¹, Jannat Khan¹, Karishma Kadakia¹, Jessica Gosse¹, Jeremy Mormal¹, Peter Derman¹, Matthew Colman¹, Howard An¹

¹Department of Orthopaedic Surgery, Rush University Medical Center

9:20 AM-9:25 AM

Discussion

9:25 AM – 9:30 AM

1253**Outcomes of Expandable Interbody Devices in Lumbar Fusion: A Systematic Review****Presenter: Eric H. Lamoutte***Dil V. Patel, BS¹, Benjamin Khechen, BA¹, Joon S. Yoo, BA¹, Sailee S. Karmarkar, MS¹, Eric H. Lamoutte, BS¹, Andrew M. Block, BS¹, Simon P. Lalehzarian, MS¹, Sravisht Iyer, MD¹, Kern Singh, MD¹*¹Department of Orthopaedic Surgery, Rush University Medical Center

9:30 AM – 9:35 AM

1230**L5/S1 Survival Rate After Multiple-Level Lateral Interbody Fusion Stopping in L5****Presenter: Gabriel Henrique de Pokorny***Fernando Marcelino¹, Luis Marchi¹, Rodrigo Amaral¹, Gabriel Pokorny¹, Rubens Jensen¹, Luiz Pimenta²*¹Instituto de Patologia da Coluna, ²Instituto de Patologia da Coluna; UCSD

9:35 AM – 9:40 AM

1523**The Soft Landing: Proximal Laminar Hooks Are Associated with Decreased Rate of Proximal Junctional Kyphosis in Spinal Fusion for Adult Spinal Deformity compared to Pedicle Screw Fixation****Presenter: Fadi Hamati***Bryce Basques¹, Philip Louie¹, Michael Nolte¹, Jannat Khan¹, Kamran Movassaghi¹, Jimmy Oh¹, Joseph Michalski¹, Howard An¹, Christopher DeWald¹*¹Department of Orthopaedic Surgery, Rush University Medical Center

9:40 AM – 9:45 AM

1967**In the relationship between change in Kyphosis and change in Lordosis: which drives which?****Presenter: Renaud Lafage***Matthieu Bannwarth¹, Renaud Lafage¹, Tejbir Pannu¹, Jonathan Elysee¹, Brandon Carlson², Frank Schwab¹, Han Jo Kim¹, Virginie Lafage¹*¹Hospital for Special Surgery, NY, USA, ²Kansas City, KS, USA

9:45 AM – 9:50 AM

Discussion**Friday, April 5****12:00 PM – 1:50 PM****General Session: Value and Economics****Moderators: Jean-Jacques Abitbol, MD and Naresh Kumar, MD**

12:05 PM – 12:10 PM

613**Risk Benefit Assessment of Major versus Minor Osteotomies for Flexible and Rigid Cervical Deformity Correction****Presenter: Katie Pierce***Peter G. Passias¹, Samantha R. Horn¹, Virginie Lafage³, Renaud Lafage³, Justin S. Smith⁵, Breton G. Line⁶, Shaleen Vira¹, Gregory M. Mundis⁸, Bassel G. Diebo⁹, Katherine E. Pierce¹, Cole A. Bortz¹, Alan H. Daniels¹², Eric O. Klineberg¹³, Douglas C. Burton¹⁴, International Spine Study Group¹⁵*¹NYU Langone Orthopedic Hospital, ³Hospital for Special Surgery, ⁵University of Virginia Medical Center, ⁹International Spine Study Group, ⁸San Diego Center for Spinal Disorders, ⁹SUNY Downstate Medical Center, ¹²Warren Alpert School of Medicine, Brown University¹, ¹³UC Davis Medical Center, ¹⁴University of Kansas Medical Center

12:10 PM – 12:15 PM

623**Cost-Utility of Revisions for Cervical Deformity Correction Warrants Minimization of Reoperations****Presenter: Avery Brown***Peter G. Passias¹, Samantha R. Horn¹, Avery Brown¹, Hamid Hassanzadeh³, Katherine E. Pierce¹, Cole A. Bortz¹, Jason A. Horowitz², Renaud Lafage², Justin S. Smith⁸, Han Jo Kim⁹, Alan H. Daniels¹⁰, Robert A. Hart¹¹, Frank J. Schwab⁷, Shay Bess¹³, Christopher P. Ames¹⁴, International Spine Study Group¹⁵*¹NYU Langone Orthopedic Hospital, ³University of Virginia Medical Center, ⁷Hospital for Special Surgery, ⁸University of Virginia Medical Center, ⁹NYU Langone Orthopedic Hospital, ¹⁰Warren Alpert School of Medicine, Brown University, ¹¹Swedish Neuroscience Institute, ¹³Rocky Mountain Scoliosis and Spine, ¹⁴UCSF Medical Center

12:15 PM – 12:20 PM

1720**Does Day of Surgery Affect Length of Stay and Hospital Charges Following Lumbar Decompression?****Presenter: Eric H. Lamoutte***Dil V. Patel, BS¹, Benjamin Khechen, BA¹, Brittany E. Haws, MD¹, Fady Y. Hijji, MD¹, Ankur S. Narain, MD¹, Joon S. Yoo, BA¹, Sailee S. Karmarkar, BS¹, Eric H. Lamoutte, BS¹, Kern Singh, MD¹*¹Department of Orthopaedic Surgery, Rush University Medical Center

12:20 PM – 12:25 PM

710

Short-term Outcomes Following Cervical Laminoplasty and Laminectomy and Fusion with Instrumentation

Presenter: Haddy Alas

Anthony Boniello¹, Philip Petrucelli¹, Yudi Kerbel¹, Samantha Horn², Amrit Khalsa¹, Avery Brown², Haddy Alas², Peter Passias²

¹Department of Orthopedic Surgery, Drexel University College of Medicine, ²Department of Orthopedic Surgery, NYU Langone Orthopedic Hospital, New York, NY

12:25 PM – 12:30 PM

1172

Correlation between PROMIS Physical Function and Legacy Measures in Spinal Fusion Surgery

Presenter: Catherine Gang

Avani Vaishnav¹, Catherine Gang¹, Steven McAnany¹, Todd Albert¹, Sheeraz Qureshi¹

¹Hospital for Special Surgery

12:30 PM – 12:35 PM

Discussion

12:35 PM – 12:40 PM

656

Hospital-Acquired Conditions Occur More Frequently in Elective Spine Surgery than for other Common Elective Procedures

Presenter: Jordan Manning

Peter G. Passias¹, Samantha R. Horn¹, Jordan Manning¹, Frank A. Segreto¹, Cole Bortz¹, Dennis Vasquez-Montes¹, Breton G. Line⁶, Cheongeun Oh¹, Haddy Alas¹, Avery E. Brown¹, Shaleen Vira¹¹, Bassel G. Diebo¹¹, John A. Bendo¹², Renaud Lafage¹³, Virginie Lafage¹³, Hamid Hassanzadeh¹⁵

¹Department of Orthopaedics, NYU Langone Medical Center-Orthopaedic Hospital, New York, NY, USA, ⁶Denver International Spine Center, Presbyterian/St. Luke's Medical Center and Rocky Mountain Hospital for Children, Denver, CO, USA, ¹¹Department of Orthopedic Surgery, SUNY Downstate, New York, NY, USA ¹²Department of Orthopaedics, NYU Langone Medical Center-Orthopaedic Hospital, New York, NY, USA, ¹³Department of Orthopaedic Surgery, Hospital for Special Surgery, New York, NY, USA, ¹⁵Department of Orthopaedic Surgery, University of Virginia, Charlottesville, VA

12:40 PM – 12:45 PM

1696

Patient-Reported Outcomes Following Minimally Invasive Lumbar Decompression: A Comparison Between Hospitals and Ambulatory Surgery Centers

Presenter: Sailee S. Karmarkar

Dil V. Patel, BS¹, Benjamin Khechen, BA¹, Brittany E. Haws, MD¹, Fady Y. Hijji, MD¹, Ankur S. Narain, MD¹, Joon S. Yoo, BA¹, Sailee S. Karmarkar, BS¹, Eric H. Lamoutte, BS¹, Kern Singh, MD¹

¹Department of Orthopaedic Surgery, Rush University Medical Center

12:45 PM – 12:50 PM

686

Ossification of the Posterior Longitudinal Ligament in Cervical Spine Cases: High Complication Rates May Have Led to Decreased Use of Anterior Approach in the US from 2005-2013

Presenter: Ethan Ayres

Samantha R. Horn¹, Frank A. Segreto¹, Cole A. Bortz¹, Ethan Ayres¹, Katherine E. Pierce¹, Dennis Vasquez-Montes¹, Haddy Alas¹, Avery Brown¹, Nicholas Frangella¹, Bassel Diebo², Hamid Hassanzadeh³, Brian Neuman⁴, Michael Raad⁵, Daniel Sciubba⁵, Peter G. Passias⁶

¹NYU Langone Orthopaedic Hospital, ²SUNY Downstate, ³University of Virginia Medical Center, ⁴Johns Hopkins University School of Medicine, ⁵Johns Hopkins Hospital, ⁶NYU Langone Orthopaedic Hospital; NY Spine Institute

12:50 PM – 12:55 PM

844

Treatment Trends of Early-Onset Scoliosis Using Spinal Fusion Techniques: Case Complexity Has Increased with Added Perioperative Morbidity Despite Diminishing Fusion Rates.

Presenter: Mohamed Moawad

Frank A. Segreto¹, Peter G. Passias², Cole A. Bortz¹, Samantha R. Horn¹, Mohamed Moawad¹, Dennis Vasquez-Montes¹, Katherine E. Pierce¹, Avery E. Brown¹, Haddy Alas¹, Ethan W. Ayres¹, Renaud Lafage¹, Virginie Lafage¹, Aaron J. Buckland¹, Michael C. Gerling¹, Thomas J. Errico¹

¹Department of Orthopaedics, NYU Langone Orthopaedic Hospital, New York, NY, ²NY Spine Institute; Department of Orthopaedics, NYU Langone Orthopaedic Hospital, New York, NY

12:55 PM – 1:00 PM

659

PROMIS Correlates with Patient Satisfaction and VAS Back Pain Scores

Presenter: Cole Bortz

Samantha R. Horn¹, Cole Bortz¹, Frank A. Segreto¹, Dennis Vasquez-Montes¹, Leah Steinmetz¹, Nicholas Stekas¹, David H. Ge¹, Haddy Alas¹, Avery E. Brown¹, Christopher G. Varlotta¹, Renaud Lafage², Virginie Lafage², Aaron J. Buckland¹, Themistocles S. Protopsaltis¹, Peter G. Passias¹

¹Department of Orthopaedics, NYU Langone Medical Center-Orthopaedic Hospital, New York, NY, USA, ²Department of Orthopaedic Surgery, Hospital for Special Surgery, New York City, NY, USA

1:00 PM – 1:05 PM

671

Do Hospital and Patient Characteristics Predict Extended Length of Stay in Patients Undergoing Primary Spine Procedures?

Presenter: Virginie Lafage

Peter G. Passias¹, Frank A. Segreto¹, Katherine E. Pierce¹, Michael Moses¹, Cole A. Bortz¹, Samantha R. Horn¹, Erik Wang¹, Bassel G. Diebo², Kartik Shenoy¹, Shaleen Vira¹, Renaud Lafage³, Virginie Lafage³, Themistocles S. Protopsaltis¹, Thomas J. Errico¹

¹NYU Langone Orthopedic Hospital, ²SUNY Downstate Medical Center, ³Hospital for Special Surgery

1:05 PM – 1:10 PM

Discussion

1:10 PM – 1:15 PM

1060**The Prevalence of Risk Factors for Hospital-Acquired Venous Thromboembolism in Neurosurgery and Orthopedic Surgery Patients****Presenter: Erik Wang***Charla R. Fischer¹, Erik Wang¹, Leah Steinmetz¹, Dennis Vasquez-Montes¹, Aaron Buckland¹, John Bendo¹, Anthony Frempong-Boadu¹, Thomas Errico¹*¹NYU Langone Orthopaedic Hospital

1:15 PM – 1:20 PM

510**Economic Performance of Oblique Lateral Lumbar Interbody Fusion (OLLIF) with a Focus on Hospital Throughput Efficiency****Presenter: Hamid Abbasi***Hamid Abbasi¹, Christopher Murphy²*¹Inspired Spine, ²AMW LLC

1:20 PM – 1:25 PM

789**Clusters of Predicting Factors for Pseudarthrosis: A 10-Year Analysis of 101 929 Thoracolumbar Spine Fusions****Presenter: Brooke O'Connell***Cole Bortz¹, Dennis Vasquez-Montes¹, Samantha R. Horn¹, Frank A Segreto¹, Brooke O'Connell¹, John A. Buza III¹, Nicholas Stekas¹, Haddy Alas¹, Avery E. Brown¹, Virginie Lafage², Renaud Lafage², Michael C. Gerling¹, Mohamed A. Moawad¹, Shaleen N. Vira¹, Bassel G Diebo³, Peter G. Passias¹*¹Division of Spinal Surgery/Departments of Orthopaedic and Neurosurgery, NYU Medical Center, NY Spine Institute, New York, NY, USA, ²Department of Orthopedic Surgery, Hospital for Special Surgery, New York, NY, ³Department of Orthopedic Surgery, SUNY Downstate, New York, NY

1:25 PM – 1:30 PM

847**Association Between Non-Modifiable Demographic Factors and Press Ganey Satisfaction Scores in Spine Surgery Clinics****Presenter: Dennis Vasquez-Montes***Bradley Johnson¹, Dennis Vasquez-Montes¹, Aaron Buckland¹, John Bendo¹, Jeffrey Goldstein¹, Thomas Errico¹, Charla Fischer¹*¹NYU Langone Orthopaedic Hospital

1:30 PM – 1:35 PM

1223**Correlation Between ODI, PROMIS and SF-12 in Minimally Invasive Lumbar Spinal Surgery****Presenter: Catherine Gang***Avani Vaishnav¹, Catherine Gang¹, Steven McAnany¹, Todd Albert¹, Sheeraz Qureshi¹*¹Hospital for Special Surgery

1:35 PM – 1:40 PM

1380**Healthcare Utilization and Costs in the Two Years Prior to a Single-Level Posterior Lumbar Fusion - What happens Before Surgery?****Presenter: Safdar N. Khan***Azeem Tariq Malik¹, Nikhil Jain¹, Frank M. Phillips¹, Sohrab S. Virk¹, Safdar N Khan¹*¹The Ohio State University Wexner Medical Center

1:40 PM – 1:45 PM

644**Age-Adjusted Spino-Pelvic Alignment and Surgical Invasiveness in Cervical Deformity Correction****Presenter: Avery Brown***Peter G Passias¹, Samantha R Horn¹, Dennis Vasquez-Montes¹, Frank A Segreto¹, Cole A Bortz¹, Avery Brown¹, Katherine E Pierce¹, Nicholas Stekas¹, Christopher G Varlotta¹, Aaron Hockley¹, Nicholas Frangella¹, Bassel G Diebo², Renaud Lafage³, Shaleen Vira¹, Michael C Gerling¹, Virginie Lafage³*¹NYU Langone Orthopedic Hospital, ²SUNY Downstate Medical Center,³Hospital for Special Surgery

1:45 PM – 1:50 PM

Discussion

Friday, April 5

1:55 PM – 2:45 PM

General Session: Cervical Degeneration

Moderators: Seok Woo Kim, MD and Jack Zigler, MD

1:55 PM – 2:00 PM

441

Comparison of Recombinant Human Bone Morphogenetic Protein-2 Versus Iliac-Crest Autograft in Anterior Cervical Discectomy and Fusion—A Multicenter Prospective Randomized and Controlled Study

Presenter: Jinhui Shi

Jinhui Shi¹, Weimin Jiang¹, Yonghui Huang³, Zhengzhong Sun⁴, Lin Nie⁵, Feng Yuan⁶, Gang Liu⁷, Huilin Yang¹

¹The First Affiliated Hospital of Soochow University, ³Affiliated Hospital of Jiangsu University, ⁴Wuxi Ninth People's Hospital, ⁵Qilu Hospital of Shandong University, ⁶The Affiliated Hospital of Xuzhou Medical University, ⁷Nanjing General Hospital

2:00 PM – 2:05 PM

1383

Bariatric Surgery prior to Elective Anterior Cervical Discectomy and Fusion in Obese Patients Reduces the Risk of 90-Day Post-Operative Complications and Readmissions

Presenter: Safdar N. Khan

Azeem Tariq Malik¹, Wendy Xu¹, Sheldon Retchin¹, Safdar N. Khan¹

¹The Ohio State University Wexner Medical Center

2:05 PM – 2:10 PM

1520

Sagittal Alignment Parameters and Early Radiographic Changes Associated with Adjacent Segment Pathology after Anterior Cervical Discectomy and Fusion

Presenter: Sadaf Younis

Phillip Louie¹, Bryce Basques¹, Michael Nolte¹, Jannat Khan¹, Steve Heidt¹, Clayton Maschhoff¹, Konstantin Tchalukov¹, Edward Goldberg¹, Howard An¹

¹Department of Orthopaedic Surgery, Rush University Medical Center

2:10 PM – 2:15 PM

1646

Hybrid Surgery for the Treatment of Contiguous Two-Segment Cervical Degenerative Disc Disease: is it Moving forward? Clinical and Radiological Mid-Term Outcomes of Hybrid Surgery in Comparison to Anterior Cervical Discectomy and Fusion (ACDF) and Total Disc Replacement

Presenter: Seok Woo Kim

Seok Woo Kim¹, Jae-Yeun Hwang¹, Tae-Hwan Kim¹, Jae-Keun Oh¹, Dae-Hwan Kim¹, Ki-Tae Kim¹, Min-Wook Lee¹

¹Hallym University Sacred Heart Hospital

2:15 PM – 2:20 PM

Discussion

2:20 PM – 2:25 PM

1804

Achieving Successful Clinical Outcomes Following Surgery for Cervical Deformity

Presenter: Dennis Vasquez-Montes

Themistocles Protopsaltis¹, Nicholas Stekas¹, Justin S. Smith³, Dennis Vasquez-Montes¹, Alex Soroceanu⁴, Renaud Lafage⁵, Alan Daniels⁶, Han Jo Kim⁵, Peter Passias¹, Gregory Mundis⁹, Eric Klineberg¹⁰, Kojo Hamilton¹¹, Munish Gupta¹², Virginie Lafage⁵, Robert Hart¹⁴, Frank Schwab⁵

¹NYU Langone Hospital, Department of Orthopedic Surgery, ³University of Virginia Medical Center, Department of Neurosurgery, ⁴University of Calgary, Department of Orthopaedic Surgery, ⁵Hospital for Special Surgery, Department of Orthopaedic Surgery, ⁶Warren Alpert School of Medicine, Brown University, Department of Orthopaedic Surgery, ⁹San Diego Center for Spinal Disorders, Department of Orthopaedic Surgery, ¹⁰University of California, Davis, Department of Orthopaedic Surgery, ¹¹University of Pittsburgh School of Medicine, Department of Neurological Surgery, ¹²Washington University, Department of Orthopaedic Surgery, ¹⁴Swedish Neuroscience Institute, Department of Orthopaedic Surgery

2:25 PM – 2:30 PM

1946

The Association of Preoperative Disc Height with Radiographic and Clinical Outcomes Following ACDF

Presenter: Sadaf Younis

Bryce Basques¹, Jannat Khan¹, Michael Nolte¹, Philip Louie¹, Arash Sayari¹, Jonathan Markowitz¹, Gagan Grewal¹, Edward Goldberg¹, Howard An¹

¹Department of Orthopaedic Surgery, Rush University Medical Center

2:30 PM – 2:35 PM

1822

Limited Morbidity and Radiographic Benefit of C2 vs Subaxial Cervical Upper-Most Instrumented Vertebrae

Presenter: Dainn Woo

Peter G. Passias¹, Cole Bortz¹, Virginie Lagafe³, Justin S. Smith⁴, Samantha R. Horn¹, Frank A. Segreto¹, Dainn Woo¹, Daniel M. Sciubba², Eric O. Klineberg⁸, Alexandra Soroceanu⁹, Douglas C. Burton¹⁰, Frank J. Schwab³, Shay Bess¹², Christopher I. Shaffrey⁴, Christopher P. Ames¹⁴, ISSG¹⁵

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2:35 PM – 2:40 PM

1815

The Relationship of Objective Functional Biomechanical Measures and Fear-Avoidance Beliefs in Patients with Cervical Spondylotic Myelopathy

Presenter: Akwasi Boah

Ram Haddas¹, Akwasi Boah¹, Andrew Block¹

¹Texas Back Institute

2:40 PM – 2:45 PM

Discussion