SMISS Program Draft 3.0
As of 7/10/18

Cases and Controversies in Minimally Invasive Spine Surgery

Thursday, September 6, 2018
7:00 am – Optional Non-CME Cadaveric Labs
4:00 pm
4:00-6:00 pm Registration Opens

Friday, September 7, 2018
6:45am Registration
7:30 Non-CME Technology Workshops with Breakfast
Participants choose which to attend

Session 1: Spinal Deformity
Moderators: G. Mundis, MD & B. Taylor, MD

Controversy: Does Every Patient Benefit from “Ideal” Correction?

8:30 Welcome
8:35 Age Specific Alignment Goals: Give It to Me Straight, what are the Key Goals I Need to Know for Each Case? S. Berven, MD

Debate: Do We Really Need to Get Patients “Aligned” to Have a Good Long-term Outcome?
8:43 Case: 75 y/o Female with Modest Degenerative Scoliosis
8:46 Alignment is Overrated N. Anand, MD
8:51 Alignment is Critical to Outcome A. Kanter, MD
8:56 Discussion
9:00 Audience Response

9:03 How Do I Decide Whether MIS, Hybrid, or Open is Best for My Patient? J. Uribe, MD
9:11 Discussion

Debate: Surgical Approach to Degenerative Deformity: Front, Back, Lateral or All Three?
9:15 Case: 60 y/o Female, PI/LL 20°, SVA 10°, PT 23°
9:18 Posterior Only is Ideal for the Patient M. Wang, MD
9:23 Circumferential MIS Surgery is Best R. Eastlack, MD
9:28 Single Position Lateral Surgery Can Accomplish Everything W. Smith, MD
9:33 Discussion
9:36 Audience Response
**Debate: How Best to Treat L5-S1:**

9:38  Case: Adult Degenerative Scoliosis with DDD L5-S1 No Prior Surgery  
S. Qureshi, MD

9:41  MIS TLIF  
D. Okonkwo, MD

9:46  ALIF - Direct Anterior  
I. Lieberman, MD

9:51  Discussion

9:55  Avoiding L5-S1 in Short Segment Degenerative Scoliosis  
R. Sethi, MD

10:03  Does Multi-Disciplinary Risk Assessment Lead to Better Outcomes?  
I. Lieberman, MD

10:11  Discussion

10:15  Panel Discussion: Does Minimally Invasive Spine Surgery Lead to More or Less Complications?  
Alignment Failure; Implant Non-union Failure; Repeat Surgery  
Moderator: Drs. Mundis and Taylor  
Panel: Drs. Phillips, Berven, Park, Mummaneni, Staub

10:35  Refreshment Break & Exhibit Viewing

**Concurrent Sessions: Free Papers & Young Surgeons’ Session**

**Session 2A: Degenerative & Lateral Free Papers**  
Moderators: N. Ashraf, MD & N. Anand, MD

11:05  **Paper #1:** A Clinical Study to Evaluate Static versus Expandable Lateral Lumbar Interbody Fusion Devices: With One-Year Follow-up  
Richard Frisch, MD; Daina Brooks, BS; Gita Joshua, MA; and Charles Ledonio; Southeastern Spine Institute, Mt Pleasant, SC  
Best Paper Award Finalist

11:09  **Paper #2:** Static versus Expandable Interbody Devices in Minimally Invasive Transforaminal Lumbar Interbody Fusion: Comparison of Radiographic and Functional Outcomes  
Benjamin Khechen, BA; Brittany Haws, MD; Dil Patel, BS; Jordan Guntin, BS; Kaitlyn Cardinal, BS; Andrew Block, BS; Kern Singh, MD; Rush, Chicago, IL

11:13  **Paper #3:** Immediate Restoration of Lordosis in Single-level Minimally Invasive Transforaminal Lumbar Interbody fusion (MI-TLIF): A comparison of Expandable and Static Interbody Cages  
Avani Vaishnav, MBBS; Philip Saville, MD; Steven McAnany, MD; Rogertl Hartl, MD; Sertac Kirnaz, MD; Rodrigo Navarro-Ramirez, MD, MSc; Catherine Gang, MPH; Sheerez Qureshi, MD, MBA; Hospital for Special Surgery, New York, NY and Weill Cornell Medicine - New York Presbyterian Hospital, New York, NY

11:17  **Paper #4:** Do Expandable Cages Lead to a Higher Incidence of Subsidence? Two-year Follow-up of Lateral Lumbar Interbody Fusions  
Dan Cohen, MD; Joseph O’Brien, MD; William Tally, MD; Thomas Lee, MD; Torrey Shirk, BA; Gita Joshua, MA; and Charles Ledonio; Spine Care Institute of Miami Beach, Miami Beach, FL; The George Washington University School of Medicine & Health Sciences, Washington, DC; Athens Orthopedic Clinic, Athens, GA; Spinemore Surgical Associates, P.C., St Louis, MO

11:21  Discussion
11:29  Paper #5: Minimally Invasive Spine Surgery Through Lumbar Decompression: Patient-Reported Outcomes from More than 9,000 Cases

Stefan Prada, M.D.; Michael Weiss, D.O.; Stephen Songhurst, B.S.; Chip Wade, Ph.D.; Reginald Davis, M.D.; Laser Spine Institute, Tampa, FL and Auburn University, Auburn, AL

Best Paper Award Finalist


Sheeraz Qureshi, MD, MBA; Avani Vaishnav, MBBS; Catherine Himo Gang, MPH; Steven McAnany, MD; and Todd Albert, MD; Hospital for Special Surgery, New York, NY

11:37  Paper #7: Employment is Associated with Superior Patient Reported Outcomes Following Minimally Invasive Lumbar Spondylolisthesis Surgery: An Analysis of the Quality Outcomes Database

Andrew Chan, MD; Erica Bisson, MD, MPH; Mohamad Bydon, MD; Steven Glassman, MD; Kevin Foley, MD; Eric Potts, MD; Christopher Shaffrey, MD; Mark Shaffrey, MD; Domagoj Coric, MD; John Knightly, MD; Paul Park, MD; Michael Wang, MD; Kai-Ming Fu, MD, PhD; Jonathan Slotkin, MD; Anthony Asher, MD; Panagiotis Kerezoudis, MD; Regis Haid, MD; and Praveen Mummaneni, MD; University of California, San Francisco, San Francisco, CA; University of Utah, Salt Lake City, UT; Mayo Clinic, Rochester, MN; Norton Leatherman Spine Center, Louisville, KY; Semmes-Murphey Neurologic and Spine Institute, Memphis, TN; Goodman Campbell Brain and Spine, Indianapolis, IN; University of Virginia, Charlottesville, VA; Carolina Neurosurgery & Spine Associates, Charlotte, NC; Atlantic Neurosurgical Specialists, Morristown, NJ; University of Michigan, Ann Arbor, MI; University of Miami, Miami, FL; Weill Cornell Medical Center, New York, NY; Geisinger Health System, Danville, PA; and Atlanta Brain and Spine Care, Atlanta, GA

11:41  Paper #8: Preoperative Opioid Use Associated with Worsened Outcomes in Patients Undergoing Stand-alone Lateral Lumbar Interbody Fusion for Degenerative Disc Disease

David Salvetti, MD; Alp Ozpinar, MD; Nima Alan, MD; David Okonkwo, MD PhD; Adam Kanter, MD; and D. Kojo Hamilton; University of Pittsburgh, Pittsburgh, PA

11:45  Discussion

11:53  Paper #9: Systematic Review Of Facet Tropism As It Relates To Degenerative Disc Disease In The Lumbar Spine: The Overlooked Synovial Joint

Fabio Pencle, MBBS; Moawiah Mustafa; Luai Mustafa; Omar Viqar; Zaid Sheikh; and Kingsley Chin, MD; LESS Institute, Hollywood, FL; Florida International University, Miami, FL; and Florida International University, Miami, FL

11:57  Paper #10: Influence of Lumbar Stenosis on Concomitant Sacroiliac Joint Pain: Short-Term and Preliminary Long-Term Results.

Konrad Bach, MD; Thomas Freeman, MD; USF, Tampa, FL

12:01 pm  Paper #11: Anterior Column Release (ACR) during Lateral Interbody Fusion for Hyperlordotic Segmental Correction

Larry Khoo, MD; Roya Gheissari, MS; and Charlie Loeb; Spine Clinic of Los Angeles, Los Angeles, CA; Roya Gheissari, Los Angeles, CA; and Charlie Loeb, Los Angeles, CA


Neel Anand, MD; Edward Nomoto, MD; Christopher Kong, MD; Babak Khandehroo, MD; and Sheila Kahwaty, PA-C; Cedars Sinai Medical Center, Los Angeles, CA

12:09  Discussion
Session 2B: Deformity, Trauma & Cervical Free Papers
Moderators: S. McAnany, MD & I. Moss, MD


Rene Grass, Prof Dr. med and Jaroslaw Pyrc, MD; OrthoUniversity Hospital C.G. Carus TU Dresden, Dresden, Germany

11:09  Paper #17: The Impact Of Endplate Fracture On The Clinical Efficacy Of Minimally Invasive Percutaneous Pedicle Screw Fixation For Treatment Of Thoraco-lumbar Vertebra Burst Fractures

Yongxin Ren, MD, PHD and Hui Che, master; The First Affiliated Hospital of Nanjing Medical University, Nanjing, China


Jason Garber, M.D., F.A.C.S.; Western Regional Center for Brain and Spine Surgery, Los Vegas, NV


Jung Mok; Evan Sheha, MD; Andre Samuel, MD; Steven McAnany, MD; Avani Vaishnav, MBBS; Todd Albert, MD; Catherine Gang, MPH; and Sheeraz Qureshi, MD, MBA; Weill Cornell Medicine, New York, NY; and Hospital for Special Surgery, New York, NY

11:21  Discussion

11:29  Paper #20: Sway and Neuromuscular Activity Changes in Adult Degenerative Scoliosis Patients Pre and Post Surgery Compared to Controls

R. Haddas, I. Lieberman; Texas Back Institute, Plano, TX.

11:33  Paper #21: Proximal Fusion Constructs in MIS Scoliosis Surgery are Successful without Interbody or Intertransverse Fusion

S. Burks, J. Godzik, K. Bach, J. Uribe, M. Wang; University of Miami, Miami, FL, Barrow Neurological Institute, Phoenix, AZ.

Paper #23: Clinical and Radiographic Outcomes of Mini Open Correction and Fusion for Adolescent Idiopathic Scoliosis (AIS): 2-5 Years Follow up

D. Singh, M. Geck, E. Truumees, J. Stokes; Seton Spine and Scoliosis Center, Austin, TX.

Paper #24: The Relationship of Static Spinopelvic Parameters with Dynamic Biomechanical Parameters Measured by Gait and Balance Analyses in Patients with Adult Degenerative Scoliosis

Ram Haddas; Isador Lieberman, MD; Texas Back Institute, Plano, TX

Paper #25: Is Achieving Optimal Spinopelvic Parameters Necessary to Obtain Substantial Clinical Benefit: Analysis of Patients Who Underwent Circumferential MIS or Hybrid Surgery With Open Posterior Instrumentation

Paul Park, MD; Robert Eastlack, MD; Kai-Ming Fu, MD; Stacie Tran; Gregory Mundis, MD; Juan Uribe, MD; Michael Wang, MD; Khoi Than, MD; David Okonkwo, MD; Adam Kanter, MD; Pierce Nunley, MD; Neel Anand, MD; Richard Fessler, MD; Dean Chou, MD; Praveen Mummaneni, MD; and International Spine Study Group; University of Michigan, Ann Arbor, MI; Scripps Clinic, La Jolla, CA; Weill Cornell, New York, NY; San Diego Spine Foundation, San Diego, CA; Scripps Clinic & San Diego Spine Foundation, San Diego, CA; Barrow Neurological Institute, Phoenix, AZ; University of Miami, Miami, FL; Oregon Health & Science University, Portland, OR; University of Pittsburgh, Pittsburgh, PA; Louisiana Spine Institute, Shreveport, LA; Cedars-Sinai, Los Angeles, CA; Rush University, Chicago, IL; University of California, San Francisco, San Francisco, CA; and International Spine Study Group Foundation, Brighton, CO

Paper #26: The Role of Pelvic Parameters on S2 Alar-Iliac (S2AI) Screw Trajectory

Jamal Shillingford, MD; Joseph Laratta, MD; James Lin, MD; Comron Saifi; Steven Ludwig; Lawrence Lenke, MD; and Ronald Lehman, MD; Norton Leatherman Spine Center, Louisville, KY; The Spine Hospital at Columbia University Medical Center, New York, NY; University of Pennsylvania, Philadelphia, PA; and University of Maryland Medical Center, Baltimore, MD

Paper #27: Navigated Percutaneous Cervical Pedicle Screw Internal Fixation

John Peloza, MD and Meghan Cingrani; Center for Spine Care, Dallas, TX

Paper #28: The Effect of an Expandable Lordotic Interbody Implant to a Fixed Lordotic Interbody Implant in Minimally Invasive Spine Surgery: Its Effect on Sagittal Alignment and Restoration of Disc Height and Foraminal Heights

Donald Kucharzyk, DO and Dushan Budimir, BS; DK Orthopedics, Crown Point, IN


Randall Hlubek, MD; Jakub Godzik, MD; Anna Newcomb, MS; Jennifer Lehrman, MS; Bernardo De Andrade Pereira, MD; Brian Kelly, PhD; and Jay Turner, MD, PhD; Barrow Neurological Institute, Phoenix, AZ
Paper #30: Impact of Lower Thoracic vs. Upper Lumbar UIV in MIS Correction of Adult Spinal Deformity

Robert Eastlack, MD; Pierce Nunley, MD; Juan Uribe, MD; Paul Park, MD; Stacie Tran, MPH; Michael Wang, MD; Khoi Than, MD; David Okonkwo, MD; Adam Kanter, MD; Neel Anand, MD; Richard Fessler, MD; Kai Ming Fu, MD; Dean Chou, MD; Praveen Mummmaneni, MD; Gregory Mundis, MD; and International Spine Study Group; Scripps Clinic, San Diego, CA; Louisiana Spine Institute, Shreveport, LA; Barrow Neurological Institute, Phoenix, AZ; University of Michigan, Ann Arbor, MI; San Diego Spine Foundation, San Diego, CA; University of Miami, Miami, FL; Oregon Health & Science University, Portland, OR; University of Pittsburgh Medical Center, Pittsburgh, PA; Cedars Sinai, Los Angeles, CA; Rush University, Chicago, IL; Weill Cornell, New York, NY; University of California, San Francisco, San Francisco, CA; Scripps Clinic & San Diego Spine Foundation, San Diego, CA; and International Spine Study Group Foundation, Brighton, CO

12:29  Discussion

Session 2C: Young Surgeons’ Free Papers
Moderators: A. Kanter, MD & E. Yu, MD

11:05  YS Paper #31: Age, Number of Vertebral Levels Fused, and Average Psoas Size All Predict Hospital Length of Stay After Minimally Invasive TLIF and LLIF

H. Zakaria, M. Macki, L. Massie, V. Chang; Henry Ford Hospital, Detroit, MI, Henry Ford West Bloomfield, West Bloomfield, MI.

11:08  YS Paper #32: Optimizing Biomechanics Of Anterior Column Realignment (ACR) Constructs: A Cadaveric Study Of Rod Strain And Construct Stability

Jakub Godzik, MD; Bernardo de Andrada Pereira, MD; Anna Newcomb, MS; Jennifer Lehrman, MS; Gregory Mundis, MD; Randy Hlubek, MD; Juan Uribe, MD; Brian Kelly, PhD; Jay Turner, MD, PhD; Barrow Neurological Institute, Phoenix, AZ; and Scripps, La Jolla, CA

11:11  YS Paper #33: Maximal Segmental Lordosis Can Be Achieved When Fixating Into One Or Both Vertebral Bodies During Anterior Column Realignment: A Cadaveric Study

Jakub Godzik, MD; Bernardo de Andrada Pereira, MD; Anna Newcomb, MS; Jennifer Lehrman, MS; Gregory Mundis, MD; Juan Uribe, MD; Brian Kelly, PhD; Jay Turner, MD, PhD; Barrow Neurological Institute, Phoenix, AZ; and Scripps, La Jolla, CA

11:14  YS Paper #34: Interbody Fusion Rate In Xlif Surgery: A Proposal Of Classification

Luca Proietti; Caterina Fumo; Luca Fresta; Andrea Perna; Ilaria Giannelli; Marco Renzi; and Francesco Ciro Tamburrelli; Catholic University of Rome, Italy, Rome, Italy

11:17  Discussion

11:22  YS Paper #35: Does Dynamic Surgical Guidance (DSG) contribute to Safe and Accurate Pedicle Screws, A Retrospective Collection

John Starr, MD and David Powell, MD; George Washington University, Johns Hopkins Medicine at Sibley Memorial Hospital, Washington, DC; and Fort Wayne Radiology, Fort Wayne, IN

11:25  YS Paper #36: Reducing Pedicle Drilling Radiation By Using Dynamic Surgical Guidance With A Jamshidi Needle While Maintaining Screw Placement Accuracy; A Cadaver study

John Williams, MD; Larry Khoo, MD; Karim Muradian, MD; and John Gaughan, PhD; Ortho Northeast, Fort Wayne, IN; The Spine Clinic of Los Angeles, LA, CA; MedCure, Bio-skills lab, Henderson, NV; and Temple University, Philadelphia, PA

11:28  YS Paper #37: Comparison of Segmental Lordosis and Global Spinopelvic Alignment after Single-Level Lateral Lumbar Interbody Fusion or Transforaminal Lateral Interbody Fusion
YS Paper #38: A Novel, Single Step Technique to Percutaneously Insert Lumbar Pedicle Screws Significantly Reduces Surgical Time and Radiation Exposure to the Patient and the Surgeon  
Steven DeLuca, DO, MS; Orthopedic Institute of Pennsylvania, Camp Hill, PA

Discussion

YS Paper #39: Single-Level Instrumented Lumbar Interbody Fusion: The Impact of Ambulatory Surgical centers on Evidence-Based Medicine  
Dwight Tyndall, MD; William Zuke, MD; Adam Wright-Chisem, BA; Orthopaedic Specialists of Northwest Indiana, Munster, IL; Department of Orthopaedic Surgery, Cleveland Clinic, Chicago, IL; and University of Illinois College of Medicine, Chicago, IL

YS Paper #40: Minimally Invasive Posterior Fossa Tubular Decompression for the Management of a Chiari 1.5 Malformation: Technical Note, Proof of Concept and Illustrative Case  
J. Soriano-Sánchez, J. Romero-Rangel, S. Soriano-Solis, M. Soto-Garcia, P. Trejo-Huerta; American British Cowdray Medical Center IAP, Mexico City, MEXICO.

YS Paper #41: MIS TLIF Using A Lordotic Interbody Device That Expands In Both Axial And Sagittal Planes  
Hani Malone, MD and Richard Fessler, MD, PhD; Scripps Clinic, La Jolla, CA and Rush University Medical Center, Chicago, IL

YS Paper #42: The Impact of Interbody Location on Segmental Height and Angular Correction in an Expandable Articulating Minimally Invasive Transforaminal Interbody Fusion  
L. Massie, M. Macki, H. Zakaria, V. Chang; Henry Ford Hospital, Detroit, MI

Discussion

YS Paper #43: An Anatomic Shape Guide to MRI Lumbar Foraminal Stenosis  
G Grady McBride, MD; Orlando Orthopaedic Center, Winter Park, FL

YS Paper #44: The Small Gets Smaller: Feasibility of 14mm Tubular Retractor in the Management of Simple and Complex Cases Of Lumbar Disc Herniations  
Arvind Kulkarni; Mumbai Spine Scoliosis & Disc Replacement Centre, Mumbai, India

YS Paper #45: Cost of Lateral Lumbar Interbody Fusion in the Elderly  
Nima Alan; Andrew Faramand; Nitin Agarwal; David J Salvetti; David K Hamilton; David O Okonkwo; and Adam S Kanter; UPMC, Pittsburgh, PA

Jian Shen, MD, PhD; Mohaw Valley Orthopedics, PC, Amsterdam, NY

Discussion

Panel: Career Development and Life Balance  
Moderators: Drs. Wang, Kumar, Khoo, Anderson

Lunch; Exhibit Viewing; Meet-the-Experts Sessions; Young Surgeon Workshop  
Exhibit Hall
Concurrent Session 3A: Cervical Spine and Cervical Arthroplasty
Moderators: F. Phillips, MD; P. Nunley, MD

Controversy: Cervical Arthroplasty is Underutilized.

1:20 Introduction

Debate: Single Level Middle Aged Patient with Soft Herniated Disc at 5-6 and Unilateral SXS. The Best Option is:

1:22 Case Example
1:25 TDR S. Qureshi, MD
1:30 MIS PCMF K. Foley, MD
1:35 ACDF H. Bae, MD
1:40 Endoscopic J. Yue, MD
1:45 Discussion
1:49 Audience Response

1:51 Case Panel Discussion: 68 y/o Female, with Osteopenia, Loss of Lordosis, Degen. Disc Collapse, 2 level Dz, Bilateral SXS, Mild Long Tract Signs. The Best Option is: Posterior, multilevel; ACDF; Multi level TDR

Panel: Drs. Bae, Foley, Qureshi, Yue

2:06 Audience Response


2:14 Are ASCs Suitable for ACDFs / TDRs? K. Foley, MD

2:20 What are the Guidelines for Return to Work or Play after Surgery? M. Oppenlander, MD

2:26 Discussion

Complications Avoidance and Management:
2:32 Minimizing Collateral Damage with ACDF R. Huang, MD
2:38 Posterior Cervical Spine Surgery I. Moss, MD
2:44 Bailout Options for MIS Intra op Instrumentation Failures G. Anderson, MD
2:49 Discussion

2:55 Refreshment Break; Exhibit Viewing Exhibit Hall
Concurrent Session 3B: Robotics, Navigation, Image Guidance

Moderators: S. Qureshi, MD, G. Mundis, MD & A. Kulkarni, MD

Controversy: Is Robotics the Next Lumbar TDR?

1:20 Introduction

**Debate:** Putting Pedicle Screws in a Twisted Spine. The Best Technique is:
Moderator: G. Mundis, MD
1:22 Case: Rotary Scoliosis in Elderly, Small Female
1:25 Real Surgeons Free Hand B. Staub, MD
1:30 Navigation for Feel and 3D View J.P. Mobasser, MD
1:35 Robots Know Best I. Lieberman, MD
1:40 Discussion
1:45 Audience Response

1:55 Options for Reducing Radiation Exposure in Minimally Invasive Spine Surgery, Even When Budgets are Tight S. McAnany, MD

2:03 Principles of Navigation: Review of Current Technologies B. Staub, MD

2:11 2D vs. 3D Image Guidance: How Much is Enough? P. Park, MD

2:19 Discussion

2:27 Robotic Spine Surgery: Where are We Today and Where are We heading? J. Roh, MD

2:37 3D Navigation and Robotics: Complications Avoidance and Management R. Lehman, MD

2:47 Discussion

2:55 Refreshment Break; Exhibit Viewing Exhibit Hall
Session 4: Technology Updates – Non CME Session
Moderators: K. Radcliff, MD & W. Smith, MD
3:20 Presentation on specific technology – Medtronic
3:26 Presentation on specific technology – Titan
3:32 Presentation on specific technology – Spineology
3:38 Presentation on specific technology – Stryker
3:44 Presentation on specific technology – Globus Medical
3:50 Presentation on specific technology -- DePuy
3:56 Discussion

Session 5: Ambulatory Spine Surgery / Multimodal Analgesia Techniques
Moderators: K. Radcliff, MD & W. Smith, MD

Controversy: Does Ambulatory Surgery Benefit Patient Outcome?

Transitioning Spine Surgery from the Hospital to an Ambulatory Surgery Center:
4:00 Which Cases Can I Safely Do in an ASC? N. Ashraf, MD
4:07 ALIF in same day surgery setting *(Title TBD)* J. Schoeff, MD
4:14 My Experience and Learning Curve K. Singh, MD
4:21 Discussion

4:26 How to Keep Hospital Administrators Happy While Taking Cases Out of the Hospital F. Phillips, MD
4:33 Do the Economics of ASCs Make Sense in 2018? H. Bae, MD

4:40 Discussion

4:45 Multimodal Analgesia and Anesthesia Techniques for Same Day Discharge Success in Spine Surgery - with Video Demo of TAP Block for ALIF and LLIF E. Soffin, MD
4:55 Use of Opioids in the Ambulatory Setting G. Polston, MD
5:03 Novel Methods for Treating Postoperative Pain Following Spinal Surgery P. Whang, MD
5:11 Discussion

Debate: Doing Spine Surgery in an ASC:
Moderator: W. Taylor, MD
5:16 Is Better for Your Patients M. Wang, MD
5:22 Is Worse for the Patient (But Good for the Surgeon’s Wallet) G. Mundis, MD
5:28 Discussion
5:33 Audience Response

5:35 Adjourn; Welcome Reception Exhibit Hall
-6:35 pm
Saturday, September 8, 2018

7:00 am  Registration

7:45  Non-CME Technology Workshops with Breakfast
     *Participants choose which to attend*

**Session 6: Degenerative Spine**
Moderators: P. Park, MD, K. Foley, MD & S. Rohidas, MD

**Controversy: Do Standard Degenerative Spine Cases Really Need MIS Approaches?**

8:40  Welcome

**Debate: For a Herniated Disc the Best Approach is:**

8:45  Case: Free Fragment, L4-5 Disc

8:48  Tubular Approach (incl. video demo)  A. Kumar, MD

8:56  Endoscopic Approach (incl. video demo)  C. Hofstetter, MD

9:04  Micro-discectomy (incl. video demo)  L. Khoo, MD

9:12  Discussion

9:16  Audience Response

**Debate: L4-5 Grade 1 Spondylolisthesis / Stenosis. The Best Technique is:**

9:19  Case Example

9:22  MIS TLIF  J.P. Mobasser, MD

9:28  Awake Fusion  M. Wang, MD

9:34  Decompression Without Fusion  S. Ryu, MD

9:40  Indirect Decompression and LLIF  R. Amaral, MD

9:46  Discussion

9:52  Audience Response

**Debate: 2-level L4-S1 Decompression and Fusion. The Best Technique is:**

Moderator: S. Qureshi, MD

9:55  Case Example

9:57  2-level MIS TLIF  B. Staub, MD

10:03  2-level ALIF With Posterior Fixation  J. Uribe, MD

10:09  OLIF/LLIF  R. Lehman, MD

10:15  Discussion

10:20  Audience Response

10:23  Presentation of Best Paper & Award Presentation

10:30  Refreshment Break; Exhibit Viewing  
      *Exhibit Hall*
Concurrent Sessions: Free Papers

Session 7A: Emerging Technology, Navigation, and Complications Free Papers
Moderators: P. Mummaneni, MD & R. Lehman, MD

10:55 Paper #47: A Quantitative Assessment Of The Accuracy And Reliability Of Robotic Guidance For Lumbar Fusion: A Technique And Application Accuracy
Cory Hartman; Jakub Godzik, MD; Corey Walker, MD; Clinton Morgan, MD; Steven Chang, MD; Randall Porter, MD; Laura Snyder, MD; and Juan Uribe, MD; Barrow Neurological Institute, Phoenix, AZ

10:59 Paper #48: Accuracy and Efficiency of Robot-Assisted Pedicle and S2AI Screw Cannulation for Adult Thoracolumbar and Lumbar Fusion: Success and Failure in a Single Surgeon’s First 110 Cases and 816 Pedicles
A. Ha; New York Presbyterian Columbia, New York, NY.

11:03 Paper #49: Robotics in Spine Surgery: the Use of Pre-op Planning to Optimize the Outcome of Spondylolisthesis Reduction
Isador Lieberman and Xiaobang Hu; Texas Back Institute, Texas Health Presbyterian Hospital, Plano, TX

Terrence Julien, M.D.; Allegheny Health Network, Monroeville, PA

11:11 Discussion

Fabio Pencle, MBBS; Moawiah Mustafa; Luai Mustafa; Kathleen Quijada; Jason Seale, MBBS; and Kingsley Chin, MBBS; LESS Institute, Hollywood, FLand Florida International University, Miami, FL

11:23 Paper #52: The difference in surgical site infection rates between open and minimally invasive spine surgery for degenerative lumbar pathology: a retrospective single center experience of 1,442 cases
K. Mueller, D. Zhao, O. Johnson, F. Sandhu, J. Voyadzis; Medstar Georgetown University Hospital, Washington, DC, Georgetown University School of Medicine, Washington, DC.

Aakash Agarwal, PhD; University of Toledo, Toledo, OH

Thomas Francavilla, MD; Michael Weiss, DO; and Reginald Davis, MD; Tulane University, New Orleans, LAand Laser Spine Institute, Tampa, FL

11:35 Discussion

11:43 Paper #55: Two-Year Outcomes of Patients Treated with BVN Ablation for the Relief of Chronic Low Back Pain: Results of the SMART Trial
Hyun Bae; Jeffrey Fischgrund; Rick Sasso; and Alfred Rhyme; Cedars Sinai Medical Center, Los Angeles, CA; William Beaumont Hospital, Royal Oak, MI; Indiana Spine, Indianapolis, IN; and Orthocarolina, Charlotte, NC

K. Huang, J. Chi, Z. Moses, M. Krag, P. Nunley, M. Bydon, S. Lavoie. SCOUT Investigators; Brigham and Women’s Hospital, Boston, MA, University of Vermont College of Medicine, South Burlington, VT, Louisiana State University Health Sciences Center, Shreveport, LA, Mayo Clinic, Rochester, MN, Central Florida Regional Hospital, Sanford, FL, SCOUT Investigators, MA.

11:51

Paper #57: Molybdenum Rhenium Alloy provides Superior Biomechanical and Wear Properties for a New Generation of Spine Implants

Kornelis Poelstra, M.D., Ph.D.; Jorge Isaza, MD; Kee Kim, MD; Raphael Roybal, MD; Cyrus Ghavam, MD; Samuel Joseph, MD; and Matthew McGirt, MD; The Spine Institute on the Emerald Coast, Fort Walton, FL; Surgical Speciality Center of Baton Rouge, Baton Rouge, LA; UC Davis School of Medicine, Sacramento, CA; Chatham Orthopaedics Associates, Savannah, GA; The Orthopedic Center, Huntsville, AL; Joseph Spine, Tampa, FL; and Carolina Neurosurgery & Spine, Charlotte, NC

11:55

Paper #58: A Single Surgeon Experience And Results Between Multi-level Lumbar Laminectomy With Microscopic Tubular Approach And Fully-endoscopic Approach: A Report Of Over 1000 Cases And Up To 6 Years Follow-up

Jian Shen, MD, PhD; Mohaw Valley Orthopedics, PC, Amsterdam, NY

11:59

Discussion

12:07

Paper #59: The Influence of Conflicts of Interest on Outcomes in the Lumbar Disc Arthroplasty Literature

Jordan Guntin, BS; Kaitlyn Cardinal, BS; Brittany Haws, MD; Benjamin Khechen, BA; Dil Patel, BS; Simon Lalehzarian, MS; Kern Singh, MD; Rush, Chicago, IL

12:11

Paper #60: Appropriateness of Elective Outpatient Spine Surgery Referral


12:15


Daniel Bu; Samuel Overley; Steven McAnany; Todd Albert; and Sheerez Qureshi; New York, New York, NY

12:19

Discussion

Session 7B: Asian Perspectives Free Papers

Moderators: J.S.L. Kim, MD; S. Rohidas, MD; S. Ryu, MD

10:55

Paper #62: Clinical and Radiological Outcome of Mini Modified Open and Open TLIF- A Comparative Study

F. Syed; Sri Ramachandra Medical College and Research Institute, Chennai, INDIA.

10:59

Paper #63: Comparative Clinical Analysis Of OLI51 And Percutaneous Posterior Fixation In Lateral Position Versus MIS-TLIF For Lumbosacral Degenerative Disorders

Yoshihisa Kotani; Richard Hynes; Yoshinao Koike; Hidemasa Terao; Yumejiro Nakamura; Hiroyuki Tachi; Yusuke Kameda; and Yasushi Yabuuchi; Spine and Spinal Cord Center, Steel Memorial Muroran Hospital, Muroran, JapanAnd B.A.C.K. Center, Merbourne, FL

11:03

Paper #64: Short term Results of Lumbar Interbody Fusion Using Cortical Bone Trajectory Screw Technique

D. Choi, J. Kim, H. Lee, M. Shin, S. Kim; Incheon St. Mary’s Hospital, The Catholic University of Korea, Incheon, KOREA, REPUBLIC OF.

11:07

11:11 Discussion

11:19 Paper #66: Transforaminal Endoscopic Thoracic Discectomy
Junseok Bae; Sang-Ha Shin; Sang-Ho Lee; and Han-Joong Keum; Wooridul Spine Hospital, Seoul, Korea, Republic of

11:23 Paper #67: Percutaneous Transforaminal Endoscopic Spine System With Target Technique For Treatment Of Lumbar Spinal Disc Herniation In Scoliosis Patients
Qingbing Meng and Wensheng Zhang; The 4th affiliated hospital to Nantong university, Yancheng, China

11:27 Paper #68: Surgical considerations for percutaneous endoscopic lumbar discectomy at L5/S1 level with quantified assessment
G. Fan; Tongji University School of Medicine, Shanghai, CHINA.

Ajay Krishnan, MS ORTHOPAEDICS; Ajay Krishnan, MS ORTHOPAEDICS; Paresh Bang, MS ORTHOPAEDICS; bharat dave; and Devanand D; Stavya Spine Hospital & Research Institute, Ahmedabad, India; Stavya Spine Hospital, Ahmedabad, India; bharat dave, Ahmedabad, India; and Stavya, Ahmedabad, India

11:35 Discussion

11:43 Paper #70: Diffusion-weighted Mr Neurography For The Preoperative Assessment Of Nerve Root Anomaly In Minimally Invasive Spine Surgery
Yukihiro Nakagawa, MD, PhD; Hiroshi Yamada, MD, PhD; Mamoru Kawakami, MD, PhD; Hiroshi Iwasaki, MD, PhD; Akihito Minamida, MD, PhD; Masatoshi Teraguchi, MD, PhD; Ryohei Kagotani, MD, PhD; Shunji Tsutsui, MD, PhD; Masanari Takami, MD, PhD; Hiroshi Hashizume, MD, PhD; and Yasutsugu Yukawa, MD, PhD; Wakayama Meidical University Kihoku Hospital, Wakayama City, Japan; Wakayama Meidical University, Wakayama City, Japan

11:47 Paper #71: Contralateral Radiculopathy after Minimally Invasive Oblique Lumbar Interbody Fusion
Amit Jhala, M.S. D.N.B; Chirayu Hospital, AHMEDABAD, Gujarat, India

11:51 Paper #72: Indirect decompression of neural foramen after minimally invasive retroperitoneal anterolateral interbody fusion: an MRI study
A. Mahathathanatrakul, V. Kotheeranurak, G. Lin, H. Chung, J. Hur, J. Kim; Naesuan University Hospital, Phitsanulok, THAILAND, Queen Savang Vadhana Memorial Hospital, Sri Racha, Chonburi, THAILAND, Seoul St. Mary’s Hospital. The Catholic University of Korea, Seoul, KOREA, REPUBLIC OF.

11:55 Paper #73: Large Developed Anterior Subsidence Influences Cervical Alignment And Its Avoidance In Single Level Standalone Cage Assisted Anterior Cervical Fusion
JAEWON JANG, MD., PhD.; CHOONKEUN PARK, M.D., PhD.; and DONGHWA HEO, M.D., PhD.; Leon Wiltse Memorial Hospital, SUWON, Korea, Republic of

11:59 Discussion

Ashish Jaiswal, FNB (spine surgery), MS (orthopaedics); Siva Reddy, MBBS, DNB; and Satish Kumar, MBBS, DNB; Apollo Hospital, Bilaspur, India

12:11 Paper #75: Vesselplasty in Difficult in vertebral fractures
Arvind Bhave; Deenanath Mangeshkar Hospital, Pune, India
Session 8: Technology Updates – Non-CME Session

Moderators: M. Oppenlander, MD & G. Anderson, MD
1:05  Presentation on specific technology – Cerapedics
1:11  Presentation on specific technology - Orthofix
1:17  Presentation on specific technology - SpineCraft
1:26  Discussion

Session 9: New Technology / Interbody Implant Surface Technologies / Fusion Options
Moderators: M. Oppenlander, MD & G. Anderson, MD

1:30  Porous PEEK and Titanium Coated Interbody Cages – Hype or Not?  P. Whang, MD
1:38  Nanotechnology Improves Fusion – Real or Hype?  P. Slosar, MD
1:46  Cellular Allograft – As Good As BMP?  C. Upadhyaya, MD
1:54  Talk on Metallurgy – Dr. Bae to specify title  H. Bae TBD
2:02  Discussion

2:08  Interspinous Decompression Devices – Do They Have a Role?  P. Nunley, MD
2:14  TLIF Expandable Cage – Straight Oblique vs Banana Cage  V. Chang, MD
2:20  Discussion

2:27  Lateral Expandable Cage Technology  R. Eastlack, MD
2:35  Fenestrated Pedicle Screws to Optimize Fixation in Osteoporosis or Tumor  K. Than, MD
2:43  Endoscopic Fusion  W. Taylor, MD
2:51  Discussion

Debate: PEEK vs Titanium: which is better?
2:56  PEEK Cages are Best to Decrease Subsidence and Obtain Fusion  N. Anand, MD
3:01  Titanium Cages are Best for Osteointegration  S. Berven, MD
3:06  Discussion
3:11  Audience Response

Session 10: Complications – Avoidance and Management
Moderators: L. Khoo, MD; S. Eden, MD

Review of Common Complications, Methods for Management and Avoidance:

3:14  LLIF  A. Kanter, MD
3:19  OLIF  R. Lehman, MD
3:24  MIS TLIF  K. Radcliff, MD
3:30  Endoscopic Decompression  J.S Kim, MD
3:36  Anterior Column Realignment  J. Uribe, MD
3:42 Discussion

3:45 MIS Strategies to Treat Symptomatic Adjacent Segment Disease
   Z. Ray, MD

3:51 Optimizing Management of Osteoporotic Patients who undergo MIS Fusion
   P. Mummaneni, MD

3:57 Video: Treatment of Durotomies in MIS
   J. O’Toole, MD

4:07 Discussion

4:15 Adjourn