



A comprehensive approach for Neurosurgeons, Orthopaedic Surgeons, Medical Spine Specialists, and Advanced Practice Providers

**June 19–24, 2024**

Cleveland Clinic Lutheran Hospital  
and InterContinental Hotel  
Cleveland, OH

[www.ccfcmc.org/CSR24](http://www.ccfcmc.org/CSR24)



# Cleveland Spine Review: *Hands-On 2024*

Presented by Cleveland Clinic Center for Spine Health



# Cleveland Spine Review: *Hands-On 2024*



**Cleveland Spine Review: *Hands-On 2024*** is a comprehensive course utilizing the cadaver laboratory and didactic sessions with ample time for discussion. This intensive course emphasizes the fundamentals of spine surgery, particularly biomechanical considerations, and the surgery decision-making process.

Through intensive, hands-on sessions utilizing cadavers, participants study surgical techniques and strategies for a range of procedures including occipitocervical, cervical, thoracic, and lumbar fixation techniques. Complex surgical exposures in all regions of the spine are emphasized.

Led by experienced faculty, the course examines the multiple adjuncts to surgery, including soft tissue and bone retractors and distractors, minimally invasive surgical techniques, spinal implants (from multiple vendors), and dissection tools. Non-operative strategies are also emphasized. Significant time is dedicated to operative indication discussions. The problem-based decision-making process is introduced and emphasized during these very interactive discussions.

Upon completion of the Cleveland Spine Review, the participant will be able to:

- Utilize problem-based decision-making to develop logical algorithms for solving complex problems.
- Employ physiological and surgical principles to spinal fusion and instrumentation.
- Apply anatomic and physiologic principles to the variety of surgical approaches available to access all regions of the spine.
- Recognize the fundamental skills required to perform the most appropriate operation for any given clinical pathology, and to recognize one's own limitations in this regard.
- Evaluate available instrumentation systems and appreciate the advantages of each, as well as the relative indications for their use.

## Why Should Non-Surgeons Attend?

Nurses, Advanced Practice Nurses, Physician Assistants, physicians and other medical spine specialists have the unique opportunity to learn side by side, in didactic sessions as well as a cadaver laboratory, with surgeons in a relaxed, collegial atmosphere.

Additionally, a special session for non-surgeons is held prior to the start of the Spine Review on the first day to meet fellow attendees and prepare for the content to be presented throughout the remainder of the course.

A variety of non-surgical breakout sessions and a cadaver dedicated to non-surgeons gives participants a multifaceted learning experience. Social functions complete an extremely memorable course.



## Register now for the June 19–24 hands-on course in Cleveland

These are verbatim comments taken from the evaluation form of past course attendees:

“It was very educational and I learned a lot of useful information.”

“Amazingly insightful (and often entertaining) presentations.”

“The presenters were full of information and knowledge. They were not only passionate about their presentation but were willing to stay over to answer questions.”

“Very collegial group that kept the course fun and informative.”

“Practice pearls and cases were excellent. Very solid course from top to bottom.”

“This was well presented and the flow of information was in a way that was easy to comprehend and in a reinforcing manner. Even though I have attended this event before the material was updated and fresh. Excellent group of people with a diverse set of thoughts and opinions.”

Register online at [www.ccfcm.org/CSR24](http://www.ccfcm.org/CSR24)

## The Art Steffee Honored Guest Lecturer

**Eric Klineberg, MD**

McGovern Medical School, UTHealth, Houston, TX

## Course Directors

**Edward C. Benzel, MD**

Cleveland Clinic, Cleveland, OH

**Douglas Orr, MD**

Cleveland Clinic, Cleveland, OH

**Jason Savage, MD**

Cleveland Clinic, Cleveland, OH

**Richard Schlenk, MD**

Cleveland Clinic, Cleveland, OH

**Michael Steinmetz, MD**

Cleveland Clinic, Cleveland, OH

**Gregory R. Trost, MD**

University of Wisconsin, Madison, WI

## Planning Committee Members

**Erin Anderson, PA-C**

Cleveland Clinic, Cleveland, OH

**Andrea Strayer, PhD, NP, CNRN**

University of Iowa, Iowa City, IA

**Rachel Waite, CNP**

Cleveland Clinic, Cleveland, OH

## Eric O. Klineberg, MD, MS

### The Art Steffee Honored Guest Lecturer

**Eric O. Klineberg, MD, MS**, is a Professor and Vice Chair in the Department of Orthopedic Surgery at UTHealth Houston. He serves as Chief of Orthopedic Spine Surgery and also holds the Milton “Chip” Rountt Endowed Chair of Spinal Surgery.

World-renowned in his field, Dr. Klineberg was a Professor and Vice Chair of the Department of Orthopedics, at the University of California, Davis, where he was for 16 years. He was also the Chief of the Spine service and the Co-Director of the Spine Center. Board-certified by the American Board of Orthopaedic Surgery, Dr. Klineberg clinically cared for complex adult spinal deformity patients at UC Davis and complex pediatric patients at Shriners Hospital for Northern California.

Dr. Klineberg has been academically productive through collaboration both locally and nationally. He has over 290 publications and 20 book chapters as well as the book editor for “Adult Lumbar Scoliosis, A Clinical Guide to Diagnosis and Management.” He has developed a national and international reputation in Spinal Deformity surgery through research, teaching, and clinical activity. Dr. Klineberg serves on the executive committee of the International Spine Study Group and collaborates with researchers around the globe. He is a principal or co-principal investigator for more than a half-dozen clinical studies and has received numerous medical and educational grants.

Nationally, Dr. Klineberg is active in the Scoliosis Research Society as a Board Member and is the Chair-Elect for the 31st International Meeting on Advanced Spine Techniques in San Diego. He is also an active member of AO Spine, he has served as the Chair of the AOSNA spine fellowship committee and is the Chair-elect of AO Spine North America.



## Arthur D. Steffee, MD

**Arthur D. Steffee, MD**, practiced in Cleveland, OH from 1967 thru 1998 with a special interest in total joint replacement and spine surgery. He received his B.S. degree from Allegheny College, graduated from McGill University’s medical school and completed his residency at Cleveland Clinic. Throughout his career, he received numerous awards and recognition for his pioneering contributions to medicine. In 1983, Dr. Steffee started AcroMed, a company that produced spinal implants for which he holds many patents. He’s traveled extensively throughout the world for AcroMed, operating in 35 different countries. Dr. Steffee retired from active practice in 1996 but continued to travel and operate until 1998. His company was sold to DePuy and subsequently to Johnson & Johnson.



## Guest Faculty

**Jonathan Belding, MD**  
MetroHealth Medical Center

**Nathaniel Brooks, MD**  
University of Wisconsin

**Eldad Hadar, MD**  
University of North Carolina

**Gwyneth Hughes, MD**  
Akron Children's Hospital

**Kristen Jones, MD**  
University of Minnesota

**Vince Miele, MD**  
University of Pittsburgh

**Des Kwok, MD**  
Hamilton General Hospital

**Eric Momin**  
Grand Junction, Colorado

**Tim Moore, MD**  
Hamilton General Hospital

**Rakesh Patel, MD**  
University of Michigan

**Sharad Rajpal**  
Avista Adventist Hospital

**Abdelfattah Saoud, MD, PhD**  
Ain Shams University

**Shelly Schmoller, PA-C**  
University of Wisconsin

**Andrea Strayer, PhD, NP, CNRN**  
University of Iowa

**Suzanne Tharin, MD, PhD**  
Stanford University

**Andrew Wakefield, MD**  
Hartford Hospital

## Cleveland Clinic Faculty

**Erin Anderson, PA-C**  
Center for Spine Health

**Ryan Goodwin, MD**  
Orthopedic Surgery

**Kush Goyal, MD**  
Center for Spine Health

**Augusto Hsia, MD**  
Center for Spine Health

**Iain Kalfas, MD**  
Center for Spine Health

**Ajit Krishnaney, MD**  
Center for Spine Health

**Tom Mroz, MD**  
Center for Spine Health

**Dominic Pelle, MD**  
Center for Spine Health

**Richard Rammo, MD**  
Center for Neurological Restoration

**Pablo Recinos, MD**  
Brain Tumor and Neuro-Oncology Center

**Sarah Rispinto, PhD**  
Center for Spine Health

**Joanne Schneider, DNP**  
Pain Management

**Santhosh Thomas, DO**  
Center for Spine Health

**Jenny Wu, MD, MRMD**  
Diagnostic Radiology

**Rachel Waite, CNP**  
Center for Spine Health

## Unique Features of the Course

- Interactive Small Group Case Presentations: Participants are encouraged to bring cases for discussion
- Collegial atmosphere with ample opportunity to pose questions to the faculty and honored guest one-on-one and during lectures

## Course Schedule

- The program runs from Wednesday, June 19, through Monday, June 24.
- The pre-course non-surgical lectures begin at 11 a.m. on Wednesday, June 19.
- Round-trip transportation from the InterContinental Hotel at the Arcade to Cleveland Clinic Lutheran Hospital will be provided each day.

## 5 Reasons Not to Miss Cleveland Spine Review 2024

1. Appropriate for oral board preparation. Emphasis is given to the fundamentals of spine surgery (especially biomechanical considerations) and the surgery decision-making process, but the week-long program also allows for a deep dive into a rich array of subtopics in spine care with more than 50 lectures and daily case review sessions.
2. A serious devotion to “hands-on.” The course is true to its name by pairing its didactic lectures with eight dedicated hands-on sessions in the cadaver laboratory.
3. Ample time for discussion and problem-based learning. Participant questions are highly encouraged throughout all portions of the course, and significant time is dedicated to operative indication discussions.
4. An extensive faculty from across the nation and the globe. Half of the course’s faculty are from or trained at Cleveland Clinic and the remaining half is from US and internationally renowned universities and medical centers.
5. This activity has been approved for *AMA PRA Category 1 Credits™*, ANCC Contact Hours, and AAPA Category 1 CME Credits with more than 50 credit hours.



## Cleveland Spine Review

### Wednesday, June 19, 2024

- 12:00–12:45 p.m. **Welcome and Introduction** – *Ed Benzel*
- 12:45–1:15 p.m. **Preoperative Evaluation / Assessment of the Spine Surgery Patient** – *Shelly Schmolter*
- 1:15–1:45 p.m. **Medical Management of Complex Spine Surgery Patients**  
*Suzanne Tharin*
- 1:45–2:15 p.m. **Bone Health** – *Gus Hsia*
- 2:15–2:45 p.m. **Intraoperative Radiation Exposure and Its Implications**  
*Thomas Mroz*
- 2:45–3:15 p.m. **Post-op Pain Management ERAS** – *Ajit Krishnaney*
- 3:15–3:30 p.m. Beverage Break
- 3:30–3:45 p.m. **Team Building, Collaboration, and Efficiency in the OR** –  
*Greg Trost*
- 3:45–4:15 p.m. **Spinal Injections: What, When, and Where** – *Kush Goyal*
- 4:15–4:35 p.m. **Mimics of Spine Pathology** – *Jason Savage*
- 4:35–5:05 p.m. **Image Guidance in Spine Surgery (include Robotics)**  
*Iain Kalfas*
- 5:05–6:20 p.m. **Panel Discussion** – *Richard Schlenk, Moderator*  
*Panel: Sarah Rispinto, Richard Rammo, Santhosh Thomas*
- 6:20–7:00 p.m. **CSM Case Discussion** – *Doug Orr / Greg Trost*



### Thursday, June 20, 2024

- 6:45–7:00 a.m. **Short Subjects** – *Ed Benzel*
- 7:00–7:30 a.m. **Fundamentals of Biomechanics** – *Andy Wakefield*
- 7:30–8:10 a.m. **Approaches to the Craniocervical Junction** – *Eric Momin*
- 8:10–8:30 a.m. **Endoscopic Treatment of Craniocervical Junction Pathology** – *Pablo Recinos*
- 8:30–9:00 a.m. **Current Strategies in Craniocervical Stabilization**  
*Ajit Krishnaney*
- 9:00–9:15 a.m. **It's All About the Hike** – *Ed Benzel*
- 9:15–9:45 a.m. **Ventral Cervical Surgery and Complications**  
*Thomas Mroz*
- 9:45–10:15 a.m. Break
- 10:15–10:45 a.m. **Getting Out of Trouble in Cervical Spine Surgery**  
*Sharad Rajpal*
- 10:45–11:15 a.m. **Failed Back Surgery** – *Doug Orr*
- 11:15 a.m.–12:15 p.m. **Working Lunch: Craniocervical Case** – *Greg Trost*
- 12:15–12:30 p.m. **Transition to Lab**
- 12:30–2:45 p.m. **Lab 1 & 2: Craniocervical Junction / Ventral Cervical Surgery** – *Lab Faculty*
- 2:45–3:15 p.m. **Cervical Trauma** – *Tim Moore*
- 3:15–3:45 p.m. **Pediatric Spine Trauma** – *Gwyneth Hughes*
- 3:45–4:30 p.m. **Case Discussion** – *Course Faculty*

## Cleveland Spine Review

### Friday, June 21, 2024 at Lutheran Hospital

- 6:45–7:00 a.m. **Short Subjects** – *Ed Benzel*
- 7:00–7:30 a.m. **Biomechanics of Instrumentation and Construct Design**  
*Faculty*
- 7:30–7:45 a.m. **Cervical Foraminotomy and Laminoplasty Indications and Techniques** – *Dom Pelle*
- 7:45–8:00 a.m. **Cervical Laminectomy and fusion Indication and Techniques** – *Eldad Hadar*
- 8:00–8:30 a.m. **Cervical Deformity: Diagnosis and Treatment**  
*Thomas Mroz*
- 8:30–9:05 a.m. **Case Based Decision Making** – *Des Kwok*
- 9:05–9:15 a.m. **Transition to Lab**
- 9:15–11:30 a.m. **Lab 3: Dorsal Cervical Exposure and Craniocervical Fixation** – *Lab Faculty*
- 11:30 a.m.–12:15 p.m. **Lunch with Cases** – *Course Faculty*
- 12:15–12:30 p.m. **It's All About the Hike 2** – *Ed Benzel*
- 12:30–1:00 p.m. **Biomechanics: Back Pain, Fusion, and Motion Preservation** – *Roc Patel*
- 1:00–1:45 p.m. **SPINE BOWL 1** – *Greg Trost / Suzanne Tharin*
- 1:45–1:50 p.m. **Transition to Lab**
- 1:50–3:50 p.m. **Lab 4: Dorsal Cervical Instrumentation, Deformity Correction, and CT Exposure** – *Lab Faculty*
- 3:50–4:35 p.m. **ART STEFFEE Lecture** – *Eric Klineberg*
- 4:35–5:00 p.m. **Case Presentations** – *Mike Steinmetz*

### Saturday, June 22, 2024

- 8:00–8:15 a.m. **Short Subjects** – *Ed Benzel*
- 8:15–9:00 a.m. **Journal Club – Analyzing the Literature** – *Suzanne Tharin*
- 9:00–9:30 a.m. **How to Write an Article for Publication** – *Ed Benzel*
- 9:30–10:00 a.m. **Steve Halton Jr Memorial Lecture** – *Eric Klineberg*
- 10:00–10:30 a.m. **Surgery of the Geriatric Spine** – *Doug Orr*
- 10:30–11:00 a.m. **Cost-effectiveness in Spine Surgery** – *Nathaniel Brooks*
- 11:00 a.m.–12:00 p.m. **Saturday Morning Cases** – *Course Faculty*  
CSM / L5 Foraminal Stenosis / Neuro Intact Burst / Deformity / PJK – Can it be stopped
- 12:00–12:30 p.m. **What to Do When Neuromonitoring Changes**  
*Mike Steinmetz*
- 12:30–1:00 p.m. **It's All About the Hike** – *Ed Benzel*



## Cleveland Spine Review

### Sunday, June 23, 2024

- 8:00–8:15 a.m. **Short Subjects** – *Ed Benzel*
- 8:15–8:45 a.m. **Spine Tumors: Work-up and Treatment Options**  
*Ajit Krishnaney*
- 8:45–9:00 a.m. **Spinal Radiosurgery** – *Course Faculty*
- 9:00–9:30 a.m. **Exposure of the Cervicothoracic Junction**  
*Richard Schlenk*
- 9:30–10:00 a.m. **Dorsal Thoracic and Lumbar Instrumentation**  
*Nathaniel Brooks*
- 10:00– 10:05 a.m. **Transition to Lab**
- 10:05 a.m.–12:30 p.m. **Lab 5: Dorsal Thoracic Exposure / Instrumentation**  
*Lab Faculty*
- 12:30–1:15 p.m. **Lunch with Cases** – *Course Faculty*
- 1:15–1:45 p.m. **Lumbar Complications** – *Andrew Wakefield*
- 1:45–2:15 p.m. **Open Thoracoabdominal and Retroperitoneal Approach**  
*Roc Patel*
- 2:15–2:45 p.m. **ALIF OLIF LLIF Exposure and Technique** – *Dom Pelle*
- 2:45–2:50 p.m. **Transition to Lab**
- 2:50–4:45 p.m. **Lab 6: Ventral Exposures and Instrumentation**  
*Lab Faculty*
- 4:45–5:30 p.m. **SPINE BOWL 2** – *Greg Trost / Suzanne Tharin*

### Monday, June 24, 2024 at Lutheran Hospital

- 6:45–7:00 a.m. **Short Subjects** – *Ed Benzel*
- 7:00–7:30 a.m. **Thoracolumbar Trauma – Case Based** – *Kristen Jones*
- 7:30–8:00 a.m. **Case Studies** – *Jonathan Belding*
- 8:00–8:30 a.m. **Pediatric Scoliosis** – *Ryan Goodwin*
- 8:30–8:45 a.m. **Adult Deformity: Measurement and Classification**  
*Jason Savage*
- 8:45–9:15 a.m. **Degenerative Spondylolisthesis and Scoliosis**  
*Richard Schlenk*
- 9:15–9:30 a.m. **Iatrogenic Deformity Prevention** – *Ajit Krishnaney*
- 9:30–10:00 a.m. **Deformity Correction Techniques** – *Doug Orr*
- 10:00–10:30 a.m. **Sacropelvic Fixation** – *Abdelfattah Saoud*
- 10:30–10:35 a.m. **Transition to Lab**
- 10:35–11:50 a.m. **Lab 7: Deformity** – *Lab Faculty*
- 11:50 a.m.–12:50 p.m. **Lunch / SPINE BOWL Finale** – *Greg Trost / Suzanne Tharin*
- 12:50–1:20 p.m. **Lumbar MIS Techniques** – *Mike Steinmetz*
- 1:20–1:40 p.m. **MIS in Deformity and Trauma** – *Nathaniel Brooks*
- 1:40–1:55 p.m. **MIS TLIF** – *Vince Miele*
- 1:55–2:10 p.m. **Sports Injuries and Return to Play** – *Vince Miele*
- 2:10–2:30 p.m. **Preventing Surgical Site Infections** – *Course Faculty*
- 2:30–2:50 p.m. **Primary Spinal Infections** – *Course Faculty Course*
- 2:50–3:20 p.m. **Wrap-up** – *Ed Benzel*
- 3:20–3:25 p.m. **Transition to Lab**
- 3:25–5:00 p.m. **Lab 8: Participant Choice** – *Lab Faculty*
- 5:00 p.m. **Course Concludes**
- 6:30 p.m. **Course Reception**



## Wednesday, June 19

at InterContinental Hotel

- 7:30–8:00 a.m.      **Registration / Meet and Greet / Continental Breakfast**
- 8:00–8:10 a.m.      **Welcome and Introductions**  
*Andrea Strayer and Erin Anderson*
- 8:10–8:40 a.m.      **Spinal Anatomy** – *Andrea Strayer*
- 8:40–9:20 a.m.      **Spinal Pathology** – *Greg Trost*
- 9:20–9:50 a.m.      **Now That I Have Imaging – How to Interpret?**  
*Jenny Wu*
- 9:50–10:15 a.m.    **When to Order Imaging?** – *Shelly Schmoller*
- 10:15–11:00 a.m.   **Chronic Pain** – *Joanne Schneider*



## Thursday, June 20

at Lutheran Hospital

- 2:00–2:30 p.m.      **Optional Case Studies**  
*Erin Anderson and Andrea Strayer*

## Friday, June 21

at Lutheran Hospital

- 2:50–3:50 p.m.      **New Patient History and Exam Pearls for the New Provider** – *Kush Goyal*

## Sunday, June 23

at Lutheran Hospital

- 11:00–11:30 a.m.    **Pre-Operative Assessment** – *Shelly Schmoller*
- 3:20–3:50 p.m.      **Post-Operative Complications and Avoidance**  
*Andrea Strayer*

## Location

### Lectures and Labs:

Cleveland Clinic Lutheran Hospital  
1730 W. 25th Street, Cleveland

### Lodging: InterContinental Hotel

(Note: The lectures on Wednesday, June 19, will be held at the InterContinental Hotel. All other lectures from Thursday through Monday will take place at Cleveland Clinic Lutheran Hospital.)

## Hotel Reservations

Hotel reservations are separate from the course registration and are the responsibility of the participant. Rooms have been blocked for attendees at the following hotel:

### InterContinental Hotel

9801 Carnegie Avenue, Cleveland, OH 44106  
Telephone: 216.707.4100 or 1.855.765.8709

Visit the hotel link at [www.ccfme.org/CSR24](http://www.ccfme.org/CSR24) to reserve your room online or call the hotel directly at 216.707.4100 or 1.855.765.8709 and ask for the Cleveland Clinic Spine Course group rate of \$159 USD/night + 17.5% tax.

The cut-off date for the special rate is Wednesday, May 26, 2024.

The InterContinental Hotel is located 15 miles NE from Cleveland Hopkins International Airport.

## Registration/Refund Policy

Register at [www.ccfme.org/CSR24](http://www.ccfme.org/CSR24). The course size is limited. The registration deadline is Wednesday, June 12, 2024 at 5:00 pm EST, or until all available slots have been taken. To register after June 12, please contact Martha Tobin at 216.445.3449 or [tobinm@ccf.org](mailto:tobinm@ccf.org).

In case of cancellation, a \$50 cancellation fee will be deducted from your refund. Written notification of your cancellation is required in order to process your refund. NO REFUNDS WILL BE ISSUED AFTER JUNE 12, 2024.

## Accreditation

In support of improving patient care, Cleveland Clinic Center for Continuing Education is jointly accredited by the Accreditation Council for Continuing Medical Education (ACCME), the Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC), to provide continuing education for the healthcare team.

### CREDIT DESIGNATION

- **American Medical Association (AMA):** Cleveland Clinic Center for Continuing Education designates this live activity for a maximum of 53.0 *AMA PRA Category 1 Credits*<sup>™</sup>. Physicians should claim only the credit commensurate with the extent of their participation in the activity.  
Participants claiming CME credit from this activity may submit the credit hours to the American Osteopathic Association for Category 2 credit.
- **American Nurses Credentialing Center (ANCC):** Cleveland Clinic Center for Continuing Education designates this live activity for a maximum of 53.0 ANCC contact hours.
- **American Academy of PAs (AAPA):** Cleveland Clinic Center for Continuing Education has been authorized by the American Academy of PAs (AAPA) to award AAPA Category 1 CME credit for activities planned in accordance with AAPA CME Criteria. This activity is designated for 53.0 AAPA Category 1 CME credits. PAs should only claim credit commensurate with the extent of their participation.
- **Certificate of Participation:** A certificate of participation will be provided to other health care professionals for requesting credits in accordance with their professional boards and/or associations.

- **American Board of Surgery (ABS) Maintenance of Certification (MOC):** Successful completion of this CME activity, which includes participation in the evaluation component, enables the participant to earn up to:

- **ABOS MOC:** 53.0 Accredited CME credits in the ABOS Maintenance of Certification Program
- **ABS CC:** 53.0 Accredited CME credits toward ABS Continuous Certification Program

It is the CME activity provider's responsibility to submit participant completion information to ACCME for the purpose of granting ABOS and ABS credit. Credit will be reported within 30 days of claiming credit.

## Faculty Disclosure

The Cleveland Clinic Center for Continuing Education has implemented a policy to comply with the current Accreditation Council for Continuing Medical Education Standards for Integrity and Independence requiring mitigation of all faculty conflicts of interest. Faculty declaring a relevant financial relationship will be identified in the activity syllabus.

## Health & Safety Information

All applicable Centers for Disease Control (CDC), state, and local safety protocols will be enforced for this event. Additional attendance requirements may be implemented to ensure attendee health and safety.

## Americans with Disabilities Act

The Cleveland Clinic Center for Continuing Education fully intends to comply with the legal requirements of the Americans with Disabilities Act. If you need assistance, please notify us at least two weeks prior to the activity.

For additional information: Ms. Martha Tobin  
800.223.2273 ext. 53449 or [tobinm@ccf.org](mailto:tobinm@ccf.org) (email)

## Non-Surgeon Lectures

*Please Note: Non-surgeons attend the same lectures as the surgeons. They also begin with a pre-course session on the first day. Special, non-surgical-only lectures include:*

- Functional Anatomy and Physiology of the Spine, Spinal Cord and Peripheral Nerves
- Cervical Spine Pathology and Correlative Neuro Assessment
- Radiology Fundamentals
- Biomechanics Fundamentals
- Spinal Column Pathology and Medical Decision-Making: The Surgeon's Perspective
- Outcomes Assessment
- Lumbar Spine Pathology and Correlative Neuro Assessment
- Pre- and Post-Operative Nursing Care Considerations
- Interactive Cervical and Lumbar Case Discussions



## Have Your Family Vacation in Cleveland in 2024!

For family entertainment, Cleveland offers a wealth of fun and excitement sure to intrigue families with children of all ages. From thrilling rides at area amusement parks to fun-filled attractions and interesting museums, there's plenty to see and do year round in Greater Cleveland.

**See what Fodor's, Travel & Leisure, the LA Times and others are saying about Cleveland:** [www.thisiscleveland.com/media/cleveland-in-the-news](http://www.thisiscleveland.com/media/cleveland-in-the-news)

### Some Area Attractions

- Cedar Point Amusement Park
- Cleveland Metroparks Zoo and RainForest
- Rock and Roll Hall of Fame and Museum
- Great Lakes Science Center
- NASA John H. Glenn Research Center at Lewis Field
- Cleveland Botanical Garden
- The Steamship William G. Mather
- Cleveland Museum of Natural History
- Pro Football Hall of Fame
- Cleveland Orchestra
- Playhouse Square Center
- Cleveland Play House
- Rocket Mortgage Field House
- Progressive Field
- Greater Cleveland Aquarium



Rock and Roll Hall of Fame and Museum



Progressive Field



Great Lakes Science Center



Cleveland Zoo

# It's ALL About the Hike!



Team Rivas – Best Poker Hand



Rich's Ringers – First Team to Finish the Hike



Register online at [www.ccfme.org/CSR24](http://www.ccfme.org/CSR24)



## Cleveland Spine Review: *Hands-On 2024*

**June 19–24, 2024**

Cleveland Clinic Lutheran Hospital  
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Cleveland, OH

### Course Registration Fees

Surgeons	\$4,500
Surgical Residents/ Fellows*	\$2,950
Physiatrists and Non-Physicians	\$1,750

\*Letter from program director is required to receive discounted fee. If letter is not received two weeks prior to the activity, the full physician fee will be charged.

Course fee includes registration materials, continental breakfasts and lunches, breaks, Opening Reception, Hike Fest and Closing Reception.

### Registration and Cancellation

Register at [www.ccfme.org/CSR24](http://www.ccfme.org/CSR24).

The course size is limited. The registration deadline is Wednesday, June 12, 2024 at 5:00 pm EST, or until all available slots have been taken. To register after June 12, please contact Martha Tobin at 216.445.3449 or [tobinm@ccf.org](mailto:tobinm@ccf.org).

In case of cancellation, a \$50 cancellation fee will be deducted from your refund. Written notification of your cancellation is required in order to process your refund. NO REFUNDS WILL BE ISSUED AFTER JUNE 12, 2024.

For questions about registering online, call 216.448.8710 or email [cmeregistration@ccf.org](mailto:cmeregistration@ccf.org).

Cleveland Clinic Center for Continuing Education reserves the right to cancel or postpone activity in our sole discretion. In the unlikely event that this occurs, any registration fee(s) paid will be refunded. Be advised that Cleveland Clinic is not responsible for related costs including airline tickets, hotel costs, or any similar fee penalties incurred as a result of any trip cancellations or changes.

Register online at [www.ccfme.org/CSR24](http://www.ccfme.org/CSR24)