

4th Annual NeuroSpine Research Forum

January 26, 2026
9:00am - 1:00pm EST

Register Online: med.unc.edu/neurosurgery/event/neurospine-2026



School of Medicine

Neurosurgery



9:00 AM

Introduction

Daniel Faraj, BS
Allie Harbert, MD, MPH

Michael Galgano, MD, FAANS

The University of North Carolina, School of Medicine

9:05

Comparative Outcomes of Spinal Cord Stimulation Across Pain Etiologies in a 47,540-Patient Real-World Cohort

Barbara Buccilli, MD
Amir H. Faraji, MD, PhD

Clinical Innovations Laboratory - Houston Methodist

9:13

Decision-Making Challenges in Geriatric Spine Surgery: The Role of the Endoscopic Approach

Abdulrahman Marzouq Almutairi, MD

Mohammad Ghazi Abdo, MD

King Abdullah Medical City

9:21

A Comparison of Natural Language Processing Transformer Models for Automatic Spine Clinic Screening

Sean Lau BS, BBA, MS2

Alex Flores, MD

Baylor College of Medicine

9:29

Three Decades of Growth: Tracking the Evolution of Distraction-Based Surgery and Adjunctive Techniques in Early-Onset Scoliosis

Seong-Won Kim, BS, MS3

Stuart Mitchell, MD

The University of North Carolina

9:37

Complications in Endoscopic spine surgery: A Systematic review of regional variation, Surgical Technique and outcome Patterns

Besona Lora, MD, MD
Salah G.Aoun, MD

UT Southwestern

9:45

Achieving Alignment and Implant-Specific Goals in ALIF, and Predictors of Postoperative Intradiscal Lordosis: The Role of Spinopelvic Parameters, Cage Lordosis, Intraoperative Consistency, Surgical Technique, and Treated Level

Abdelrahman Hamouda, MD
Benjamin Elder, MD, PHD

Mayo Clinic

9:53

Predictors of Fixation Failure in Cancer Patients with Pathological Vertebral Body Fractures

Graham Winston, MD
Mark Bilsky, MD

Weill Cornell New York-Presbyterian, Memorial Sloan Kettering

10:01

Fusion Outcomes and Complication Rates After Thoracolumbar Surgery for Primary and Metastatic Spinal Tumors: A Systematic Review and Meta-Analysis

Noah Dover and James Sampson, MS2
Sean M. Barber, MD

Texas A&M School of Engineering Medicine, Houston Methodist Hospital

10:09

Incidence and Predictors of T1-T2 Junctional Pseudoarthrosis After Posterior C2-T2 Fusion

Abdelrahman Hamouda, MD
Benjamin Elder, MD, PHD

Mayo Clinic

10:17

Predictors of Pelvic Tilt Correction in Complex Adult Spinal Deformity Surgery: A Multivariate Analysis of Patient and Surgical Variables

Blake Holthaus, BS, MS2

Andrew Grossbach, MD

The Ohio State University College of Medicine

10:25

Pelvic Incidence Predicts Proximal Junctional Failure in Long Segment Spinal Fusion

Nathan Ritchey, BS, M3

Andrew Grossbach, MD

The Ohio State University College of Medicine

10:33

Corticospinal Tract Microstructural Alterations in Amyotrophic Lateral Sclerosis: A Diffusion Tensor Imaging-Based Predictive Model Using CSA, FA, and MD

T. Naveen Keerthi, 3rd year MBBS

Dr. Santosh Rajamani, MBBS, MS

MBBS - MIMER Medical College Pune

10:41

Short-Segment Cement-Augmented Fixation Following Open Spinal Decompression for Spinal Metastasis: Predictors of Success and Failure

Amanda del Rosario Cuastumal Aguirre, MD

William Christopher Newman, MD, MPH

Memorial Sloan Kettering Cancer Center, Spine Tumor Center

10:49

Delays from Utopian to Actual Discharge in Spine Surgery Patients: a quantitative analysis and narrative modelling

Connor Holm, BS, M1

Richard Menger, MD, MPA

University South Alabama Whiddon College of Medicine

10:57

Break

11:07

Incremental Risk of Lumbar Fusion Failure Associated With Perioperative Polypharmacy: A Real-World Evidence Study

Barbara Buccilli, MD,

Amir H. Faraji, MD, PhD

Clinical Innovations Laboratory - Houston Methodist

11:15

Identifying at-risk patients and vertebrae remains a clinical challenge: survival impact of metastatic VCF, gaps in prophylactic intervention, and economic burden

Thomas Hamre, B.S., MS2 BCM

Christopher Alvarez-Breckenridge, M., PhD

Baylor College of Medicine

11:23

Investigating the Impact of Work Environment Characteristics on Burnout and Professional Satisfaction Among Early Career Spine Surgeons

Garrett Dyess, BA, MS2

Richard Menger, MD, MPA

University of South Alabama

11:31

Preoperative Paraspinal Muscle Quality is an Independent Predictor of Prolonged Hospitalization After Surgical Intervention for Lumbar Spine Trauma

Nathan McLaughlin, B.S., MS2

Mauricio Avila, MD

Saint Louis University School of Medicine

11:39

Functional Sequelae of T1 Nerve Root Sacrifice in Spinal and Brachial Plexus Surgery: A Systematic Review and Meta-Analysis

Linda Liverani, MD

Atman Desai, MD

Stanford School of Medicine

11:47

Area Deprivation Index and Framingham Risk Score in Spinal Trauma Patients with TLICS 4

Advika Srinivas, Medical Student, MS3

Mauricio Avila, MD

Saint Louis University School of Medicine

11:55

Anterior Column Support versus Posterior-Only Fixation in Long Lumbosacral Constructs: A Systematic Review and Meta-Analysis of Sagittal Alignment and Fusion Outcomes

Linda Liverani, MD

Atman Desai, MD

Stanford School of Medicine

12:03

Intramedullary Endometrial Tissue of the Conus: Illustrative Case, Epidemiology, and Treatment Strategies

Brandon T. Lee, MS3

Rory Goodwin, MD, PhD

Duke University Department of Neurosurgery,
The University of North Carolina, School of Medicine

12:11

Case Presentation and Operative Video Highlights of a Lenke 1B Adolescent Idiopathic Scoliotic Curve Correction

Forbes Fowler, MS1

Michael Galgano, MD, FAANS

The University of North Carolina, School of Medicine

12:19

Closing a Three-column Osteotomy With a Construct-To-Construct Closure: Case Series and Technical Note with Intraoperative Pictures and Videos

Harsh Jain, MBBS

Scott L. Zuckerman, MD, MPH

Vanderbilt University Medical Center

12:27

Multi-Level Uncinectomies and Posterior Column Osteotomies to Correct a Cervical Kyphotic Deformity: Case Instruction With Intraoperative Picture and Video

Advith Sarikonda, BA BS

Scott L. Zuckerman, MD, MPH

Vanderbilt University Medical Center

12:35

Unilateral Laminotomy for Bilateral Decompression Under Spinal Anesthesia: Tubular Docking and Operative Workflow

Vishva Natarajan, MS

Murray A. Echt, MD

Geisel School of Medicine at Dartmouth

12:43

Closing Remarks

Michael Galgano, MD, FAANS

The University of North Carolina, School of Medicine