# Thursday, October 28, 2021

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Speaker(s)</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>2:00</td>
<td>On-site Registration</td>
<td></td>
<td>Gracia Ballroom Foyer</td>
</tr>
<tr>
<td>5:00</td>
<td>Welcome</td>
<td>R. Eastlack, MD</td>
<td>Castellana 1</td>
</tr>
<tr>
<td>5:05</td>
<td>NuVasive Award</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5:10</td>
<td>Posterior is the best answer</td>
<td>K. Foley, MD</td>
<td></td>
</tr>
<tr>
<td>5:17</td>
<td>Lateral just makes sense</td>
<td>L. Pimenta, MD</td>
<td></td>
</tr>
<tr>
<td>5:24</td>
<td>Discussion</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5:31</td>
<td>Safer and better for the patient</td>
<td>R. Lehman, Jr., MD</td>
<td></td>
</tr>
<tr>
<td>5:36</td>
<td>Time consuming and not necessary</td>
<td>F. Phillips, MD</td>
<td></td>
</tr>
<tr>
<td>5:41</td>
<td>Discussion</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5:48</td>
<td>Lateral works, why risk it?</td>
<td>A. Kanter, MD</td>
<td></td>
</tr>
<tr>
<td>5:53</td>
<td>PTP: Try it you'll like it</td>
<td>W. Taylor, MD</td>
<td></td>
</tr>
<tr>
<td>5:58</td>
<td>Discussion</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6:05</td>
<td>Safer and better for the patient</td>
<td>R. Eastlack, MD</td>
<td></td>
</tr>
<tr>
<td>6:10</td>
<td>Alternative MIS procedures achieve lordosis</td>
<td>V. Deviren, MD</td>
<td></td>
</tr>
<tr>
<td>6:15</td>
<td>Discussion</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6:25</td>
<td>Thoracic lateral SPS: What you need to know. What’s next?</td>
<td>J. Uribe, MD</td>
<td></td>
</tr>
<tr>
<td>6:32</td>
<td>Deformity and SPS: What you need to know. What’s next?</td>
<td>G. Mundis, Jr., MD</td>
<td></td>
</tr>
<tr>
<td>6:39</td>
<td>Neuromonitoring and SPS: Is SSEP the new standard?</td>
<td>T. Smith, MD</td>
<td></td>
</tr>
<tr>
<td>6:46</td>
<td>Discussion</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6:53</td>
<td>Non-CME Tech Update: Title Speaker Supported by: NuVasive</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6:59</td>
<td>Non-CME Tech Update: Title Speaker Supported by: Viseon</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7:05</td>
<td>Discussion</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7:10</td>
<td>Adjourn</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Friday October 29, 2021

6:45 am On-site Registration

7:30-8:20 Non-CME Workshops with Breakfast
*Participants are invited to attend the workshop of their choice.*

Workshop Title 1
Workshop Faculty
Supported by: SI-Bone

Workshop Title 2
Workshop Faculty
Supported by: Globus

Workshop Title 3
Workshop Faculty
Supported by: Medtronic

Session 2: Minimally Invasive Management of the Complex Spine Patient
*Mods: JP Mobasser, MD & L. Tumialán, MD*

8:30 Welcome

8:35 Introduction to the Problem

8:52 Rapid Fire - Why I Do:
- Posterior MIS TLIF
- ALIF or OLIF only
- Anterior-posterior
- MIS PLIF with cortical screws

9:02 Discussion

9:27 Audience poll: Which approach is best? Did opinions change?

9:30 Complication management and avoidance - anterior and posterior.
Intraoperative: the unthinkable

9:40 The science of cellular graft material. Does the data support the cost?

9:52 Discussion

How To... Technique Videos for Complex Cases

10:00 Techniques for minimally invasive Gill laminectomy

10:08 Virtual reality and spinal surgery...the future of resident training

10:16 Discussion
Friday October 29, 2021 continued

10:30 Refreshment Break & Exhibit Viewing Exhibit Hall

11:00 am-12:30 pm Concurrent Sessions 3A, 3B, & 3C

Concurrent Session 3A: Free Papers Gracia Ballroom
Mods: R. Härtl, MD & K. Foley, MD

11:00 Paper #1: Single-level MIS TLIF vs. ALIF at L5/S1: A comparison of patient-reported outcomes and recovery ratios
Kevin Jacob, Madhav Patel, Frank Chavez, Alexander Parsons, Max Ribot, Michael Prabhu, Hanna Pawlowski, Nisheka Vanjani, Kern Singh

11:04 Paper #2: Titanium and PEEK cages have similar outcomes in single-level MIS-TLIF: A matched cohort analysis with long-term follow-up
Daniel Coban, Stuart Changoor, Stephen Saela, Kumar Sinha, Ki Hwang, Michael Faloon, Arash Emami

11:08 Paper #3: Differences in predictors of readmission and extended length of stay between open, minimally invasive, and robotic single-level lumbar fusion surgery
Calista Dominy, Justin Tang, Nicholas Pitaro, Christopher White, Jeremy Steinberger, Jun Kim, Samuel Cho

11:12 Paper #4: Minimally invasive spine surgery program implementation in university-affiliated acute care peripheral rural community hospital: Early clinical experience with initial consecutive cases after launch
Vivek Sharma, Anthony Oyekan

11:16 Discussion

11:24 Paper #5: Return to work, activities of daily living and disability improvement: 12-month outcomes of an FDA IDE trial of decompression and tension band stabilization for degenerative spondylolisthesis

11:28 Paper #6: Lumbar facet arthroplasty for lumbar spondylolisthesis – 2-year outcomes
Steven DeLuca, William Welch, Eric Potts, John Chi

11:32 Paper #7: Can disc distraction using a percutaneous approach reduce spondylolisthesis?
Micah Smith

11:36 Paper #8: Effectiveness and cost-effectiveness of full-endoscopic transforaminal discectomy vs. open discectomy for sciatica
Provash Gadjaradi, Biswadjet Harhangi

11:40 Discussion
Friday October 29, 2021 continued

11:48 Paper #9: The influence of preoperative narcotic consumption on patient-reported outcomes of lumbar decompression
Madhav Patel, Kevin Jacob, Conor Lynch, Elliot Cha, Michael Prabhu, Hanna Pawlowski, Nisheka Vanjani, Kern Singh

Pierce Nunley, John Chi, Martin Krag, Mohamad Bydon, Stephane Lavoie, Yi Lu, Marcus Stone

11:56 Paper #11: Evaluation of the ability of a novel curved drill to create an arcuate tunnel without breaching the spinal canal
Robert Eastlack, Taylor Semingson, Hani Malone

12:00 Paper #12: Patients’ preferences for the treatment of lumbar disc herniation: a discrete choice experiment
Pravesh Gadjradj, Nicholas Smeele, Esther Bekker-Grob, Biswadjiet Harhangi

12:04 Discussion

12:12 Paper #13: Examination of factors causing anterior detached bone fragments after extreme lateral interbody fusion
Atsushi Ikeura, Yoshihisa Kotani, Takashi Toyoda, Takanori Saito

12:16 Paper #14: Objective evaluation of dynamic balance among lumbar disc herniation patients before and after discectomy: Comparison of cone of economy balance measures to the clinical Y-balance test
Damon Mar, Abigail Reichow, Kyle Robinson, Alexander Satin, Blake Staub, Peter Derman

12:20 Paper #15: Analysis of peri-operative events reported from a 200-subject multicenter, prospective lateral interbody fusion study
Pierce Nunley, Brandon Strenge, John Malloy, Jason Huffman, Sandeep Kunwar, Marcus Stone

12:24 Discussion

Concurrent Session 3B: Free Papers

Mots: J. Harrop, MD & L. Pimenta, MD

11:00 Paper #16: Does the global alignment and proportion (GAP) score predict mechanical complications in circumferential minimally invasive surgery for adult spinal deformity?
David Gendelberg, Andrew Chung, Anita Anand, Arya Rao, Shriya Sharma, Christopher Kong, Babak Khandehroo, Sheila Kahwaty, Neel Anand
Friday October 29, 2021 continued

11:04 Paper #17: Does minimally invasive adult deformity surgery result in improved perioperative recovery and function?  
*Peter Passias, Kevin Moattari, Nicholas Kummer, Oscar Krol, Bailey Imbo, Rachel Joujon-Roche, Tyler Willison, Peter Tretiakov*

11:08 Paper #18: Feasibility and outcomes of mini open correction and fusion for adolescent idiopathic scoliosis (AIS): 2-5 years follow-up  
*Matthew Geck, Devender Singh, Ashley Duncan, Eeric Truumees, John Stokes*

11:12 Paper #19: Comparison of adolescent idiopathic scoliosis (AIS) correction - open vs. minimally invasive cohorts: A 2-year radiographic and surgical outcome study  
*Matthew Geck, Devender Singh, Eeric Truumees, John Stokes, Ashley Duncan*

11:16 Discussion

11:24 Paper #20: The relative contribution of anterior techniques vs. posterior techniques in restoring spinal balance in circumferential minimally invasive surgical correction of adult spinal deformity without osteotomies  
*Andrew Chung, David Gendelberg, Christoper Kong, Anita Anand, Arya Rao, Shriya Sharma, Babak Khandehroo, Sheila Kahwaty, Neel Anand*

11:28 Paper #21: Indirect decompression demonstrates similar clinical outcomes to direct decompression in single level circumferential fusion for isthmic spondylolisthesis  
*Kimberly Ashayeri, Brett Braly, J. Alex Thomas, Ivan Cheng, Mark Medley, Brian Kwon, Themistocles Protopsaltis, Aaron Buckland*

11:32 Paper #22: Minimally invasive modification of Goel-Harms atlantoaxial fusion utilizing percutaneous screws and intraarticular cage is feasible and results in decreased blood loss  
*Aaron Gelline, Cole Sloboda, Andrew Abomusso, Deb Bhowmick*

11:36 Paper #23: Single-position, single-incision approach for lateral interbody fusion with supplemental posterior fixation - technique and comparative outcomes to two-incision and two-position approaches  
*Larry Khoo, Payman Emmanuel, Miya Khoo, Sora Cho*

11:40 Discussion

11:48 Paper #24: Clinical and radiographic outcomes for high-risk subjects undergoing single-level or multi-level lumbar fusion using a cellular bone allograft  
*Todd Lansford*
Friday October 29, 2021 continued

11:52  Paper #25: Comparison of the incidence of adjacent segment pathology (ASP) between anterior lumbar interbody fusion (ALIF) and transfornaminal lumbar interbody fusion (TLIF) for lumbosacral junction


Nathan Lee, Venkat Boddapati, Justin Mathew, Paul Park, Eric Leung, Avery Buchholz, John Pollina, Ehsan Jazini, Colin Haines, Thomas Schuler, Christopher Good, Joseph Lombardi, Ronald Lehman

12:00  Paper #27: Attrax putty vs. autograft in XLIF: A prospective randomized single-center evaluation of radiographic and clinical outcomes

Cristiano Menezes

12:04  Discussion

12:12  Paper #28: A longitudinal assessment of segmental motion of the cervical spine following total disc arthroplasty: A comparative analysis of devices

Matthew Colman, Athan Zavras, Vincent Federico, Michael Nolte, Kern Singh, Frank Phillips

12:16  Paper #29: Range of motion on flexion and extension at long-term follow-up after cervical total disc arthroplasty: A systematic review and meta-analysis

Athan Zavras, Navya Dandu, Michael Nolte, Arash Sayari, T Barrett Sullivan, Matthew Colman

12:20  Paper #30: Incidence of voice vs. swallowing complications following stand-alone ACDF

Akhil Chandra, Avani Vaishnav, Jung Kee Mok, Hikari Urakawa, Marcel Dupont, Derek Colaizzo, Pratyush Shahi, Evan Sheha, Todd Albert, Catherine Hiyo Gang, Sheeraz Qureshi

12:24  Discussion

Concurrent Session 3C: Young Surgeons Forum

Castellana 2

Mod: J. Steinberger, MD; Panel: H. Bae, MD; A. Kanter, MD; A. Kumar, MD

11:00  Paper #31: Minimally invasive posterior cervical foraminotomy vs. open posterior cervical foraminotomy, anterior cervical discectomy and fusion and cervical total disc arthroplasty: Systematic review and meta-analysis

Andrew Platt, Richard Fessler, Vincent Traynelis, John O’Toole

11:04  Paper #32: Minimally invasive lateral single-position surgery for multilevel degenerative lumbar spine disease: feasibility and perioperative results in a single Latin American spine center

Sara Henao Romero, Miguel Enrique Berbeo, Roberto Carlos Diaz Orduz, Daniel Villamizar
Friday October 29, 2021 continued

11:08 Paper #33: MIS decompression with non-instrumented facet fusion vs. MIS TLIF for stenosis associated with grade 1 degenerative spondylolisthesis
Daniel Kim, Christopher Alcala, Jes Schwender

11:12 Paper #34: Outcomes and complications of minimally invasive transforinal lumbar interbody fusion in the elderly: A systematic review and meta-analysis
Jonathan Huang, Erik Rabin, Kevin Swong

11:16 Discussion

11:24 Paper #35: Radiographic subsidence following minimally invasive transforaminal lumbar interbody fusion: Comparative analysis of a static vs. expandable interbody cage
Josha Woodward, Lacin Koro, Suel Meza, Dominick Richards, Christopher Keegan, R. David Fessler, Richard Fessler

11:28 Paper #36: Radiographic and patient-reported outcomes in a large cohort of patients undergoing anterior cervical discectomy and fusion using hydroxyapatite-coated PEEK interbody spacers: One-year results
Michael Kelly, S. Babak Kalantar

11:32 Paper #37: Lordotic and hyper-lordotic ALIF implants at the lumbosacral junction: How much lordosis is possible?
S. Harrison Farber, Jakub Godzik, Corey Walker, Jes Zhou, Kaveh Khajavi, Jay Turner, Juan Uribe

11:36 Paper #38: Severity and location of lumbar spine stenosis affects the outcome of total knee arthroplasty
Will Sheppard, Kevin McKay, Alexander Upfill-Brown, Akash Shah, Gideon Blustein, Adam Sassoon, Don Park

11:40 Discussion

11:48 Paper #39: The role of injury-to-surgery time in influencing union rate after odontoid screw placement for Anderson-D’Alonzo type II fractures: An international study
Luca Ricciardi, Massimo Miscusi, Antonino Raco

11:52 Paper #40: A novel classification system for thoracic disc herniations: External validation and application to surgical approach
S. Harrison Farber, Corey Walker, Jakub Godzik, Bernardo de Andrade, Jay Turner, Juan Uribe

11:56 Paper #41: National trends in lumbar disc replacement relative to fusion for lumbar degenerative disc disease and spondylosis, 2010-2018
Friday October 29, 2021 continued

12:00  Paper #42: Percutaneous delivery of recombinant human bone morphogenetic protein-2 augments fusion in a nicotine-impaired rabbit fusion model  
Sohrab Virk, Avani Vaishnav, Sheeraz Qureshi

12:04  Discussion

12:12  Paper #43: Peak force of the posterior ligentous complex is lower in patients with adult spinal deformity requiring revision surgery  
Bahar Shahidi, Brad Anderson, Hani Malone, Tina Iannacone, Courtney Moltzen, Robert Eastlack, Gregory Mundis

12:16  Paper #44: What advantages does a navigated robot have over a non-navigated robot for robot-assisted spine surgery? A multicenter, propensity-matched analysis of 2,800 screws and 372 patients  
Nathan Lee, Justin Mathew, Venkat Boddapati, Paul Park, Eric Leung, Avery Buchholz, Ash Khan, Jeffrey Mullin, John Pollina, Ehsan Jazini, Colin Haines, Thomas Schuler, Christopher Good, Joseph Lombardi

12:20  Paper #45: Comparative analysis of academic productivity among neurological and orthopedic spine surgeons  
Nitin Agarwal, Jes Baraldi, Vsi Reddy, Anthony Zelina, Anvith Reddy, Michael White

12:24  Discussion

12:30-1:20  Lunch  
Exhibit Hall

12:30-1:20  Young Surgeons Lunch: Growing your practice as a young surgeon in crowded, saturated marketplaces: how do I carve a niche?  
Panel: S. Iyer, MD; A. Kanter, MD; JP Mobasser, MD; F. Nin, MD  
Supported by: Medtronic  
Castellana 2

1:20-3:00  Concurrent Sessions 4A & 4B  
Gracia Ballroom

Concurrent Session 4A: Imaging, Navigation, & Robotics and Their Value in Your OR  
Mods: S. Qureshi, MD & K. Radcliff, MD

State of the Art with New Technology
1:20  Navigation  
P. Park, MD
1:29  Robotics  
I. Lieberman, MD
1:38  Discussion

1:46  Augmented reality / extended reality / mixed reality  
R. Härtl, MD
1:55  MRI spectroscopy  
M. Gornet, MD
2:04  Discussion
Friday October 29, 2021 continued

2:11  The value proposition for new technology. Financial decision-making for adopting new technology. Hospital vs. ASC  A. Bruggeman, MD
2:21  Discussion

Debate: SPECT (single photon emission computed tomography) for MIS spine surgery
2:28  - SPECT plays a critical role in accurate decision-making  H. Malone, MD
2:33  - SPECT is bunk. I’m smart enough with traditional imaging  S. Ryu, MD
2:38  Discussion

2:43  Non-CME Tech Update: Title
Speaker
Supported by: Kuros Biosciences

2:49  Non-CME Tech Update: Title
Speaker
Supported by: Spinal Simplicity

2:55  Discussion

3:00  Refreshment Break & Exhibit Viewing  Exhibit Hall

Concurrent Session 48: Postoperative Pain Control in Minimally Invasive Surgery  Castellana 1
Mods: R. Fessler, MD & F. Phillips, MD

1:20  The opioid epidemic: Where have we been? Where are we now? Where are we going?  A. Bruggeman, MD
1:29  How opioids affect short term and long-term outcomes: The data  A. Veeravagu, MD
1:39  Discussion

1:48  Opioid-free spinal surgery: Is it possible?  JP Mobasser, MD
2:02  What difference has ERAS made on spinal surgery?  D. Hoh, MD
2:12  Discussion

2:17  Panel Discussion: Opioids in spine surgery – international perspectives
Panel: Y. Kotani, MD, PhD; C. Menezes, MD; K. Poelstra, MD, PhD; J. Soriano, MD

2:35  Case Presentation: Patient with chronic narcotic use on 120 MME daily who needs a multiple level fusion. Audience poll  K. Than, MD
2:38  - Operate and get the patient out of pain  V. Chang, MD
2:43  - Optimize the patient’s long-term outcome by weaning him off  C. Miller, MD
2:48  Audience poll: Have opinions changed?

2:51  Non-CME Tech Update: Title
Speaker
Supported by: TrackX
Friday October 29, 2021 continued

2:57 Discussion

3:00 Refreshment Break & Exhibit Viewing

Exhibit Hall

Session 5: Deformity

Gracia Ballroom

Mods: S. Hu, MD & G. Mundis, Jr., MD

3:30 What is the rationale and what is feasible with MIS deformity correction today? K. Radcliff, MD

3:40 Discussion

Debate: Same day vs. staged MIS correction – how to decide

3:45 - Same day is optimal for the patient and system R. Fessler, MD

3:50 - Staged correction is ideal for surgeon performance D. Okonkwo, MD

3:55 Discussion

Debate: Single vs. limited position vs. standard

4:00 - Prone lateral W. Taylor, MD

4:05 - Single position is faster AND cool J. Uribe, MD

4:10 - Single position for the anterior column recon, but my arms are killing me with lateral screws N. Anand, MD

4:15 - Using three positions is still the most effective approach J. Turner, MD

4:20 Discussion

Debate: Reconstruction of the anterior column—which approach is the best when 5/1 is included?

4:27 - ALIF with LLIF rules the roost (with technique video) R. Eastlack, MD

4:32 - ALIF/oblique lateral has the advantage (with OLIF technique video) R. Hynes, MD

4:37 - MIS osteotomies (PCO/PSO) (with technique video) J. Uribe, MD

4:42 - Prone lateral with TLIF at L5-S1 R. Amaral, MD

4:47 Discussion

4:52 Non-CME Tech Update: Title Speaker
Supported by: DePuy Synthes

4:58 Non-CME Tech Update: Title Speaker
Supported by: DePuy Synthes

5:04 Non-CME Tech Update: Title Speaker
Supported by: Company

5:10 Discussion
Friday October 29, 2021 continued

5:14  Keynote Lecture Introduction  L. Tumialán, MD

5:15  Keynote Lecture: What one patient's experience can teach us about ethical opioid prescribing  T. Rieder, PhD

5:40  Discussion

5:45-6:45  Course Reception  Exhibit Hall
Saturday, October 30, 2021

7:00 am On-site Registration  Gracia Ballroom Foyer

7:30-8:20 Non-CME Workshops with Breakfast
Participants are invited to attend the workshop of their choice.

Workshop Title 1  Brera 2
Workshop Faculty
Supported by: Atec Spine

Workshop Title 2  Brera 5
Workshop Faculty
Supported by: NuVasive

Workshop Title 3  Brera 6
Workshop Faculty
Supported by: Zimmer

Session 6: Part 1 - Endoscopic Surgery  Gracia Ballroom
Mods: L. Khoo, MD & B. Kwon, MD

8:25 Welcome

8:30 Intro: 37 F, marathon runner with new L calf pain. Stopped running but has NYC/Boston/London marathon to train for. MRI – LEFT L4-5 HNP [paracentral]  B. Kwon, MD

8:35 “Help! I put my scope into the foramen & nothing looks familiar!” Basics of foraminal anatomy and how not to get lost underwater  C. Kim, MD

8:43 Advanced disc pathology: Transforaminal decompression and discectomy for far-lateral pathology and paracentral and cranially migrated disc - data and technique  JS Kim, MD, PhD

8:51 Interlaminar decompression and discectomy: technique and data using uniportal and biportal techniques  S. Yi, MD

8:59 Discussion

Debate: Should surgeons undertake the learning curve of endoscopic spine surgery?
- Yes, it’s the future and like arthroscopic knee surgery, we’re all going to be doing it someday.  C. Hofstetter, MD
- No, it’s a waste of time, it takes too long, and isn’t as good.  S. Ryu, MD

9:19 Discussion

Complications
Saturday, October 30, 2021 continued

9:31    Yup...it’s the nerve. Fixing complications that occur during endoscopic spine surgery  J. Yue, MD
9:37    Discussion

9:42    Video: Transforaminal endoscopic discectomy, far lateral  C. Hofstetter, MD
9:50    Video: Uniportal hemilaminectomy / discectomy  S. Yi, MD
9:58    Discussion and take-home points

Session 6: Part 2 - MIS Case Debate  Gracia Ballroom
Mods: L. Khoo, MD & B. Kwon, MD

L4-L5 grade 2 spondylolisthesis with stenosis

10:05    Posterior-only TLIF  K. Poelstra, MD, PhD
10:10    MIS endoscopic decompression and fusion  C. Yeung, MD
10:15    Lateral lumbar interbody fusion  L. Pimenta, MD
10:20    Prone lateral  T. Smith, MD
10:25    Discussion

10:35    Refreshment Break with Exhibits  Exhibit Hall

11:00 am-12:10 pm  Concurrent Sessions 7A, 7B, & 7C

Concurrent Session 7A: Free Papers  Gracia Ballroom
Mods: K. Than, MD, & I. Lieberman, MD

11:00    Paper #46: Lateral decubitus single-position anterior-posterior (AP) fusion shows equivalent results to minimally invasive transforal lumbar interbody fusion at one-year follow-up  
Kimberly Ashayeri, Brett Braly, J. Alex Thomas, Carlos Leon, Ivan Cheng, Brian Kwon, Mark Medley, Themistocles Protopsaltis, Aaron Buckland

11:04    Paper #47: Comparison of early “prone lateral” experience vs “PTP” proceduralization: Learnings, efficiencies, and peri-op outcomes  
Kelli Howell, Tyler Smith, Antoine Tohmeh, Bryan Lee, Gene Massey, Isaac Moss, David Schwartz, Samuel Joseph, John Pollina

11:08    Paper #48: Saphenous SSEP monitoring of femoral nerve health during lateral lumbar interbody fusion (LLIF)  
Kelli Howell, Antoine Tohmeh, Cheri Somers

11:12    Paper #49: Indirect decompression in lateral lumbar interbody fusion. Indications and potential limitations. Assessment in effectiveness of fulfillment of a check list on preoperative considerations  
Hazem Nicola, Bertha Loaiza

11:16    Discussion
Saturday, October 30, 2021 continued

11:24  Paper #50: Transition from dual-position to single-position procedure in lateral interbody fusion (LLIF) and percutaneous pedicular screws (PPS) navigation-assisted minimally invasive technique in treatment of lumbar degenerative disease (LDD). Operative and clinical
Hazem Nicola, Bertha Loaiza, Duval Molina, Esteban Holguin

11:28  Paper #51: Blade-based retraction allows safe oblique pre-psoas approaches despite inadequate oblique corridors and high-riding psoas
Chirag Berry, Punit Aghera, Dinesh Thawrani, Fadi Makhoul, Krishna Reddy

11:32  Paper #52: Comparison of PTP and LLIF techniques for segmental lordosis correction
Rodrigo Aral, Gabriel De Pokorny, Rafael Moriguchi, Fernando Marcelino, Marcelo Yozo, Igor Barreira, Daniel Arnoni, Luiz Pimenta

11:36  Paper #53: Intraoperative learning curve on navigated prone lateral lumbar interbody fusion: pearls and pitfalls
Alfredo Guiroy, Harry Shufflebarger, Jahangir Asghar, David Yam, Ashish Patel

11:40  Discussion

11:48  Paper #54: Combined OLIF and transmuscular staged correction of osteomyelitis and discitis
Richard Hynes

11:52  Paper #55: The Lateral in the prone (LIP) position – case series of novel indications, nuances, and outcome
Matthew Helton, Marcus Stephens, Kelsey Hundley, Noojan Kazemi

11:56  Paper #56: Single-position transpsoas corpectomy and instrumentation in the thoracolumbar spine for different clinical scenarios
Alfredo Guiroy, Cristiano Menezes, J. Alex Thomas, Jahangir Asghar

12:00  Paper #57: Comparison of patient preference, understanding, and sentiment for minimally invasive vs. open spine surgery
Christopher White, Akshar Patel, Liam Butler, Uchechukwu Akiri, Brandon Yeshoua, Jeremy Steinberger, Suel Cho, Jun Kim

12:04  Discussion
Saturday, October 30, 2021 continued

Concurrent Session 7B: Free Papers

Castellana 1

Mods: C. Menezes, MD & W. Taylor, MD

11:00  Paper #58: Anterior longitudinal ligament release from a posterior approach: an alternative to three-column osteotomy
        Nathan Han, Nathan Pratt, Farooq Usmani, Erik Hoyman, Salazar Jones, Parker Johnsen, Alexandra Thomson, Ivan Ye, Timothy Chryssikos, Ashish Sharma, Joshua Olexa, Daniel Cavanaugh, Eugene Koh, Kendall Buraimoh

11:04  Paper #59: Implementation of an enhanced recovery after surgery (ERAS) program for patients undergoing same-day outpatient elective minimally invasive transforimal lumbar interbody fusion (MIS TLIF)
        Samuel Joseph, Uhuru Smith, Ashley Urso

11:08  Paper #60: Decision-making factors leading to fusion vs. decompression for one-level degenerative spondylolisthesis
        Kyle Morse, Michael Steinhaus, Patawut Bovonratwet, Gregory Kazarian, Catherine Himo Gang, Avani Vaishnav, Virginie Lafage, Renaud Lafage, Sravisht Iyer, Sheeraz Qureshi

11:12  Paper #61: Using an electrical conductivity loop control system for automated breach prevention during robotic power drilling of bone
        Larry Khoo, John Willis, Elie Saghbini, Randall Betz, Ciaran Bolger, Hee Kit Wong, Thibault Chandanson, Stephane Bette, Jimmy DaSilva, Richard Assaker, Maurice Bourlion, Helton Delfino, Andre Kaelin, Guillaume Morel

11:16  Discussion

11:24  Paper #62: Robotic navigation-assisted K-wireless pedicle screw times, accuracy, and reasons for conversion in adult degenerative spine surgery
        Fedan Avrumova, Kyle Morse, Madison Heath, Roger Widmann, Darren Lebl

11:28  Paper #63: The impact of computer-assisted navigation on charges and readmission in lumbar spinal fusion
        Ula Isleem, Calista Dominy, Justin Tang, Varun Arvind, Brian Cho, Christopher White, Sara Pasik, Suel Cho, Jun Kim

11:32  Paper #64: P-15 peptide is inferior to demineralized bone matrix for spine fusion in a rat model
        Deeptee Jain, Don Blaskiewicz, Gregory Mundis, Jiawei He, Rema Oliver, Vedran Lovric, Will Walsh, Frank Vizesi

11:36  Paper #65: Reoperation following lumbar discectomy for cauda equina syndrome: Retrospective review
        Landon Bulloch, Brandon Huggins, Ryan Berger, Dom Coric, Bruce Darden, II, MD, Alfred Rhyne
Saturday, October 30, 2021 continued

11:40 Discussion

11:48 Paper #66: Patient satisfaction reviews for 967 spine neurosurgeons  
Nitin Agarwal, Arjun Gupta, Radhika Gupta, Michael White, Vsi Reddy, Yue-Fang Chang, Prateek Agarwal, Nima Alan

11:52 Paper #67: What is a better value for your time, ACDF or CDA?  
Austen Katz, Junho Song, David Essig, Jeff Silber, Sohrab Virk

11:56 Paper #68: Three-year conversion rate of lumbar microsurgical decompression to lumbar fusion  
Michael Krzyskowski, Nitin Khanna, Shalini Tallraju, Krish Khanna

12:00 Paper #69: Clinical effect of chemonucleolysis with condoliase for lumbar disc herniation  
Takashi Toyoda, Yoshihisa Kotani, Atsushi Ikeura, Takanori Saito

12:04 Discussion

Concurrent Session 7C: Young Surgeons Free Papers & Panel  
Castellana 2  
Mods: K. Foley, MD & I. Moss, MD

11:00 Paper #70: A matched cohort study of cage subsidence of porous titanium vs. polyetheretherketone (PEEK) for lateral lumbar interbody fusion  
Hansen Deng, Lena Vodovotz, Nima Alan, Nitin Agarwal, Alp Ospinar, Adam Kanter, Kojo Hilton, David Okonkwo

11:04 Paper #71: Metal-on-metal vs. metal-on-plastic artificial discs in two-level anterior cervical disc replacement: A meta-analysis with follow-up of 5 years or more  
Daniel Coban, Michael Pompliano, Stuart Changoor, Stephen Saela, Kumar Sinha, Ki Hwang, Michael Faloon, Arash Emami

11:08 Paper #72: Is there a difference in screw accuracy, robot time per screw, robot abandonment, and radiation exposure between the Mazor X and the Renaissance? A propensity-matched analysis of 1179 robot-assisted screws  
Nathan Lee, Justin Mathew, Venkat Boddapati, Paul Park, Eric Leung, Joseph Lombardi, Ronald Lehman

11:12 Paper #73: A novel fusion classification system for the advent of bioactive interbody implants  
Robert Eastlack, Hani Malone, Martin Collier, Hazem Elsebaie, Gregory Mundis, Bahar Shahidi, Behrooz Akbarnia

11:16 Discussion
Saturday, October 30, 2021 continued

11:24  Paper #74: CT Hounsfield units as a predictor of reoperation and graft subsidence following standalone and multi-level lateral lumbar interbody fusion  
*Nima Alan, Daipayan Guha, Harry Mushlin, Nallmai Muthiah, Lena Vodovoz, Nitin Agarwal, Kojo Hilton, David Okonkwo, Adam Kanter*

11:28  Paper #75: Telemedicine in spine patients: Utilization and satisfaction remain high even after COVID-19 lockdown  
*Patawut Bovonratwet, Jung Kee Mok, Karim Shafi, Jes Dowdell, Evan Sheha, Sheeraz Qureshi, Sravisht Iyer*

11:32  Paper #76: The safety and efficacy of stand-alone lateral lumbar interbody fusion for adjacent segment disease in a cohort of 44 patients  
*Elliot Pressman, Ryan Screven, Gaut Rao, Thomas Freeman, Puya Alikhani*

11:36  Paper #77: Implementation of AR for the key steps in MIS TLIF  
*Fabian Sommer, Sertac Kirnaz, Lynn McGrath, Jacob Goldberg, Branden Medary, Roger Härtl*

11:40  Discussion

*Alexander Spiessberger, Nicholas Dietz, Basil Gruter, Justin Virojanapa, Peter Hollis*

11:52  Paper #79: Comparative RCT study between endoscopic and open decompression for lumbar spinal stenosis: Preliminary outcomes in 38 patients with 6-months follow-up  
*Junghoon Kim, Youngjin Kim, Woojung Lim, Kyeongsik Ryu, Jinsung Kim*

11:56  Paper #80: Supra-iliac or trans-iliac endoscopic access to L5-S1: Prevalence of anatomic variants and a novel radiographic method for predicting the preferred approach  
*Nebiyu Osman, Sagar Gulati, Ceron Kia, Scott Mallozzi, Mark Cote, Said Osman, Isaac Moss*

12:00 pm  Paper #81: Microscopic tubular and full-endoscopic lumbar discectomy for massive disc herniation causing cauda equina syndrome: A retrospective case series  
*Jared Wilcox, Aysha Alsahlawi, Oliver Lasry, Jeff Golan*

12:04  Discussion

12:10  Lunch with Exhibits – Last Chance for Giveaway!
Saturday, October 30, 2021 continued

Session 8: Part 1 - Ambulatory Surgical Centers
Mods: J. Uribe, MD & P. Whang, MD

12:45  37 F marathon runner with new L calf pain. Stopped running but has to train for NYC marathon. MRI – L4-5 spondylolytic spondylolisthesis. Your hospital just shut down all in-patient surgery due to COVID restrictions but you have privileges at your ASC  
B. Kwon, MD

12:50  When do you know you’re ready to take cases to ASC? Is it all about procedural time?  
L. Khoo, MD

12:58  Regional anesthesia for lumbar surgery?  
A. Sharan, MD

1:06  Who are the critical team members to successful ASC surgery?  
K. Poelstra, MD, PhD

1:14  Discussion

1:22  Do the economics of ASCs make sense? For whom?  
K. Foley, MD

1:30  Role of ASCs during the COVID-19 pandemic. Did it help the needs of our patients? “As we learned in 1941, national emergencies can create strange bedfellows”  
C. Yeung, MD

1:38  Discussion

Session 8: Part 2 – Ambulatory Surgical Centers
Mods: L. Tumialán, MD & C. Yeung, MD

Debate: This patient needs to be done in a real hospital or ASC is adequate

1:46  L3-4 LLIF for PJF above previous L4-S1 fusion  
J. Godzik, MD

1:50  Agree  
B. Kwon, MD

1:55  Disagree  
I. Lieberman, MD

2:00  Discussion

Debate: This patient is the ideal candidate for an ASC and will be better off because of it

2:05  2-level ACDF for myelopathy  
K. Than, MD

2:08  Agree  
S. Qureshi, MD

2:13  Disagree  
P. Whang, MD

2:18  Discussion

2:23  Complications: That revision microdiscectomy was supposed to be a piece of cake, why is there CSF everywhere? And why does my anesthesiologist look so nervous? What to do when your 1-hour operation is now 3 hours long  
I. Moss, MD

2:31  Complications: ASA 3 in the ASC? Sure...  
C. Kim, MD

2:39  Discussion

2:44  Video: Same-day awake fusion  
A. Sharan, MD

2:54  Questions

3:00  Adjourn