

8TH ANNUAL INTERNATIONAL SPINAL DEFORMITY SYMPOSIUM (ISDS)

DECEMBER 2-3, 2022 | NEW YORK, NY

Friday, December 2, 2022

7:15 am	Registration Continental Breakfast and Exhibit Viewing	Convene Level 2 Foyer
Session 1:	45-degree Adult Degenerative Lumbar Scoliosis, Spinal Stenosis and Mild Sagittal Malalignment with Moderate Thoracic Kyphosis: What is the Best Way to Treat and is an UT or LT UIV Best? <i>Moderator: F. Schwab, MD</i>	Forum Room
8:00	Welcome	
8:05	Introduction to Problem, Recent Literature Review, & Analysis and Decision-making Based on Clinical and Radiographic Presentation Step-by-step Surgical Treatment:	Jonathan Oren, MD
8:15	Option #1: Fusion to UT is more reliable and a better approach	Greg Mundis, MD
8:23	Option #2: Fusion ending LT ideal: faster, safer, better approach	Jeff Gum, MD
8:31	Option #3: Hybrid or MIS-only is a great option with less morbidity	Dean Chou, MD
8:39	Discussion	
8:49	Post-op Considerations, Complications, Return to Normal Function, and Outcomes	Virginie Lafage, PhD
8:57	Tips and Pearls	Frank Schwab, MD
9:05	Case Discussion	<i>Mod: F. Schwab, MD</i>
Session 2:	C-T PJK Following a Scheuermann's Kyphosis PSF with a UIV of T3 in a Middle-aged Male with Mild Cervical DDD; How to Correct and How Cephalad does One have to Go? <i>Moderator: HJ Kim, MD</i>	Forum Room
9:25	Introduction to Problem, Recent Literature Review, & Analysis and Decision-making Based on Clinical and Radiographic Presentation Step-by-step Surgical Treatment:	Paul J. Park, MD
9:35	Option #1: Traction First and Then I would Select a UIV	Lee Tan, MD
9:43	Option #2: 3CO or no? How to decide	Alan Daniels, MD
9:51	Option #3: Extension to C7/T1 or C2? Which UIV better and why?	Zeeshan Sardar, MD
9:59	Discussion	
10:09	Post-op Considerations, Complications, Return to Normal Function, and Outcomes	Eric Klineberg, MD
10:17	Tips and Pearls	Han Jo Kim, MD
10:25	Case Discussion	<i>Mod: HJ Kim, MD</i>
10:45	Refreshment Break and Exhibit Viewing	Foyer

Session 3:	Middle Aged Female with Prior Lumbar Congenital Fusion-in-Situ now with Progressive Deformity and Combined Coronal and Sagittal Malalignment	Forum Room
	<i>Moderator: L. Lenke, MD</i>	
11:10	Introduction to Problem, Recent Literature Review, & Analysis and Decision-making Based on Clinical and Radiographic Presentation	Sam Cho, MD
	<i>Step-by-step Surgical Treatment:</i>	
11:20	Option #1: ASF/PSF Approach is best	Sig Berven, MD
11:28	Option #2: PSF Alone with PCO's will suffice	Eric Klineberg, MD
11:36	Option #3: a 3CO will be needed for optimal correction	Kal Kebaish, MD
11:44	Discussion	
11:54	Post-op Considerations, Complications, Return to Normal Function, and Outcomes	Marinus DeKleuver, MD
12:02 pm	Tips and Pearls	Larry Lenke, MD
12:10	Case Discussion	Larry Lenke, MD
12:30	Lunch Break	Foyer
Session 4:	Non-CME Presentations	Forum Room
1:00	Intelligence-Based Medicine: How AI and Enabling Technologies Are Changing the Way We Practice Spine Surgery <i>Supported by Medtronic</i>	Christopher Ames, MD & Alan Daniels, MD
1:30	Latest Evolution in Spinopelvic Fixation <i>Supported by SI-BONE</i>	David W. Polly Jr., MD
2:00	C360: Correction, Alignment and Balance in the Cervical Spine <i>Supported by NuVasive</i>	Tyler Koski, MD
<i>Note: Session 5 & 6 are planned by the chairs/directors but not counted in CME hours</i>		
Session 5:	What is the best way to interbody fuse mid-lower lumbar spine: ALIF, LLIF, TLIF with Primary Degenerative Lumbar Spine with stenosis and sagittal malalignment due to loss of distal Lumbar Lordosis after a previous 1 or 2 level fusion? Incorporating Technology for optimal solutions.	Forum Room
	<i>Moderator: R. Lehman, MD</i>	
2:30	Introduction to Problem, Recent Literature Review, & Analysis and Decision-making Based on Clinical and Radiographic Presentation	David Polly, MD
	<i>Step-by-step Surgical Treatment:</i>	
2:40	Option #1: Tried and True: I can get all my correction from ALIF: Especially with patient specific implants?	Chris Ames, MD
2:48	Option #2: A true Deformity TLIF can address realignment parameters with appropriate preoperative planning and intraoperative execution	Joe Lombardi, MD
2:56	Option #3: An all lateral/oblique approach is the best of both worlds. Join the revolution?	Neel Anand, MD

3:04	Discussion	
3:14	Post-op Considerations, Complications, Return to Normal Function, and Outcomes	Joe Osorio, MD
3:22	Tips and Pearls	Dan Sciubba
3:30	Case Discussion	<i>Mod: R. Lehman, MD</i>
3:50	Refreshment Break and Exhibit Viewing	Foyer
Session 6:	Special Session	Forum Room
	<i>Moderator: C. Shaffrey, MD</i>	
4:10	Introduction of Keynote Speaker	Chris Shaffrey, MD
4:15	Keynote Lecture	Serena Hu, MD
4:35	Discussion	
4:45	Role of multidisciplinary panels, predictive modeling, dedicated OR teams, and postoperative pathways to optimize ASD surgical outcomes in 2023 and beyond	Rajiv Sethi, MD
4:57	Future of AI and predictive modeling in ASD surgery: European perspective	Ferran Pellise, MD
5:09	Future of AI and Predictive Modeling in ASD Surgery: US Perspective	Chris Ames, MD
5:21	Discussion	
5:30	Adjourn	

Saturday, December 3, 2022

7:00 am	Registration Continental Breakfast and Exhibit Viewing	Convene Level 2 Foyer
7:30	Concurrent Breakout Case Discussions <i>Participants are invited to attend the Case Discussion of their choice</i>	
	Breakout #1: IONM and Neurologic Issues in Deformity Surgery <i>Mod: L. Lenke, MD</i> <i>Panel: Drs. M. Gupta, S. Lewis, M. DeKleuver, D. Sciubba, F. Pellise, D. Polly</i>	Forum Room
	Breakout #2: Primary ASD Surgery <i>Mod: F. Schwab, MD</i> <i>Panel: Drs. J. Smith, Z. Sardar, P. Passias, D. Chou, R. Sethi, N. Anand</i>	Hub One
	Breakout #3: Revision ASD Surgery <i>Mod: C. Shaffrey, MD</i> <i>Panel: Drs. S. Hu, E. Klineberg, S. Cho, K. Kebaish, G. Mundis, J. Gum</i>	Hub Two
8:25	Walking Break to General Session	

Session 7:	Adult Spinal Deformity Patient with Marked Implant Failure/ Pseudarthrosis in the Lower Lumbar/Lumbosacral Region and Malalignment: How to Revise and Strategies to Prevent this from happening	Forum Room
	<i>Moderator: J. Smith, MD</i>	
8:30	Introduction to Problem, Recent Literature Review, & Analysis and Decision-making Based on Clinical and Radiographic Presentation	Andrew Chan, MD
	Step-by-step Surgical Treatment:	
8:40	Option #1: The patient needs more metal: Use of supplemental rods to revise instrumentation failure and to prevent it from happening in the first place	Munish Gupta, MD
8:48	Option #2: Supplemental rods are only delaying failure if bony fusion is not achieved: Grafting and osteobiologics strategies to salvage pseudarthrosis and prevent its occurrence	Steve Lewis, MD
8:56	Option #3: Appropriate alignment is critical for promoting solid arthrodesis and construct durability: strategies to align the malaligned ASD patient with pseudarthrosis and implant failure	Tyler Koski, MD
9:04	Discussion	
9:14	Post-op Considerations, Complications, Return to Normal Function, and Outcomes	Peter Passias, MD
9:22	Tips and Pearls	J. Smith, MD
9:30	Case Discussion	<i>Mod: J. Smith, MD</i>
9:50	Refreshment Break and Exhibit Viewing	Foyer

Session 8: Concurrent Free Paper Session 8 **Hub One**
Moderator: J. Smith, MD

10:25	Vertebral bone quality score independently predicts proximal junctional kyphosis and/or failure following adult spinal deformity surgery <i>Cathleen C. Kuo, BS, Mohamed A.R. Soliman, MD MSc PhD, Alexander O. Aguirre, BS, Nicco Ruggiero, BS, Marissa Kruk, BS, Asham Khan, MD, Moleca M. Ghannam, MD, Neil D. Almeida, MD, Patrick K. Jowdy, MD, David E. Smolar, MD, John Pollina, MD, Jeffrey P. Mullin, MD MBA</i>
10:29	Lateral lumbar interbody fusion with percutaneous pedicle screw fixation: Are we getting the sagittal alignment right? <i>Breana R. Siljander, MD, Nicholas R. Dick, BS, Austin M. DeBoer, BS, Jason J. Haselhuhn, DO, Paul Brian O. Soriano, MD, MBA, J. Alex Thomas, MD, Jonathan N. Sembrano, MD</i>
10:33	UIV within 3 levels of the thoracic apex is the most significant risk factor for proximal junctional kyphosis in Lenke type 5 and 6 adolescent idiopathic scoliosis patients <i>Josephine R. Coury, Zeeshan M. Sardar, Yong Shen, Mark Ren, Lawrence G. Lenke, Harms Study Group</i>
10:37	Discussion
10:43	Does UIV level influence the development of PJK/PJF in patients undergoing circumferential minimally invasive surgery (CMIS) for adult spinal deformity (ASD)? A 13-year analysis with minimum 2-year follow-up <i>Neel Anand MD, Jerry Robinson MD, David Gendelberg MD, Andrew Chung DO, Jose Jimenez-Almonte MD, Babak Khandehroo MD, Sheila Kahwaty PA-C</i>
10:47	Correcting ASD patients to normative alignment results in no functional benefit but more PJK and PJF <i>Themistocles S. Protopsaltis, MD, Fares Ani, MD, Alexandra Soroceanu, MD MPH, Renaud Lafage, MS, Han Jo Kim, MD, Eaman Balouch, MD, Zoe Norris, MD, Justin S. Smith, MD PhD, Alan Daniels, MD, Eric</i>

	<i>O. Klineberg, MD, Christopher Ames, MD, Robert Hart, MD, Shay Bess, MD, Christopher Shaffrey, MD, Frank J. Schwab, MD, Lawrence G. Lenke, MD, Virginie Lafage, PhD, Munish Gupta, MD, and the International Spine Study Group (ISSG)</i>
10:51	The influence of threaded implant design and manufacturing on osseointegration in a large preclinical animal model <i>David W. Polly Jr., MD, Michael J. Gardner, MD, Matt Pelletier, PhD, Dan Wills, BSc Vet, James Crowley, BSc Vet, Tian Wang, PhD, Ian Bailey, Scott Yerby, PhD, William R. Walsh, PhD</i>
10:55	Discussion
11:01	Outcomes and complications after anterior lumbar interbody fusion with percutaneous pedicle screws for grade II/III isthmic spondylolisthesis <i>Brandon B. Carlson MD, MPH, Joshua T. Bunch MD, Andre M. Jakoi MD, Peter Derman MD, Jacob Birlingmair MD, Mauro Tavares Junior MD</i>
11:05	Does peri-operative PTH analogues in osteoporotic patients help increase bone density, and decrease mechanical complications – minimum 2-year radiological study measuring Hounsfield units <i>Neel Anand MD, Jerry Robinson MD, David Gendelberg MD, Andrew Chung DO, Jose Jimenez-Almonte MD, Babak Khandehroo MD, Sheila Kahwaty PA-C</i>
11:09	What is the prevalence and prognosis of coronal malalignment following LLIF for adult spinal deformity with Qiu type A coronal alignment? <i>Andrew K. Chan, MD, Praveen V. Mummaneni, MD, MBA, Paul Park MD, Juan S. Uribe, MD, Jay D. Turner MD, PhD, Vivian P. Le, MPH, Robert K. Eastlack, MD, Richard G. Fessler, MD, PhD, Khoi D. Than, MD, Kai-Ming Fu, MD, PhD, Michael Y. Wang, MD, Adam S. Kanter, MD, David O. Okonkwo, MD, PhD, Pierce D. Nunley, MD, Neel Anand, MD, Gregory M. Mundis, Jr., MD, Peter G. Passias, MD, Shay Bess MD, Christopher I. Shaffrey, MD, Dean Chou, MD, and the International Spine Study Group</i>
11:14	Discussion

Session 9: Concurrent Free Paper Session 9

Forum Room

Moderator: M. Kelly, MD

10:25	Development of a spinal deformity surgical checklist: An SRS safety and value committee survey investigation <i>Rafael De la Garza Ramos; Justin K Scheer; Nabil Matmati; Reza Yassari; Lloyd A Hey; Douglas C Burton; Marinus de Kleuver; Christopher P Ames; Vijay Yanamadala</i>
10:29	Prospectively measuring radiation exposure to spine-focused neurosurgeons in real time through dosimetry <i>Daksh Chauhan, BS, Hasan S. Ahmad, BS, Shikha Singh, BS, Arjun Patel, BA, Ahmed AlBayar, MD, William C. Welch, MD, Jang W. Yoon, MD, MSc</i>
10:33	Rod fractures in thoracolumbar fusions to the sacrum/pelvis for adult symptomatic lumbar scoliosis: Long-term follow-up of a prospective multicenter cohort of 160 patients <i>Juan Pablo Sardi, MD, Bruno Lazaro, MD, Justin S. Smith, MD, PhD, Michael P. Kelly, MD, Elizabeth L. Yanik, PhD, Brian Dial, MD, Jeffrey Hills, MD, Munish Gupta, MD, Christine R. Baldus, RN, MHS, Chun Po Yen, MD, Virginie Lafage, PhD, Christopher P. Ames, MD, Shay Bess, MD, Frank Schwab, MD, Christopher I. Shaffrey, MD, Keith H. Bridwell, MD</i>
10:37	Discussion
10:43	How to use preoperative pelvic obliquity, leg length discrepancy, and lower extremity compensation as an intraoperative tool to predict postoperative coronal alignment for adult spinal deformity with 2 years follow up <i>Nathan J. Lee MD, Michael Fields MD, Fthimnir Hassan BS, Christopher Mikhail MD, Stephen Stephan MD, Joshua Bakhsheshian MD, Andrew Platt MD, Joseph M. Lombardi MD, Zeeshan M. Sardar MD, Ronald A. Lehman MD, Lawrence G. Lenke MD</i>

10:47	Unplanned reoperation and readmission following adult spinal deformity surgery: An analysis over 8,500 spinal deformity patients <i>Daniel Gallagher, William Huffman, Kevin Bondar, Jacob Harris, Rex Marco, Paul Holman, <u>Comron Saifi</u></i>
10:51	Improved outcomes in complex spine surgery with peri-operative acute pain service: A retrospective cohort study <i>Lauren E. Stone, MD; Seung Lee, MD; Engy Said, MD; Rodney Gabriel, MD; Joseph A. Osorio, MD PhD</i>
10:55	Discussion
11:01	Height gain following correction of adult spinal deformity: Magnitude, location and drivers of height gain and association with patient satisfaction <i>Bassel G. Diebo, MD; Daniel Alsoof, MBBS; Zachary Tataryn, MD; Renaud Lafage, MS; Robert A. Hart, MD; Peter G. Passias, MD; Christopher P. Ames, MD; Justin K. Scheer, MD; Stephen J. Lewis, MD, FRCSC; Christopher I. Shaffrey, MD; Douglas C. Burton, MD; Vedat Deviren, MD; Breton G. Line, BS; Alex Soroceanu, MPH; D. Kojo Hamilton, MD, FAANS; Eric O. Klineberg, MD; Gregory M. Mundis, MD; Han Jo Kim, MD; Jeffrey L. Gum, MD; Justin S. Smith, MD, PhD; Juan S. Uribe, MD; Michael P. Kelly, MD; Khaled M. Kebaish, MD; Munish C. Gupta, MD; Pierce D. Nunley, MD; Robert K. Eastlack, MD; Richard Hostin, MD; Themistocles S. Protopsaltis, MD; Lawrence G. Lenke, MD; Frank J. Schwab, MD; Shay Bess, MD; Virginie Lafage, PhD; Alan H. Daniels, MD; International Spine Study Group</i>
11:05	Validation of freehand pedicle screw technique in a deformity trained spine surgeon within the first two years of practice <i>Maxon Bassett, BS, Patrick Young, MD, <u>Richard Menger, MD MPA</u></i>
11:09	Can AI identify patterns of complex adult spinal deformity with distinct perioperative outcomes? <i>Renaud Lafage; Mitchell S. Fourman; Bess; Burton; Daniels; Gupta; Hostin; Kebaish; Ames; Kelly; Kim; Klineberg; Lenke; Lewis; Passias; Protopsaltis; Shaffrey; Smith, Justin; Schwab; Virginie Lafage; ISSG</i>
11:14	Discussion

11:20 Lunch Break

Session 10: Non-CME Presentations

Forum Room

11:50	Robotically Navigated Procedures with Focus on Advanced Lateral and Deformity Procedures Where Screw and Interbody Spacer Placement are Critical <i>Supported by Globus Medical</i>	Sheeraz Qureshi, MD
12:20 pm	The Value of Integrating AI-driven Surgical planning and Patient-specific Implants into Your Adult Deformity Practice <i>Supported by Medtronic</i>	Larry Lenke, MD
12:50	How Personalized aprevo® Interbody Implants and Plans are Designed to Help Achieve Patient-Specific Alignment Goals <i>Supported by Carlsmed</i>	Joseph Osorio, MD, PhD

Note: Session 11 is planned by the chairs/directors but not counted in CME hours

Session 11: Best Paper & Quick Tips

Forum Room

	<i>Mod: L. Lenke, MD</i>	
1:20	Best Paper Award 7-Minute Tips by the Co-chairs and Directors of ISDS	
1:22	Tip #1: Bone Graft Delivery Device:	Han Jo Kim, MD
1:29	Tip #2: Quad Iliac and Accessory Rods for Pelvic Fixation	Justin Smith, MD

1:36	Tip #3: Modified Decompression Technique	Ron Lehman, MD
1:43	Tip #4: T4-L1PA for Sagittal Alignment Targeting	Mike Kelly, MD
1:51	Discussion	
1:58	Tip #5: Proximal Tethering to Avoid PJK	Frank Schwab, MD
2:05	Tip #6:	Chris Shaffrey, MD
2:12	Tip #7: Low Lumbar “Sandwich” PSO	Larry Lenke, MD
2:19	Discussion	
2:25	Refreshment Break	
Session 12:	Young Adult Balanced Idiopathic Curve – Should We Recommend Surgery or Not?	Forum Room
	<i>Moderator: M. Kelly, MD</i>	
2:55	Introduction to Problem, Recent Literature Review, & Analysis and Decision-making Based on Clinical and Radiographic Presentation	Ferran Pellise, MD
	<i>Step-by-Step Surgical Treatment:</i>	
3:05	Option #1: Nonoperative management	Laurel Blakemore, MD
3:13	Option #2: Posterior selective thoracic fusion	Stu Hershman, MD
3:21	Option #3: Anterior posterior double major fusion	Zeeshan Sardar, MD
3:29	Discussion	
3:39	Case Discussion	<i>Mod: M. Kelly, MD</i>
4:05	Raffle Prize Drawing & Adjourn	