

SMISS Annual Forum '24

September 5–7, 2024 | The Bellagio, Las Vegas, NV

Thursday, September 5

Session 1 Revisiting the MIS TLIF 20 Years Later DaVinci Ballroom

5:00 pm	Welcome & Introduction	Sheeraz Qureshi
	My Walk Down Memory Lane with MI-TLIF—What Was Hard, What Has Changed and What Needs to Change	Moderator: Sheeraz Qureshi
5:05	School of Hard Knocks: MIS TLIF lessons learned over the past 2 decades	Frank Phillips
5:13	Technical refinement to MIS TLIF over the past 2 decades	JP Mobasser
5:21	The Evidence for MIS TLIF Today and Tomorrow	Stephen Ryu
5:29	Discussion	
	Looking Ahead—What Does the Future Hold for MI-TLIF	Moderator: Hani Malone
5:37	Where does the MIS TLIF go from here? The new technology guiding this procedure	Sheeraz Qureshi
5:45	The Future is Endoscopic: How I foresee my endoscopic TLIF practice evolving	Mike Wang
5:53	Discussion	
	Perfecting the MI-TLIF	Moderator: Paul Park
6:01	Maximizing Lordosis	Luis Tumialan
6:08	Ensuring Fusion	Jeremy Steinberger
6:15	Becoming Less Invasive?	Choll Kim
6:22	Discussion	
	TLIF in the ASC	Moderator: Paul Park
6:30	Preoperative planning for TLIF: The implications of patient-specific anatomy	Muhammad Abd-El-Barr
6:37	ESP Blocks & Principles of ERAS	Prashant Rao
6:44	Leveraging awake spine surgery to expand outpatient possibilities	Raymond Gardocki
6:51	Discussion	
7:00	Adjourn	

Friday, September 6

7:30–8:20 am Company Supported Breakfast Workshops (Non-CME)

How Navigation, Robotic Guidance Systems, Data & AI Have EnAiBLED My Approach to MIS

Supported by: Medtronic

Neel Anand

Room: Raphael 1

Integrated Technologies Delivering SmartGuidance

Sheeraz Qureshi

Supported by: Stryker

Room: Raphael 2

Treating Your Patients Through the Continuum of Care

Hani Malone

Supported by: Orthofix / SeaSpine

Room: Raphael 3

Session 2 Lateral and Deformity

DaVinci Ballroom

8:25 am	Welcome	Frank Phillips
	Lateral: This Is the Best Position	Moderator: Frank Phillips
8:30	Lateral Position Trans-psoas	Greg Mundis
8:37	Prone Lateral	Isaac Moss
8:44	OLIF	Richard Hynes
8:51	Prone Lateral for Revision Surgery	Juan Uribe
8:58	Discussion	
9:05	What Are the Learning Curves Encountered in Lateral Surgery?	Luis Pimenta
9:13	Factors to Consider When Deciding on Your Approach Side	Jean-Christoph Leveque
9:20	Vascular Injuries and Bowel Injuries	Varun Singh
9:27	Neuromonitoring in Anterolateral Lumbar Interbody Fusion—How Should We React to Signal Changes?	Adam Kanter and Dan Vitantonio
9:34	Discussion	
	Deformity	Moderator: Adam Kanter
9:41	Minimally Invasive vs. Maximally Effective	Jahangir 'John' Asghar
9:48	Addressing the Focal Problem vs. Correcting the Larger Deformity	Venu Nemani
9:55	Safety and Protocols: Overlap Between the Deformity and MIS Degen World?	Robert Eastlack
10:02	Discussion	
10:10	Luiz Pimenta, MD Lateral Spine Surgery Innovation Award	Pat Miles, ATEC CEO and Luiz Pimenta, MD

10:15 am Refreshment Break / Eposter Viewing with Exhibits**Tower Ballroom****Concurrent Session 3 Free Papers****DaVinci Ballroom****10:45 am–12:15 pm Moderators: Alex Butler & Brandon Hirsch**

10:45	10:49	Paper 1: Effect of Neck Pain Severity on Patient-Reported Outcome Measurement Information System Outcomes Following Cervical Disc Replacement for Herniated Disc – John Sencaj
10:49	10:53	Paper 2: A History of Trauma Preceding Cervical Disc Replacement May Lead to Worse Postoperative Patient Reported Outcomes: A Matched Cohort Analysis – Adin Erlich
10:53	10:57	Paper 3: Twenty-four month assessment of arthrodesis following ACDF at three contiguous levels from subjects enrolled prospectively in the FUSE IDE Clinical Trial – Pierce Nunley
10:57	11:01	Paper 4: Cervical Disc Arthroplasty for the Treatment of Adjacent Segment Disease after Anterior Cervical Discectomy and Fusion – Alexander Satin
11:01	11:06	Discussion
11:06	11:10	Paper 5: Temporal Trends of Improvement in Patients With Cervical Spondylotic Myelopathy After Anterior Cervical Discectomy and Fusion – Adin Erlich
11:10	11:14	Paper 6: Cervical Muscle Size and Sagittal Alignment in the Symptomatic Cervical Spine – Alex Nagan
11:14	11:18	Paper 7: Temporal Trends of Improvement in Patients with Cervical Radiculopathy After Anterior Cervical Surgery – Adin Erlich
11:18	11:22	Paper 8: Tubular versus Unilateral Biportal Endoscopic Lumbar Decompression for Obese Patients – Gregory Snigur
11:22	11:27	Discussion
11:27	11:31	Paper 9: Comparing Long-Term Outcomes of Minimally Invasive Posterior Cervical Foraminotomy (MI-PCF) Performed in Ambulatory Surgery Centers versus Outpatient Hospital Settings – Neil Patel
11:31	11:35	Paper 10: Safety Assessment of Performing Same-Day Outpatient Three and Four Level Anterior Cervical Discectomy and Fusion – Samuel Joseph
11:35	11:39	Paper 11: A Multicenter Evaluation of Pre and Postoperative Malalignment in Fusions from L4-S1 – How Well Are Spine Surgeons Doing at Hitting Segmental Alignment Targets? Venu Nemani
11:39	11:43	Paper 12: Outcomes of One Versus Two level MIS decompression with Adjacent Level Stenosis – Tejas Subramanian
11:43	11:48	Discussion
11:48	11:52	Paper 13: Impact of Biomechanical Characteristics of Lumbar Disk Arthroplasty Implants on Clinical Outcomes: A Multi-Institutional Analysis of 179 Patients – Anil Mahavadi
11:52	11:56	Paper 14: Correlating Preoperative Pfirrmann Grading with Multifidus Muscle Characteristics using a Novel Colorimetric Grayscale Method – Juan Giraldo
11:56	12:00	Paper 15: To Fuse or Decompress? A Multicenter Survey of Factors Affecting Surgical Decisions in L4-L5 Spondylolisthesis – Aiyush Bansal
12:00	12:04	Paper 16: Evaluation of predictive performance for new vertebral compression fracture between Hounsfield units value and vertebral bone quality score following percutaneous vertebroplasty or kyphoplasty – Yongxin Ren
12:04	12:09	Paper 17: Prediction of Postoperative Urinary Retention Following Lumbar Decompression – Eric Zhao
12:09	12:15	Discussion

Concurrent Session 4 Free Papers Raphael Ballroom
10:45 am–12:15 pm Moderators: Murray Echt & John Clohisy

10:45	10:49	Paper 18: Does Responsiveness to Erector Spinae Plane Block Following Minimally Invasive Transforaminal Lumbar Interbody Fusion Impact Patient-Reported Outcomes in the Early and Late Postoperative Periods? Eric Zhao
10:49	10:53	Paper 19: Multi-Center Prospective Cohort of Intractable Chronic Low Back Pain Patients Treated with Restorative Neurostimulation – Outcomes from 5-Year Data – Robert Eastlack
10:53	10:57	Paper 20: The Differential Impact of Pre-Surgical Opioid Use on Post-Surgical Opioid consumption in Adult Patients Undergoing Spinal Fusion or Decompression alone – Michael Rosario
10:57	11:01	Paper 21: How Do Patients Define “Risk” in Minimally Invasive Spine Surgical Decision-Making? JC Leveque
11:01	11:06	Discussion
11:06	11:10	Paper 22: Can You Perform an Adequate Discectomy During a Transforaminal Lumbar Interbody Fusion Approach Using an Endoscopic Technique? A Cadaveric Study Comparing Minimally Invasive Versus Endoscopic Approaches – Sohrab Virk
11:10	11:14	Paper 23: Technical Feasibility and Safety of Transpedicular Thoracic Corpectomy for Circumferential Decompression of Spinal Cord From Renal Cell Metastasis Using Biportal Endoscopic Technique: An Argument for the Paradigm Shift in Separation Surgery? Zihan Masood
11:14	11:18	Paper 24: Trans-SAP Approach for Thoracic Discectomy with Foraminoplasty: Clinical Outcomes and Surgical Technique – Junseok Bae
11:18	11:22	Paper 25: Return to Work After Endoscopic Spine Surgery in the United States – Meng Huang
11:22	11:27	Discussion
11:27	11:31	Paper 26: The “20-minute Rule” in Lateral Lumbar Interbody Fusion. Fact or Fiction? A Multi-Center Analysis of 658 Patients – Greg Mundis
11:31	11:35	Paper 27: Transabdominal Muscle Action Potentials (TMAP) With an Event-Based Protocol Provides Real-Time Assessment of Nerve Injury During Lateral Lumbar Interbody Fusion – J. Alex Thomas
11:35	11:39	Paper 28: Analysis of Lumbar and Pelvic Radiographic Outcomes Following Single-Position Lateral vs. Dual-Position Lumbar Interbody Fusion Surgery: A Retrospective Review – William Karakash
11:39	11:43	Paper 29: A Comparison of Post-Operative Pain Management Following Lumbar Laminectomy Fusions Utilizing TLIP or ESP Block – Daniel Park
11:43	11:48	Discussion
11:48	11:52	Paper 30: Neuroforaminal Bone Growth Leads to Slower Improvement After MIS-TLIF – Oliva Tuma
11:52	11:56	Paper 31: Psoas Muscle Morphology: A Novel Classification System and Its Anatomical Relationship with Adjacent Neurovascular Structures – George Abdelmalek
11:56	12:00	Paper 32: Lumbar Facet Arthroplasty: An Analysis Comparing Two-Year Outcomes from a Prospective Randomized Clinical Trial Among Patients with Unstable vs Stable Spondylolisthesis – John Chi
12:00	12:04	Paper 33: Intraoperative Management and Outcomes of Incidental Durotomy in Minimally Invasive Spine Surgery: A Review of 43 Cases – Oliva Tuma
12:04	12:15	Discussion

12:15–1:05 pm

Exhibit Viewing / EPosters with Lunch

Tower Ballroom

Young Surgeon Workshop

Raphael Ballroom

Bone Graft Selection in High-Risk Patients: What Does the Literature Say

Choll Kim

Supported by: Cerapedics

Non-CME Lunch Workshop

DaVinci Ballroom

The Role of Enabling Technology in the Advancement of Single Position Surgery

Supported by Globus Medical

Brandon Carlson & J. Alex Thomas

Concurrent Session 5 What Is the Future of Enabling Tech?

DaVinci Ballroom

1:05–2:30 pm

Moderators: Yoshihisa Kotani, Evan Sheha, Nima Alan *Non-CME Session*

1:05 pm	Robotics—How Far We Have Come	Brandon Carlson
1:15	Robotics—Beyond Rigid Stereotaxy: A Call to Arms	Hani Malone
1:25	Discussion	
1:35	Pre-Op Planning & Patient Specific Implants	Joe Osorio
1:40	Is AI the Future?"	Venu Nemani
1:49	Augmented Reality	Frank Phillips
1:58	Discussion	
2:02	Tech Update #1: Getting to NOPAIN: New Legislation to Support Access to Opioid Alternatives <i>Supported by: Pacira BioSciences</i>	Michael Wang
2:08	Tech Update #2: Adding Axial Views to Intra-Op 2D X-Ray by Software – No Navigational Hardware <i>Supported by: VUZE Medical Technologies</i>	David Tolkowsky
2:16	Panel: Surgeons + Industry Execs. Future of Enabling Tech; Economics & Outpatient Settings; Partnering with Industry	Moderators: Sheeraz Qureshi & Hani Malone Panelists: Jason Eckhardt (Medtronic), Mir Hussain (Globus), Pat Miles (ATEC), Gwen Watanabe (Augmedics)

2:30 pm

Refreshment Break / Eposter Viewing with Exhibits

Tower Ballroom

Concurrent Session 6 Controversies in Motion Preservation Raphael Ballroom
1:05–2:30 pm Moderators: Neel Anand, Elizabeth Lord Non-CME Session

1:05 pm	Modern Arthroplasty: What we have learned <i>Arthroplasty: Have Indications Expanded?</i>	Rick Sasso
1:13	Cervical	Hyun Bae
1:21	Lumbar	Richard Guyer
1:29	CDR: Should Patient Anatomy Determine Implant Choice? <i>Hybrid Constructs:</i>	Sheeraz Qureshi
1:37	Cervical	Stephen Ryu
1:43	Lumbar	Richard Guyer
1:49	Discussion	
1:58	Tech Update #3: Immunomodulation By P-15 <i>Supported by Cerapedics</i>	Katherine Lakstins
2:04	Tech Update #4: Revolutionizing cTDR: How Simplify is advancing MRI Visualization and Clinical Outcomes <i>Supported by Globus / NuVasive</i> Debates (Cases Provided) <i>Cervical</i>	Corey Walker
2:10	Arthroplasty	Alexander Satin
2:15	Fusion <i>Lumbar</i>	Robert Eastlack
2:20	Arthroplasty	Hyun Bae
2:25	Fusion	Alex Butler

2:30 pm Refreshment Break / Eposter Viewing with Exhibits Tower Ballroom

Session 7 Presidential Address, Awards, and Keynote DaVinci Ballroom
Moderator: Frank Phillips

	Awards, Research Grant Updates, Travelling Fellowship Updates	
3:00 pm	Final Reports from 2022 SMISS Grant Award Recipients	
3:03 pm	Paul Park Hardeep Singh	
3:06 pm	1-year Update from 2023 SMISS Grant Award Recipients	
3:09 pm	Sonny Gill John Pollina	

3:12 pm	Acknowledgement of 2024 Award Recipients Stephen Ryu	
3:15 pm	2024 Traveling Fellowship Recap and Awards John Chi	
3:25	Introduction of President	Frank Phillips
3:30	Presidential Address	Sheeraz Qureshi
3:45	Introduction of Keynote	Jeremy Steinberger
3:50	Keynote Address: When Experts Disagree: A New Approach to Medical Decision Making	Jerome Groopman and Pamela Hartzband
4:30	Q & A	

Session 8 Training the Next Generation of Spine Surgeons DaVinci Ballroom
Moderators: Mike Wang, Corey Walker

4:35 pm	Spine Training Should Be Combined During Residency!	Chris Shaffrey
4:42	Spine Training Should Remain Separate Between Neurosurgery and Orthopaedic Surgery	Richard Guyer
4:49	Discussion	
4:55	Why Is It So Important to Remain Active in Research and Societies (and Academics) Early in Practice — Is There a Blueprint for This?	Philip Louie
5:02	Learning New Techniques Early in Practice	Ahilan Sivaganesan
5:09	Building a Professional Social Media Footprint	Daniel Choi
5:16	Taking Your Practice to an ASC - Early Considerations	Ali Araghi
5:23	Preserving Our Own Mobility: Spine Health for MISS Surgeons	Theresa Williamson
5:30	Discussion	

5:40 pm Course Reception with Exhibitors

Tower Ballroom

Saturday, September 7

7:30–8:20 am Women in Spine Surgery Breakfast

Raphael Ballroom

Supported by Augmedics

Session 9 Endoscopy (Non-CME)

DaVinci Ballroom

8:25 am	Welcome	
	Endo Curious	Moderator: Sanjay Konakondla
8:30	I've Been Going to Courses for Years, But I Haven't Done Any Endoscopy—This Is Why	Jeremy Steinberger
8:37	You've Been Going to Courses For Years—This Is How (and Why) You Should Start Your Endoscopic Practice	Peter Derman
8:44	Discussion	
	Implementing Endoscopy	Moderator: Sanjay Konakondla
9:00	Uniportal—Why It's Worth It and How to Convince Your Hospital	Chris Yeung
9:07	Biportal—Why It's Worth It and How to Convince Your Hospital	Dan Park
9:14	Building an Endoscopic Program	Don Park
9:21	Measuring outcomes after Endoscopic surgery	Christoph Hofstetter
9:28	Q&A	
9:35	Tech Update #5: Enhancing Patient Outcomes with Personalized Interbody Devices and Biportal Endoscopy <i>Supported by Carlsmed</i>	John Asghar
9:41	Tech Update #6: Leveraging Novel Technology in the ASC <i>Supported by Spinal Elements</i>	Pierce Nunley
	Why Endoscopy? Why not Tubular?	Moderator: Chevy Iyer
9:47	Degen Spondy Indicated for Fusion 9:47 Case Presentation 9:49 Endoscopy 9:53 Tubular	Chevy Iyer Luke Kim John Clohisy

9:57	Soft Cervical Disc Indicated for a Foraminotomy 9:57 Case Presentation 9:59 Endoscopy 10:03 Tubular	Chevy Iyer Jian Shen Brandon Hirsch	
10:07	L5-S1 Paracentral Disc Herniation 10:17 Case Presentation 10:19 Endoscopy 10:23 Tube	Chevy Iyer Peter Derman Michael McCarthy	
10:17	Uniportal Or Biportal: How About NO Portal?	Brian Kwon	Brian Kwon
10:24	Q&A		

10:35 am Refreshment Break / Ep poster Viewing with Exhibits Tower Ballroom

Concurrent Session 10 Free Papers DaVinci Ballroom

11:05 am–12:20 pm Moderators: Corey Walker

11:05	11:07	Paper 34: Learning Curve and Long-Term Outcomes of Mini Open Correction and Fusion for Adolescent Idiopathic Scoliosis – Qais Zai
11:07	11:09	Paper 35: Biomechanical Analysis of Expandable Interbody Cage Stiffness, Force Exertion, and Subsidence in the Setting of Spondylolisthesis – Junho Song
11:09	11:11	Paper 36: Robotic Neuronavigation in Adolescent Idiopathic Scoliosis – Preliminary Results - Georgios Bakaloudis
11:11	11:13	Paper 37: Are We Getting Better at Comprehensive Alignment in Minimally Invasive Surgery for Adult Spinal Deformity? Paul Park
11:13	11:15	Paper 38: Perioperative Recovery Kinetics and Narcotic Use Following CMIS Surgery for Adult Spinal Deformity Correction of 6 or more levels – Gurmit Singh
11:15	11:17	Paper 39: Impact of Single-Level Minimally Invasive Versus Open L4-L5 and L5-S1 Transforaminal Lumbar Interbody Fusion on Postoperative Distal and Lumbar Lordosis – Tomoyuki Asada
11:17	11:19	Paper 40: Are we sacrificing lordosis when using expandable vs fixed TLIF cages? Schanin Salmanian
11:19	11:21	Paper 41: Clinical effectiveness and complication of OLIF51 versus L5/S1TLIF in surgical treatment of adult spinal deformity – Yoshihisa Kotani
11:21	11:23	Paper 42: Can 4-rod fixation with double Iliac screws and Sacral Ala-Iliac screws for adult spinal deformity prevent rod breakage and be a new fixation method? Tomohisa Harada
11:23	11:25	Paper 43: A Modern Radiographic and Clinical Comparison of Lateral Lumbar Interbody Fusion and Transforaminal Lumbar Interbody Fusion with Expandable Interbody Cages – Frank De Stefano
11:25	11:27	Paper 44: Attitudes Regarding Barriers to Entry and the Learning Curve Associated with Endoscopic Decompression-Only Surgery: An International Survey – Patricia Lipson
11:27	11:29	Paper 45: The Effect of Preoperative Symptom Duration and Spinal Pathology on Mental Health Outcomes Following Lumbar Decompression – John Sencai

11:29	11:31	Paper 46: Variations in Preoperative Muscle Health Across Vertebral Levels in Patients with One Level Degenerative Spondylolisthesis – Eric Zhao
11:31	11:33	Paper 47: Decompression alone versus decompression with fusion for degenerative lumbar spondylolisthesis: do the 5-year results differ when comparing only minimally invasive surgeries? Vardhaan Ambati
11:33	11:35	Paper 48: Interbody Fusion and Osteoinductivity Verification with AMP2, a New Variant of rhBMP-2 Re-engineered to Bind Specifically to a Carrier – Frank Vizesi
11:35	11:37	Paper 49: Transforaminal Full-Endoscopic Ventral Facetectomy: Midterm Results and Factors Associated with Poor Surgical Outcomes – Masatoshi Morimoto
11:37	11:39	Paper 50: Determining the Association between Spinal Pathology and Gene Expression within Muscle Below and Adipose Above the Thoracolumbar Soft Tissue Envelope – Apratim Maity
11:39	11:41	Paper 51: Impact of Lumbar Disk Herniation on Performance Outcomes and New Contracts in the National Basketball Association – Tejas Subramanian
11:41	11:43	Paper 52: Multi-Institutional Enhanced Recovery After Surgery (ERAS) Protocol in Lumbar Spine Surgery: A Michigan Spine Surgery Improvement Collaborative (MSSIC) Study – Dheeraj Kagithala
11:43	11:45	Paper 53: Two-Level CDR Patients Return to Work Sooner than Two-Level ACDF Patients: A Matched Cohort Analysis – Kasra Araghi
11:45	11:47	Paper 54: Enhanced Antibacterial Efficacy and Biocompatibility of Novel PEEK Cages in Spinal Fusion Patients – Hasan Ahmad
11:47	11:49	Paper 55: High modified 5 factor frailty index is associated with worse PROMs and decreased return to activities after 1 or 2 level MI-TLIF – Tejas Subramanian
11:49	11:51	Paper 56: Defining Postoperative Kyphosis Following Cervical Laminaplasty: Incidence and Risk Factor Analysis – Alejandro Perez-Albeta
11:51	11:53	Paper 57: The Impact of Age-adjusted Spinopelvic Malalignment on Postoperative Neck Pain Following ACDF – Tomoyuki Asada
11:53	11:55	Paper 58: Exclusively anterior reconstruction can be safe and effective in correcting mild, flexible cervical deformity – Nikita Lakomkin
11:55	11:57	Paper 59: Role of Single Photon Emission Computed Tomography (SPECT/CT) in Cervical Spine Surgery Decision Making – Stephanie Serva
11:57	11:59	Paper 60: Tissue-sparing circumferential cervical fusion using a posterior cervical stabilization system improves outcomes when compared to 3-level ACDF only: An interim analysis of 12 and 24 month results from a prospective randomized FDA approved IDE trial – Josh Heller
11:59	12:01	Paper 61: Discrepancy between Global- and Disease-specific Outcome Measures Following Cervical Spine Surgery – Oliva Tuma
12:01	12:03	Paper 62: Outcomes of a Multi-Institutional Enhanced Recovery After Surgery (ERAS) Protocol in Cervical Spine Surgery: A Michigan Spine Surgery Improvement Collaborative (MSSIC) Study – Anisse Chaker
12:03	12:05	Paper 63: How Are We Defining Preoperative Anemia? A Comparison of Various Anemia Thresholds Among Patients Undergoing Spine Fusion – Robert Oris
12:05	12:07	Paper 64: Elevated Alkaline Phosphatase is Associated with Increased Rates of Pseudoarthrosis, Readmission, and Return to Operating Room in Open but not Minimally Invasive Lumbar Arthrodesis Surgery – Abhinav Sharma
12:07	12:09	Paper 65: Do Preoperative Lumbar Transforaminal Steroid Injections Increase the Risk of Infection After Lumbar Decompression Surgery? Paul Minetos

12:09	12:11	Paper 66: An Evaluation of Pseudarthrosis Following Lumbar Fusion Surgery Utilizing Multi-Planar Computed Tomography – Robert Oris
12:11	12:13	Paper 67: Complications and Outcomes in Minimally Invasive vs. Open L4-L5 Decompression for Lumbar Stenosis – Pranit Kumaran
12:13	12:15	Paper 68: Comparison of Patient Outcomes of Anterior and Posterior Lumbar Interbody Fusions: A Retrospective National Database Analysis – Muhammad Talal Ibrahim

Concurrent Session 11 Free Papers Raphael Ballroom
11:05 am–12:20 pm Moderators: Jerry Du & AJ Rush

11:05	11:07	Paper 69: Analyzing Spine Surgery Outcomes Across Socioeconomic Groups Using Smartphone Activity Data – Daksh Chauhan
11:07	11:09	Paper 70: Single Position Lumbar Spine Interbody Fusion and Pedicle Screw Placement Reduces Operating Room Costs – Marc Abdou
11:09	11:11	Paper 71: Single Position Prone Lateral Demonstrates a Low Failure Rate of Indirect Decompression – Alex Thomas
11:11	11:13	Paper 72: Two-Year Clinical Outcomes of Full Endoscopic Sacroiliac Joint Neurotomy for Chronic Low Back Pain: Efficacy, Safety, and Predictive Factors – Amy Herrera
11:13	11:15	Paper 73: Transforaminal full-endoscopic decompression under local anesthesia for foraminal stenosis due to stable L5 isthmic spondylolisthesis: Pars crisscross decompression – Masatoshi Morimoto
11:15	11:17	Paper 74: Blurred Boundaries: The Prevalence of Interventional Spine Procedures Performed by Pain Management Physicians – Juan Giraldo
11:17	11:19	Paper 75: The Current Status of Simulation Training in Spinal Endoscopic Surgery: A Systematic Review – Gilberto Perez Rodriguez Garcia
11:19	11:21	Paper 76: A Clinical Comparison of Perioperative Outcomes and Complications with Biportal Endoscopic and Open Lumbar Laminectomy using an Early Recovery After Surgery (ERAS) Protocol – Don Park
11:21	11:23	Paper 77: OPEN
11:23	11:25	Paper 78: Endoscopic Decompression for Radiculopathy in Adult Degenerative Scoliosis: Single Surgeon Retrospective Review – David Huie
11:25	11:27	Paper 79: Transfacet Approach for Transforaminal Lumbar Interbody Fusion Results in Lower Length of Stay and Decreased Opioid Use Compared to MIS TLIF and percutaneous TLIF: Single Surgeon Retrospective Study – Joshua Woo
11:27	11:29	Paper 80: Relationship of Psoas Morphology to Postoperative Psoas and Quadriceps Palsy After L4/5 Prone Lateral Interbody Fusion: Series of 59 Consecutive Patients – Andre Samuel
11:29	11:31	Paper 81: One Year Clinical Outcomes of Prone Transpsoas Lumbar Interbody Fusion – Hardeep Singh
11:31	11:33	Paper 82: Prone Trans-Psoas Interbody Fusion with Anterior Longitudinal Ligament Release for Correction of Adult Spinal Deformity: Complications and Radiographic Outcomes – Rohan Suresh
11:33	11:35	Paper 83: OPEN

11:35	11:37	Paper 84: Biomechanical In Vitro Analysis of Construct Fatigue Comparing Lateral Lumbar Interbody Fusion with Lateral Plate Augmentation to Bilateral Pedicle Screw Fixation – Sumedh Shah
11:37	11:39	Paper 85: Long-Term Outcomes of Titanium vs PEEK Cages in Single Level MI-TLIF: A Matched Cohort Study – Neil Patel
11:39	11:41	Paper 86: Surgical Site Infection after Posterior Lumbar Instrumented Fusions – Kasra Araghi
11:41	11:43	Paper 87: Microscopic Assisted Uninstrumented Surgical Tumor Decompression as an Alternative to Open Surgery for Symptomatic Metastatic Epidural Spinal Cord Compression – Arthur Jenkins
11:43	11:45	Paper 88: Importance Of Epiphyseal Rim Contact In Anterior Lumbar Interbody Fusion: A Study On Bone Surrogates Reconstructed From Computed Tomography – Giovanni Solitro
11:45	11:47	Paper 89: OPEN
11:47	11:49	Paper 90: Defining the Normative Level of Functional Low Back Pain Disability in the American Population: A Crowdsourced Evaluation of the Oswestry Disability Index – Rakesh Kumar
11:49	11:51	Paper 91: Age-Adjusted Baseline NDI Values: Understanding Neck Pain Disability In The American Population Through Crowdsourcing – Patricia Lipson
11:51	11:53	Paper 92: Pre-operative HbA1C is Associated with Socioeconomic Disparities and Readmission in Minimally Invasive Lumbar Spine Surgery Outcomes – Yifei Sun
11:53	11:55	Paper 93: Temporal Trends of Improvement After Minimally Invasive Lumbar Decompression Surgery – Nishtha Singh
11:55	11:57	Paper 94: Outcomes of Primary vs. Revision TLIF Following Decompression Alone in Degenerative Spondylolisthesis: A Retrospective Propensity Score Matched Study – Nishtha Singh
11:57	11:59	Paper 95: Does Preoperative Symptom Duration Impact Clinical Outcomes in the Early and Late Postoperative Periods After Percutaneous Transforaminal Endoscopic Lumbar Discectomy? Nishtha Singh
11:59	12:01	Paper 96: Biomechanical Behavior of a New Vertebral Body Implant: Vertiwedge – Nathan Schilaty
12:01	12:03	Paper 97: Multi-Centre Prospective Cohort of Patients with Intractable Chronic Low Back Pain Treated with Restorative Neurostimulation: 2-year outcomes of the ReActiv8-C registry – Marco Amann
12:03	12:05	Paper 98: Ultrasound Assessment of the Anterior Neck and Hematoma Before and After Anterior Cervical Spine Surgery – Kasra Araghi
12:05	12:07	Paper 99: Comparing Diagnostic and Therapeutic Choices for Cervical Disorders: ChatGPT 3.5 vs ChatGPT 4.0 vs. Spine Surgeons – George Abdelmalek
12:07	12:09	Paper 100: Accuracy of Single step screw placement with Augmented Reality Navigation – William Kunkle
12:09	12:11	Paper 101: Effects of Utilization of Augmented Reality on Intraoperative Efficiency – Hardeep Singh
12:11	12:13	Paper 102: Accurately Extracting Procedural Information from 6,000 Lumbar Spine Surgery Notes with Artificial Intelligence – Marcel Dagli
12:13	12:15	Paper 103: Artificial Intelligence accurately Predicts Transfusion Requirements in Posterior Spinal Fusion for Adult Spinal Deformity based on Preoperative Patient Characteristics – Ryan Turlip

12:15	12:17	Paper 104: The Efficacy of Robot-Assisted MIS-TLIF in Patients with Radiographically Challenging Characteristics: A Comparative Study with Navigation-Only MIS-TLIF – Tomoyuki Asada
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12:20 pm Boxed Lunch Pick Up / Last Chance Exhibit Viewing Tower Ballroom

Session 12 Complications/Fun Cases/Struggles DaVinci Ballroom
Moderators: Hani Malone and Jeremy Steinberger

12:35 pm	MIS Case Complication That Changed My Practice	Corey Walker
12:42	Management of MIS Durotomies	Murray Echt
12:49	Cervical Arthroplasty—Was a Bad Choice	Saad Chaudhary
12:56	Cervical Laminoplasty – Easiest Surgery in the Cervical Spine	James Lin
1:03	Discussion	
1:10	Expandable TLIF Cages—Pillar of MIS TLIF	Zack Wilson Ray
1:17	I Was Skeptical re: AR for a While, But Now Use it for Different Applications	Phil Louie
1:24	Robots=Fancy Navigation—Don't Waste Your Money	Mike Wang
1:31	Discussion	
1:38	My Robot Broke—Should I Cancel the Case?	Cezar Mizrahi
1:45	Robots Will Replace Us Within 10 Years	Josh Schroeder (via Zoom)
1:52	SPECT—Helps Decision Making	Hani Malone
1:59	Discussion	
2:06	Really Regretted This Case for The Boards	Timur Urakov
2:13	Robotic Safety and Error	James Dowdell
2:20	Discussion	
2:25	Raffle Drawing	Jeremy Steinberger and Hani Malone
2:30	Closing Comments & Adjourn	