AGENDA
OF THE
9TH ANNUAL
SOLAS®
MEETING

MARCH 10-12, 2016
PARK HYATT AVIARA RESORT, CARLSBAD, CA

The SOLAS Research Meeting is jointly provided by Medical Education Resources and SOLAS. This activity is supported by an educational grant from NuVasive, Inc.
AGENDA

THURSDAY, MARCH 10, 2016

4:00 – 6:00 PM
REGISTRATION
HOTEL LOBBY LIBRARY

6:00 – 8:00 PM
WELCOME RECEPTION
LAVIANA AND AVALON TERRACES

7:00 – 9:00 PM
FIRESIDE CHAT/CASE DEBATES
Moderator: William Smith, MD

7:00 – 7:30 PM
Adam Kanter, MD vs. Gregory Mundis, MD: Deformity Correction with MIS or Hybrid Approaches

7:30 – 8:00 PM
Luiz Pimenta, MD, PhD vs. Rodrigo Amaral, MD: Lateral Standalone vs. Lateral+Posterior Fixation - Which is Better for Patients?

8:00 – 8:30 PM
Juan S. Uribe, MD vs. Joshua E. Heller, MD: LLIF vs PLIF/TLIF for Spondy - What Do the Outcomes and Literature Tell Us?

8:30 – 9:00 PM
Other Case Review

FRIDAY, MARCH 11, 2016

6:30 - 5:00 PM
REGISTRATION AND EXHIBITS
AVIARA PROMENADE

6:30 – 5:00 PM
SPEAKER READY ROOM
PELLICAN

6:45 – 7:45 AM
BREAKFAST
AVIARA COURTYARD

7:45 – 8:00 AM
MEETING OPENING REMARKS
Frank M. Phillips, MD & Jim A. Youssef, MD

8:00 – 9:00 AM
SYMPOSIUM - LATERAL SURGERY AT L4-5: A CONCERN OR AN OPPORTUNITY?
AVIARA SALON
Moderator: Frank M. Phillips, MD

8:00 AM - 8:09 AM
Juan S. Uribe, MD: Lateral at L4-5 - Review of Anatomy

8:09 AM - 8:18 AM
W. Blake Rodgers, MD: Lateral at L4-5 - Outcomes in the Literature

8:18 AM - 8:27 AM
Rob Isaacs, MD: Complications at L4-5 - A Review

8:27 - 8:36 AM
Stephen Ryu, MD: Pearls for Improving Surgery at L4-5

8:36 - 8:45 AM
William Taylor, MD: Advances in Neuromonitoring - Will It Make Lateral Surgery Safer?

8:45 - 9:00 AM
Discussion

9:00 – 10:00 AM
LATERAL SURGERY IN DEGENERATIVE INDICATIONS AND OTHER PEARLS
Moderators: Luiz Pimenta, MD, PhD & John Pollina, MD

9:00 – 9:05 AM
1: Comparative analysis of fusion rates and incidence of subsidence in patients who received either Osteocel® or Infuse® rhBMP2 one year after undergoing XLIF®
Jim A. Youssef, MD; Douglas Orndorff, MD; Sue Lynn Myhre, PhD; Tara Faye; Cacia Pope; Michael Glade
Spine Colorado, Durango, CO, USA

9:05 – 9:10 AM
2: Effect of cage height in stand-alone lateral interbody fusion
Luís Marchi, MS; Rodrigo Amaral, MD; Fernanda Fortti, BS; Rubens Jensen, MD; Leonardo Oliveira, BS; Luiz Pimenta, MD, PhD
Instituto de Patologia da Coluna, São Paulo, Brazil

9:10 – 9:15 AM
3: Relationship between Psoas Muscle Position and Spino-pelvic parameters: An Anatomical Analysis Using Magnetic Resonance Imaging
Akira Kondo1, Yuichiro Abe, Jun Mizutani2,3, Shigenobu Sato2, Kentaro Yamada2, Takanobu Otsuka1
1Department of Orthopaedic Surgery, Nagoya City University Graduate School of Medical Sciences; 2Department of Orthopaedic Surgery, Eniwa Hospital; 3 Department of Rehabilitation Medicine, Nagoya City University Graduate School of Medical Sciences, Japan
9:15 – 9:30 AM  
Discussion

9:30 – 9:35 AM  
4: Comparison of a calcium phosphate bone substitute with recombinant human bone morphogenetic protein-2: A prospective study of fusion rates, clinical outcomes and complications with 24-month follow-up
Gregory M. Malham, BSc, MB, ChB, FRACS; Rhiannon M. Parker PhD; Carl M. Blecher, MB, BS, FRANZCR DDU

1 Neuroscience Institute, Epworth Hospital, Melbourne, Victoria 3121, Australia; 2 Greg Malham Neurosurgeon, Melbourne, Victoria 3004, Australia; 3 Department, Epworth Hospital, Melbourne, Victoria 3121, Australia

9:35 – 9:40 AM  
5: Radiological correlation of facet degeneration and indirect decompression after Extreme Lateral Interbody Fusion
Navarro-Ramirez R, MD, MSc; Moriguchi Y, MD, PhD; Corredor JA, MD; Avila M, MD; Gotfryd A, MD; Alimi M, MD; Berlin C, BS; Pennicooke B, MD, MS; Jada A, MD; Härtl R, MD

Department of Neurosurgery, Weill Cornell Medicine, New York, NY, USA

9:40 – 9:45 AM  
6: Possibility of Colonic Perforation during Extreme Lateral Interbody Fusion: Distance between Descending or Ascending Colon and Lateral Approach Pathway
Tokumi Kanemura, MD, PhD; Kotaro Satake, MD, PhD; Hidetoshi Yamaguchi, MD; Naoki Segi, MD; Junn Ouchida, MD; Shiro Imagama, MD, PhD

1 Konan Kosei Spine Center, Konan, Japan; 2 Nagoya University, Nagoya, Japan

9:45 – 10:00 AM  
Discussion

10:00 – 10:30 AM  
BREAK

AVIARA FOYER

10:30 – 11:30 AM  
COMPLICATIONS AND REVISION IN LATERAL SURGERY

Moderators: Adam Kanter, MD & Pedro Berjano, MD, PhD

10:30 – 10:34 AM  
7: Relationship between psoas muscle dimensions and post-operative thigh pain. A possible preoperative evaluation factor
Josip Buric, MD; Domenico Bombardieri, MD; Carmine Del Gaizo, MD

Villa Torri Hospital, GVM, Bologna, Italy

10:34 – 10:38 AM  
8: Femoral And Obturator Nerve Injury After Lateral Retropertitoneal Transpsoas Approach: Prognostic Indicators For Recovery
Andrew Vivas, MD; Chun-Po Yen, MD; Konrad Bach, MD; Naomi Abel, MD; Juan S. Uribe, MD

University of South Florida, Tampa, FL, USA

10:38 – 10:42 AM  
9: Direct abdominal wall hernias following lateral lumbar interbody fusion
Zachary J. Tempel, MD; Nathan T. Zwagerman, MD; D. Kojo Hamilton, MD; Raquel Forsythe, MD; David O. Okonkwo MD, PhD; Adam S. Kanter, MD

Department of Neurological Surgery, University of Pittsburgh Medical Center, Pittsburgh, PA, USA

10:42 – 10:46 AM  
10: Lateral Transpsoas Approach to the Lumbar Spine in the Setting of Pyogenic Vertebral Osteomyelitis
George M. Ghobrial, MD; Daniel Benito, Joshua Heller, MD

Thomas Jefferson University Hospital, Philadelphia, PA, USA

10:46 – 11:00 AM  
Discussion

11:00 – 11:04 AM  
11: Overall Complications in a series of 184 cases treated with lumbar XLIF: minimum 12 months follow-up.
Josip Buric, MD; Domenico Bombardieri, MD

Villa Torri Hospital, GVM, Bologna, Italy

11:04 – 11:08 AM  
12: Extreme Lateral Interbody Fusion (XLIF): Surgical outcome and related complications in an academic center
Ioannis Siasios, MD; Vassilios Dimopoulos, MD; Alexander Becker, MS; Daniel Schneider, MS; John Pollina, MD

Department of Neurosurgery, Jacobs School of Medicine and Biomedical Sciences, University at Buffalo, State University of New York, Buffalo, New York, USA; and Department of Neurosurgery, Kaleida Health, Buffalo, New York, USA

11:08 – 11:12 AM  
13: Graft subsidence as a predictor of revision surgery following stand-alone lateral lumbar interbody fusion
Zachary J. Tempel, MD; David M. Panczykowski, MD; Gurpreet S. Gandhoke, MD; David O. Okonkwo, MD PhD; Adam S. Kanter, MD

Department of Neurological Surgery, University of Pittsburgh Medical Center, Pittsburgh, PA, USA

11:12 - 11:16 AM
14: The lateral approach in revision Lumbar surgery
Deb Pal, FRCS (Edin), FRCS (SN)
Leeds Teaching Hospitals, UK

11:16 - 11:30 AM
Discussion

11:30 AM – 12:30 PM
SINGLE POSITION SURGERY AND OTHER APPLICATIONS OF LATERAL SURGERY
Moderators: Ashish D. Diwan, PhD, FRACS, FAOrthA & W. Blake Rodgers, MD

11:30 - 11:35 AM
15: Outpatient Minimally Invasive Lumbar Interbody Fusion: Predictive Factors and Clinical Results
William D. Smith, MD,1,2; Richard Wohns MD, JD, MBA3; Evelyn J. Rodgers4; W. Blake Rodgers, MD5
1 Western Regional Center for Brain and Spine Surgery, Las Vegas, NV, USA; 2 University Medical Center, Las Vegas, NV, USA; 3 NeoSpine, Puyallup, WA, USA; 4 Spine Midwest, St. Mary’s Hospital, Jefferson City, MO, USA

11:35 - 11:40 AM
16: MIS Single-Position Anterior Interbody Fusion and Bilateral Pedicle Screw Fixation: Feasibility and Perioperative Results
J. Alex Thomas, MD
Atlantic Neurosurgical and Spine Specialists, Wilmington, NC, USA

11:40 - 11:45 AM
17: Modified ALIF for L5-S1 and Below in the Lateral Decubitus Position
Raymond Yip, FRCS(Orth)
Spine Care Hong Kong, Hong Kong

11:45 AM - 12:00 PM
Discussion

12:00 - 12:05 PM
18: Comparison of Stand-Alone, Trans-Psoas Lateral Interbody Fusion to Transforaminal Interbody Fusion for the Treatment of Lumbar Adjacent Segment Disease
Deeptee Jain, MD; Kush K. Verma, MD; Jun Mizutani, MD; Bobby Tay, MD; Shane Burch, MD; Vedat Deviren, MD
Department of Orthopaedic Surgery, University of California - San Francisco, San Francisco, CA, USA

12:05 - 12:10 PM
19: Bone morphogenetic proteins in spinal surgery – what is the fusion rate and do they cause cancer?
Gregory M. Malham, BSc, MB, ChB, FRACS1; Graham G. Giles, MSc PhD, AM; Roger L. Milne, BCom, MSc, PhD2; Carl M. Blecher, MB, BS, FRANZCR, DDU3; Graeme A. Brazenor, MB, BS, BMedSci, FRACS4
1 Neuroscience Institute, Epworth Hospital, Melbourne, Victoria 3121, Australia; 2 Cancer Council Victoria, Melbourne, Victoria 3004, Australia; 3 Radiology Department, Epworth Hospital, Melbourne, Victoria 3121, Australia

12:10 - 12:15 PM
20: The Role of Lateral Access Surgery in Global Outreach Spine Surgery
W. Blake Rodgers, MD1; Gregory Mundis, MD2; Pitchou Malaba, CNIM, MBA3; Richard Ombachi, MD4; Soren Otieno, MD5; G. Bryan Cornwall, PhD6
1 Spine Midwest, Jefferson City, MO, USA; 2 San Diego Spine Foundation & Scripps Clinic, San Diego, CA, USA; 3 NuVasive Spine Foundation, San Diego, CA, USA; 4 Kenyatta National Hospital, Nairobi, Kenya; 5 National Spinal Injury Hospital of Kenya, Nairobi, Kenya; 6 SOLAS

12:15 - 12:30 PM
Discussion

12:30 - 1:30 PM
GROUP PHOTO & LUNCH BREAK
PALM COURTYARD

1:30 - 2:30 PM
DEFORMITY CORRECTION AND ALIGNMENT, PART 1
Moderators: Vedat Deviren, MD & Hiroshi Taneichi, MD, PhD

1:30 - 1:34 PM
Juan S. Uribe, MD1; Jim A. Youssef, MD2; Sue Lynn Myhre, PhD2
1 University of South Florida, Tampa, FL; 2 Spine Colorado, Durango, CO, USA

1:34 - 1:38 PM
22: Is it Beneficial to Adapt Lateral Access Spine Surgery for Adult Sagittal Deformity?
Hiroshi Moridaira, MD; Satoshi Inami, MD; Daisaku Takeuchi, MD; Haruki Ueda, MD; Yo Shiba, MD; Makoto Ohe, MD; Futoshi Asano, MD; Hiromichi Aoki, MD; Yutaka Nohara, MD; Hiroshi Taneichi, MD
Dokkyo Medical University, Tochigi, Japan
1:38 - 1:42 PM
23: Comparison of Staged Reconstruction with Extreme Lateral Interbody Fusion (XLIF) and Multilevel Corrective PLIF/TLIF with Ponte Osteotomy for Adult Thoracolumbar Kyphoscoliotic Deformity
Hidetoshi Yamaguchi, MD; Tokumi Kanemura, MD, PhD; Kotaro Satake, MD, PhD; Naoki Segi, MD; Jun Ouchida, MD; Shiro Imagama, MD, PhD
Spine Center, Konan Kosei Hospital, Konan, Japan; *Department of Orthopaedic Surgery, Nagoya University, Nagoya Japan

1:42 - 1:46 PM
24: Impact of Multi-Level Interbody Fusion in the Treatment of Severe Adult Scoliosis (Thoracolumbar Coronal Cobb Angle>50 Degrees)
Joseph M. Zavatsky, MD; Michael Y. Wang, MD; Paul Park, MD; Dean Chou, MD; Adam S. Kanter, MD; Juan S. Uribe, MD; Pierce Nunley, MD; Robert K. Eastlack, MD; Behrooz Akbarnia, MD; Neel Anand, MD; Stacie Nguyen, MD; Praveen Mummaneni, MD; Gregory Mundis, MD; ISSG

1:46 - 2:00 PM
Discussion

2:00 - 2:04 PM
25: Sagittal Alignment Parameters in Patients Submitted to eXtreme-Lateral Interbody Fusion (XLIF) versus Minimally Invasive Transforaminal Lumbar Interbody Fusion (MIS-TLIF)
Cristiano M. Menezes, MD, PhD; Daniel de Abreu Oliveira, MD; Roberto Sakamoto Falcon, MD; Germano Senna Oliveira do Valle, MD; Rafael de Araújo Porto, MD; Germano Senna, MD; Érica Godinho Menezes, MD
Hospital Ortopedico/ Lifecenter; Hospital da Baleia, Belo Horizonte Brazil

2:04 - 2:08 PM
26: Radiological Outcome Following Extreme Lumbar Interbody Fusion (XLIF): Factors Influencing Final Lumbar Lordosis
Ioannis Siasios, MD; Vassilios Dimopoulos, MD; John Pollina, MD
Department of Neurosurgery, Jacobs School of Medicine and Biomedical Sciences, University at Buffalo, State University of New York, Buffalo, New York, USA; and Department of Neurosurgery, Kaleida Health, Buffalo, New York, USA

2:08 - 2:12 PM
27: Minimally Invasive Approach to Adult Spine Deformity Using Minimally Invasive Stabilization (MIST) Technique
Takanori Saito, MD; Shinichirou Taniguchi, MD; Masayuki Ishihara, MD; Youichi Tani, MD
Kansai Medical University, Takii Hospital, Moriguchi-city Osaka Japan

2:12 - 2:16 PM
28: Anterior Column Realignment in Adult Deformity: a Retrospective Analysis of Radiographic Outcomes
Marco Agnoletto1, Riccardo Cecchinato1, Aldo Sinigaglia2, Marco Damalino1, Maryem Ismael1, Giovanni Casero1, Roberto Bassani2, Claudio Lamartina1, Pedro Berjano1
1 G Spine 4, IRCCS Istituto Ortopedico Galeazzi, Milan, Italy; 2 2nd Spinal Surgery, IRCCS Istituto Ortopedico Galeazzi, Milan, Italy

2:16 - 2:30 PM
Discussion

2:30 - 3:30 PM
SYMPOSIUM - ADULT SPINAL DEFORMITY AND ANTERIOR COLUMN REALIGNMENT
Moderators: Behrooz Akbarnia, MD & Gregory Mundis, MD

2:30 - 2:38 PM
Vedat Deviren, MD: What Role does Lateral Surgery Play in Your Deformity Practice?

2:38 - 2:46 PM
Hiroshi Takeichi, MD, PhD: Lateral Surgery for Adult Deformity

2:46 - 2:54 PM
Robert Eastlack, MD: Lateral Surgery and the Sagittal Plane - Alignment Considerations

2:54 - 3:02 PM
Behrooz Akbarnia, MD: When is Lateral Surgery NOT Indicated for Adult Spinal Deformity

3:02 - 3:10 PM
Gregory Mundis, MD: Is There a Methodology to How Many Levels I Fuse from Lateral? Or is Every Disc an Opportunity?

3:10 - 3:18 PM
Jean-Christophe Leveque, MD: Anterior Column Realignment - Are the Outcomes Worth the Risk?

3:18 - 3:30 PM
Discussion

3:30 - 4:00 PM
BREAK
AVIARA FOYER
4:00 - 5:00 PM
THORACIC, CORPECTOMY, AND DEFORMITY CORRECTION
Moderators: Juan S. Uribe, MD & William Taylor, MD

4:00 - 4:05 PM
29: Minimally Invasive Lateral Retropleural Approach for Symptomatic Thoracic Disc Herniations
Chun-Po Yen, MD; Konrad Bach MD; Juan S. Uribe, MD
Department of Neurosurgery, University of South Florida, Tampa, FL, USA

4:05 - 4:10 PM
30: Clinical and Radiographic Outcomes of Thoracolumbar Fractures Treated by Corpectomy and Fusion through a Mini-Open Lateral Approach
William D. Smith, MD; Xeushi Li, MD, PhD; Libby Bergmann, BS
1 University Medical Center, Chief of Neurosurgery, Las Vegas, NV, USA; 2 Jiangmen Central Hospital, Dept. of Orthopedics, Jiangmen, Guangdong, China

4:10 - 4:15 PM
31: The Mini-Open Lateral Approach for Corpectomy of the Thoraco-Lumbar Spine: Results and Outcomes.
Massimo Balsano, MD; Andrea Piazzolla, MD; Barbara Cappelletto, MD
1 Regional Spinal Department, Santorso, Vicenza, Italy; 2 Trauma and Spine Operative Unit, Bari, Italy; 3 S.O.C. di Chirurgia Vertebro-midollare, Azienda Ospedaliero-Universitaria, Santa Maria della Misericordia, Udine, Italy

4:15 - 4:30 PM
Discussion

4:30 - 4:35 PM
32: Biomechanical Analysis of Anterior Column Realignment for Adult Spinal Deformity: An In-Vitro Human Cadaveric Study
Murat Pekmezci, MD; Safa Herfet, PhD; Alexander A. Theologis, MD; Aaron Clark, MD, PhD; Frank Valone, MD; Dezba G. Coughlin, MD; Alex Turner, PhD; Christopher P. Ames, MD; Vedat Deviren, MD
1 Department of Orthopaedic Surgery, University of California-San Francisco (UCSF), San Francisco, CA; 2 Department of Neurosurgery, UCSF, San Francisco, CA; 3 NuVasive Inc., San Diego, CA, USA

4:35 - 4:40 PM
33: Biomechanical Study of Rod Stress after Pedicle Subtraction Osteotomy versus Anterior Column Reconstruction: a Finite Element Study
Juan S. Uribe, MD; Jeffrey E. Harris, MS; Alexander W. Turner, PhD; Chun Po Yen, MD
1 University of South Florida, Tampa, FL, USA; 2 NuVasive Inc., San Diego, CA, USA

6:00 - 8:00 PM
GROUP DINNER WITH PANEL DISCUSSION
PALM COURTYARD

SATURDAY, MARCH 12, 2016

7:00 - 8:00 AM
BREAKFAST
AVIARA COURTYARD

8:00 - 9:00 AM
NOVEL TECHNIQUES
AVIARA SALON
Moderators: Stephen Ryu, MD & Jeffrey D. Coe, MD

8:00 - 8:04 AM
35: Preoperative Prealbumin & Risk of Postoperative Surgical Site Infection Following Elective Spine Surgery
David O. Okonkwo, MD, PhD; Zachary J. Tempel, MD; Michael M. McDowell, MD; Gurpreet S. Gandhoke, MD; D. Kojo Hamilton, MD; Adam S. Kanter, MD
Department of Neurosurgery, University of Pittsburgh Medical Center, Pittsburgh, PA, USA

8:04 - 8:08 AM
36: Lateral Lumbar Spine Surgery Without Muscle Relaxants: Technical Considerations and Early Experience with Adverse Events
Guy Fogel, MD
San Antonio Spine Pain Be Gone Clinic, San Antonio, TX, USA

8:08 - 8:12 AM
37: Lumbar Total Disc Replacement by the Lateral Approach – Up to 10-year Follow-Up
Rodrigo Amaral, MD; Luis Marchi, MS; Etevaldo Coutinho, MD; Leonardo Oliveira, BS; Rubens Jensen, MD; Luiz Pimenta, MD, PhD
Instituto de Patologia da Coluna, São Paulo, Brazil
38: Metal-on-Metal Lumbar Total Disc Replacement: Does Approach Matter? A Comparison of XL-TDR and A-MAV Prostheses
Gregory M. Malham, BSc, MB, ChB, FRACS; Rhiannon M. Parker, PhD
Neuroscience Institute, Epworth Hospital, Melbourne, Victoria 3121, Australia

39: Comparison of Single-Level MIS Posterior Lumbar Fusions, with vs. without Robotic-Guidance – A Retrospective Review
Samuel Schroerlucke, MD; Elizabeth Harris, PA; Ty Wolf; Alex Wolf
Tabor Orthopedics, division of MSK group, Memphis, Tennessee, USA

40: C-arm Positioning is a Significant Source of Radiation Exposure
Elizabeth Reiser, BA; Sarah Byrd, MSN, ANP-BC; Deborah Chi, BS; Cary Idler, MD; Robert Isaacs, MD; Kris Radcliff, MD; Frank M. Phillips, MD

41: Reduction in Length of Stay and Intraoperative Blood Loss with use of Cortical Screw Fixation versus Traditional Pedicle Screw Fixation in the Lumbar Spine
Quinlan Buchlak, MPsych, MBIS; Jean-Christophe Leveque, MD; Alison C. Bradywood, RN, MN, MPH; Elena Osborne, RN, MSN; Farrokh R. Farrokhi, MD
Virginia Mason Health System, Seattle, WA, USA

42: The Value of Intra-Operative Lumbar Lordosis Measurements. Correlations with the Pre-Operative and the Post-Operative Lumbar Lordosis Measurements
Ioannis Siasios, MD; Vassilios Dimopoulos, MD; John Pollina, MD
Department of Neurosurgery, Jacobs School of Medicine and Biomedical Sciences, University at Buffalo, State University of New York, Buffalo, New York, USA; and Department of Neurosurgery, Kaleida Health, Buffalo, New York, USA

10:30 - 10:40 AM
43: Current MIS Techniques Fail to Optimize Spinoepelvic Parameters in Patients with High Pelvic Incidence
Gregory Mundis, MD; Robert K. Eastlack, MD; Praveen Mummaneni, MD; David O. Okonkwo, MD; Stacie Nguyen, MD; Adam S. Kanter, MD; Paul Park, MD; Pierce Nunley, MD; Juan S. Uribe, MD; Joseph M. Zavatsky, MD; Dean Chou, MD; Vedat Deviren, MD; ISSG

10:40 - 11:00 AM
44: Patients with High Pelvic Tilt Achieve the Same Clinical Success as Those with Low Pelvic Tilt After Minimally Invasive Deformity Surgery
Juan S. Uribe, MD; Gregory Mundis, MD; Michael Wang, MD; Neel Anand, MD; David O. Okonkwo, MD; Stacie Nguyen, MD; Praveen Mummaneni, MD; Pierce Nunley, MD; Paul Park, MD; Adam S. Kanter, MD; Joseph M. Zavatsky, MD; Robert K. Eastlack, MD; Behrooz Akbarnia, MD; ISSG

11:00 - 11:05 AM
45: Early and Late Reoperation Rates and Etiologies Are Similar Between cMIS and HYB Techniques for ASD Correction
Robert K. Eastlack, Gregory Mundis, Stacie Nguyen, Praveen Mummaneni, David O. Okonkwo, Adam S. Kanter, Neel Anand, Paul Park, Pierce Nunley, Juan S. Uribe, Behrooz A Akbarnia, Dean Chou, Vedat Deviren, ISSG
11:05 - 11:10 AM
47: The Use of Advanced Lateral Approaches with Hyperlordotic Interbody Grafts to Avoid the Blood Loss Associated with Pedicle Subtraction Osteotomy
Jean-Christophe Leveque, MD; Kellen Nold, PA; Rajiv Sethi, MD
Department of Neurosurgery, Virginia Mason Medical Center, Seattle, WA

11:10 - 11:15 AM
48: MIS Single-Position Anterior Interbody Fusion and Bilateral Pedicle Screw Fixation: Feasibility and Perioperative Results
Gökhan Demirkiran¹, MD; Alexander A. Theologis², MD; Murat Pekmezçi², MD; Christopher Ames³, MD; Vedat Deviren⁴, MD
¹ Department of Orthopaedics and Traumatology, Hacettepe University, Ankara, Turkey; ² Department of Orthopaedic Surgery, UCSF, San Francisco, CA, USA; ³ Department of Neurologic Surgery, UCSF, San Francisco, CA, USA

11:15 - 11:30 AM
Discussion

11:30 - 11:35 AM
49: Multilevel Stand Alone Anterior Interbody Fusion: A Comprehensive Assessment of Radiographic, Operative, And Clinical Outcomes With Up to Two Years Follow-Up
Kush K. Verma, MD; Deeptee Jain, MD; Vedat Deviren, MD
Department of Orthopaedic Surgery, UCSF, San Francisco, CA, USA

11:35 - 11:40 AM
50: Lateral Interbody Fusion as a Tool in Adult Spinal Deformity Surgery: Correction and Complications with Hybrid versus Posterior-Only Approach
Russell G. Strom, MD¹; Alexander A. Theologis, MD¹; Junseok Bae, MD¹; Jun Mizutani, MD²; Frank Valone III, MD¹; Christopher P. Ames, MD²; Vedat Deviren, MD¹
¹ Department of Orthopaedic Surgery; ² Department of Neurosurgery, UCSF, San Francisco, CA, USA

11:40 - 11:45 AM
51: What Is The Effect Of Open Vs Percutaneous Screws On Complications Among Patients Undergoing Lateral Interbody Fusion for Adult Spinal Deformity?
Khoi Than, MD; Stacie Nguyen, MD; Paul Park, MD; Dean Chou, MD; Frank La Marca, MD; Juan S. Uribe, MD; Todd Vogel, MD; Pierce Nunley, MD; Robert K. Eastlack, MD; Neel Anand, MD; Adam S. Kanter, MD; Praveen Mummaneni, MD; Gregory Mundis Jr, MD; ISSG

11:45 AM - 12:00 PM
Discussion