



# Cleveland Spine Review: *Hands-On 2022*

Presented by Cleveland Clinic Center for Spine Health

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

**July 20-25, 2022**

Cleveland Clinic Lutheran Hospital  
Hyatt Regency at the Arcade  
Cleveland, OH





# Cleveland Spine Review: *Hands-On 2022*



**Cleveland Spine Review: *Hands-On 2022*** 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.

## Register now for the July 20-25 hands-on course in Cleveland

*"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."*

- 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, Physiatrists 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.

The Ohio Board of Nursing will accept at face value the number of contact hours awarded for an educational activity that has been approved for CE by a nationally accredited system of CE approval. Nurses are able to obtain CE that has been approved or provided by a nationally recognized accreditation system of continuing education. Examples include:

- The American Nurses Credentialing Center (ANCC)
- The Accreditation Council for Continuing Medical Education (ACCME)
- The International Association for Continuing Education and Training (IACET)

*Those are verbatim evaluation comments from the 2019 attendees of Cleveland Clinic's long-running intensive CME-accredited course, Cleveland Spine Review: Hands-On. The 2020 installment of this popular offering from the Cleveland Clinic Center for Spine Health runs from Wednesday, July 20, through Monday, July 25, with lodging at the Hyatt Regency Cleveland Hotel.*

For more details, visit: <http://www.cfcme.org/spinereview22>

Register online at [www.cfcme.org/spinereview22](http://www.cfcme.org/spinereview22)

## The Art Steffee Honored Guest Lecturer

### Serena Hu, MD

Professor of Orthopaedic Surgery  
Stanford University Medical Center

### 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, MS, A/G NP, CNRN

University of Wisconsin, Madison, WI

#### Rachel Waite, CNP

Cleveland Clinic, Cleveland, OH

## Serena S. Hu, MD

### The Art Steffee Honored Guest Lecturer



Serena S. Hu, MD is a professor and the Chief of Spine Surgery Service in the Department of Orthopaedic Surgery and (by courtesy) Neurosurgery at Stanford University, School of Medicine. During the June 2019 annual Meeting of the American Orthopaedic Association

(AOA), Dr. Hu was elected as the Second President-Elect, a position which leads to President in 2022, when she will become the first woman president of the AOA. She also serves as treasurer for the Scoliosis Research Society. Dr.

Hu has been committed during her career to education, research, patient outcomes, and leadership in the field of Orthopaedic Surgery. Her clinical interest is in spinal deformity surgery and her research interests include decreasing complications after spine surgery, the effect of spine tumors on spinal stability and neurologic risk, disc degeneration and recovery, cost effectiveness of spine treatment.

Dr. Hu received her medical degree from McGill University in Montreal, Quebec, and was an intern at Beth Israel Medical Center in New York. She completed her residency at Hospital for Special Surgery, New York, NY, and did a fellowship in Spine and Scoliosis surgery at Rancho Los Amigos Medical Center in Downey, CA. Prior to moving to Stanford in 2013, she was Chief of the Spine Service at UCSF.

## 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.

# Lecturing Faculty



## Guest Faculty

**Nathaniel Brooks, MD**

University of Wisconsin Hospitals & Clinics  
Madison, WI

**Eldad Hadar, MD**

University of North Carolina  
Chapel Hill, NC

**Alex Jones, MD**

Loyola University Medical Center  
Chicago, IL

**Kristen Jones, MD**

University of Minnesota  
Minneapolis, MN

**Vince Miele, MD**

University of Pittsburgh Medical Center  
Pittsburgh, PA

**Tim Moore, MD**

MetroHealth Medical Center  
Cleveland, OH

**Russ Nockels, MD**

Loyola University Medical Center  
Chicago, IL

**Sharad Rajpal, MD**

University of Wisconsin Hospitals & Clinics  
Madison, WI

**Abdelfattah Saoud, MD, PhD**

Ain Shams University  
Cairo, Egypt

**Shelly Schmoller, PA-C**

University of Wisconsin Hospitals & Clinics  
Madison, WI

**Andrea Strayer, MS, A/G NP, CNRN**

University of Wisconsin Hospitals & Clinics  
Madison, WI

**Suzanne Tharin, MD**

Stanford University  
Stanford, CA

**Greg Trost, MD**

University of Wisconsin Hospitals & Clinics  
Madison, WI

**Andrew Wakefield, MD**

Hartford Hospital  
Hartford, CT

## Cleveland Clinic Faculty

**Erin Anderson, PA-C**

Center for Spine Health

**Lilyana Angelov, MD**

Center for Spine Health

**Edward Benzel, MD**

Center for Spine Health

**Sara Davin, PhysD**

Psychiatry and Psychology

**Russ DeMicco, MD**

Center for Spine Health

**Todd Emch, MD**

Diagnostic Radiology

**Ryan Goodwin, MD**

Orthopaedic Surgery

**Kush Goyal, 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

**Sean Nagel, MD**

Center for Neurological Restoration

**Douglas Orr, MD**

Center for Spine Health

**Dominic Pelle, MD**

Center for Spine Health

**Pablo Recinos, MD**

Brain Tumor and Neuro-Oncology Center

**Jason Savage, MD**

Center for Spine Health

**Richard Schlenk, MD**

Center for Spine Health

**Joanne Schneider, DNP**

Pain Management

**Michael Steinmetz, MD**

Center for Spine Health

**Santhosh Thomas, DO**

Center for Spine Health

**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, July 20, through Monday, July 25.
- The pre-course non-surgical lectures begin at 11:00 am on Wednesday, July 20.
- **Round-trip transportation from the Hyatt Regency Hotel at the Arcade to Cleveland Clinic Lutheran Hospital will be provided each day.**

## 5 Reasons Not to Miss Cleveland Spine Review 2022

- (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) ACCME-accredited lectures and labs. Earn more than 50 *AMA PRA Category 1 Credits™* for the course.



Register online at [www.cfcme.org/spinereview22](http://www.cfcme.org/spinereview22)

# Spine Course Agenda



Cleveland Spine Review

Wednesday, July 20, 2022

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



Thursday, July 21, 2022

- 6:45-7:00 **Short Subjects** – Ed Benzel
- 7:00-7:30 **Fundamentals of Biomechanics** – Ed Benzel
- 7:30-8:10 **Approaches to the Craniocervical Junction** – Greg Trost
- 8:10-8:30 **Endoscopic Treatment of Craniocervical Junction Pathology**  
Pablo Recinos
- 8:30-9:00 **Current Strategies in Craniocervical Stabilization** – Ajit Krishnaney
- 9:00-9:15 **It's All About the Hike** – Ed Benzel
- 9:15-9:45 **Ventral Cervical Surgery and Complications** – Thomas Mroz
- 9:45-10:15 Break
- 10:15-10:45 **Getting Out of Trouble in Cervical Spine Surgery** – Iain Kalfas
- 10:45-11:15 **Failed Back Surgery** – Doug Orr
- 11:15-12:15 **Working Lunch: Craniocervical Case** – Greg Trost/Iain Kalfas
- 12:15-12:30 **Transition to Lab**
- 12:30-3:15 **Lab 1&2: Craniocervical Junction/Ventral Cervical Surgery**  
Lab Faculty
- 3:15-3:45 **Cervical Trauma** – Tim Moore
- 3:45-4:15 **Pediatric Spine Trauma** – Kaine Onwuzulike
- 4:15-5:00 **Case Discussion** – Course Faculty

A five-minute question and answer period is included in each speaker's time.

Register online at [www.ccfcmc.org/spinereview22](http://www.ccfcmc.org/spinereview22)

## Friday, July 22, 2022

- 6:45-7:00 **Short Subjects** – Ed Benzel
- 7:00-7:30 **Instrumentation and Construct Design** – Ed Benzel
- 7:30-8:00 **Dorsal Subaxial** – Dom Pelle and Eldad Hadar
- 7:55-8:20 **Dorsal Subaxial Cervical Fixation** – Eldad Hadar
- 8:00-8:30 **Cervical Deformity: Diagnosis and Treatment** – Russ Nockels
- 8:30-9:05 **Case Based Decision Making** – Greg Trost
- 9:05-9:15 **Transition to Lab**
- 9:15-11:30 **Lab 3: Dorsal Cervical Exposure and Craniocervical Fixation**  
*Lab Faculty*
- 11:30-12:15 **Lunch with Cases** – Course Faculty
- 12:15-12:30 **It's All About the Hike 2** – Ed Benzel
- 12:30-1:00 **Biomechanics: Back Pain, Fusion, and Motion Preservation**  
*Ed Benzel*
- 1:00-1:45 **SPINE BOWL 1** – Greg Trost/Suzanne Tharin
- 1:45-1:50 **Transition to Lab**
- 1:50-3:50 **Lab 4: Dorsal Cervical Instrumentation, Deformity Correction, and CT Exposure** – Lab Faculty
- 3:50-4:35 **ART STEFFEE Lecture** – Serena Hu
- 4:35-5:00 **Case Presentations** – Mike Steinmetz

## Saturday, July 23, 2022

- 8:00-8:15 **Short Subjects** – Ed Benzel
- 8:15-9:00 **Journal Club-Analyzing the Literature** – Suzanne Tharin
- 9:00-9:30 **How to Write an Article for Publication** – Ed Benzel
- 9:30-10:00 **Steve Halton Jr Memorial Lecture** – Serena Hu
- 10:00-10:30 **Surgery of the Geriatric Spine** – Doug Orr
- 10:30-11:00 **Cost-effectiveness in Spine Surgery** – Nathaniel Brooks
- 11:00-12:00 **Saturday Morning Debates** (4 topics 15 minutes each)  
*Greg Trost, Moderator, and Course Faculty*
- 12:00-12:30 **What to Do When Neuromonitoring Changes** – Mike Steinmetz
- 12:30-1:00 **It's All About the Hike** – Ed Benzel





## Sunday, July 24, 2022

- 8:00-8:15 **Short Subjects** – Ed Benzel
- 8:15-8:45 **Spine Tumors: Work-up and Treatment Options** – Ajit Krishnaney
- 8:45-9:00 **Spinal Radiosurgery** – Lily Angelov
- 9:00-9:30 **Exposure of the Cervicothoracic Junction** – Richard Schlenk
- 9:30-10:15 **Dorsal Thoracic and Lumbar Instrumentation** – Nathaniel Brooks
- 10:15-10:20 **Transition to Lab**
- 10:20-12:30 **Lab 5: Dorsal Thoracic Exposure/Instrumentation** – Lab Faculty
- 12:30-1:15 **Lunch with Cases** – Sharad Rajpal
- 1:15-1:45 **Lumbar Complications** – Andrew Wakefield
- 1:45-2:45 **Ventral Lumbar Exposure and Techniques**  
**LIF/OLIF/LLIF/TLIF/Thoracoabdominal/Retropleural**  
Nathaniel Brooks/Dom Pelle
- 2:45-2:50 **Transition to Lab**
- 2:50-4:45 **Lab 6: Ventral Exposures and Instrumentation** – Lab Faculty
- 4:45-5:30 **SPINE BOWL 2** – Greg Trost/Suzanne Tharin

## Monday, July 25, 2022

- 6:45-7:00 **Short Subjects** – Ed Benzel
- 7:00-7:30 **Thoracolumbar Trauma-Case Based** – John Belding
- 7:30-8:00 **Pediatric Scoliosis** – Ryan Goodwin
- 8:00-8:15 **Adult Deformity: Measurement and Classification** – Jason Savage
- 8:15-8:45 **Degenerative Spondylolisthesis and Scoliosis** – Richard Schlenk
- 8:45-9:00 **Iatrogenic Deformity Prevention** – Ajit Krishnaney
- 9:00-9:30 **Deformity Correction Techniques** – Doug Orr
- 9:30-10:00 **Sacropelvic Fixation** – Abdelfattah Saoud
- 10:00-10:05 **Transition to Lab**
- 10:05-12:00 **Lab 7: Deformity** – Lab Faculty
- 12:00-1:00 **Lunch/SPINE BOWL Finale** – Greg Trost/Suzanne Tharin
- 1:00-1:30 **Lumbar MIS Techniques** – Mike Steinmetz
- 1:30-1:50 **MIS in Deformity and Trauma** – Nathaniel Brooks
- 1:50-2:05 **MIS TLIF** – Vince Miele
- 2:05-2:20 **Sports Injuries and Return to Play** – Vince Miele
- 2:20-2:40 **SI Joint Fusion** – Sharad Rajpal
- 2:40-3:00 **Preventing Surgical Site Infections** – Alex Jones
- 3:00-3:20 **Primary Spinal Infections** – Sharad Rajpal
- 3:20-3:50 **Course Wrap-up** – Ed Benzel
- 3:50-3:55 **Transition to Lab**
- 3:55-5:45 **Optional Lab 8: Participant Choice** – Lab Faculty
- 5:45 **Course Concludes**



# Non-surgeon Lectures



## Non-surgeon Lectures

Wednesday, July 20, at Hyatt Regency Hotel at the Arcade

- 8:00-8:45      **Registration/Meet and Greet/Continental Breakfast**
- 8:45-8:55      **Welcome and Introductions** – Andrea Strayer/Erin Anderson/  
Rachel Waite
- 8:55-9:25      **Spine and Peripheral Nerve Anatomy** – Andrea Strayer
- 9:25-9:55      **Spine Pathology Basics** – Al Melillo
- 9:55-10:25     **When to Order Imaging?** – Rachel Waite
- 10:25-10:50    **Now That I Have Imaging – How to Interpret** – Todd Emch
- 10:50-11:30    **Spinal Column Pathology and Medical Decision Making:  
The Surgeon's Perspectives** – Greg Trost

Thursday, July 21, at Lutheran Hospital

- 2:40-3:10      **Chronic Pain** – Joanne Schneider – Meeting Room B

Friday, July 22, at Lutheran Hospital

- 11:00-11:25    **Pre-Operative Assessment I** – Shelly Schmoller – Loop Board Room
- 15:00-15:30    **Pre-Operative Assessment II** – Shelly Schmoller – Meeting Room B

Sunday, July 24, at Lutheran Hospital

- 12:00-12:25    **Post-op Complications and Avoidance** – Andrea Strayer  
Meeting Room B

Monday, July 25, at Lutheran Hospital

- 15:35-16:00    **Conservative Treatment of Spine Disease** – Russ DeMicco  
Loop Board Room
- 16:00-16:30    **Injections** – Kush Goyal – Loop Board Room

# General Information



## Location

Lectures and Labs – Cleveland Clinic Lutheran Hospital:  
1730 W. 25th Street, Cleveland

Lodging – Hyatt Regency Cleveland Hotel at the Arcade

(Note: The lectures on Wednesday, July 20, will be held at the Hyatt Regency Cleveland 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:

### **Hyatt Regency Cleveland Hotel at the Arcade**

420 East Superior Ave., Cleveland, Ohio, USA 44114

Telephone: 216.575.1234 or 1.888.421.1442

**Visit the hotel link at [www.cfcme.org/spinereview22](http://www.cfcme.org/spinereview22) to reserve your room online or call the hotel directly at 216.575.1234 or 1.888.421.1442 and ask for the Cleveland Clinic Spine Course group rate of \$130 USD/night + 16.5% tax.**

The cut-off date for the special rate is Wednesday, June 30, 2022.

The Hyatt Regency Cleveland Hotel is located 12 miles NE from Cleveland Hopkins International Airport. Public transportation through the RTA is available from the airport to Tower City. The hotel is attached to Tower City.

## Registration/Refund Policy

Register at [www.cfcme.org/spinereview20](http://www.cfcme.org/spinereview20). The course size is limited. The registration deadline is Wednesday, July 13, 2022 at 5:00 pm EST, or until all available slots have been taken. To register after July 13, 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 AUGUST 5.

## Accreditation

The Cleveland Clinic Foundation Center for Continuing Education is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

The Cleveland Clinic Foundation Center for Continuing Education designates this live activity for a maximum of 54.0 *AMA PRA Category 1 Credits™*. 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.

The Ohio Board of Nursing will accept at face value the number of contact hours awarded for an educational activity that has been approved for CE by a nationally accredited system of CE approval. Nurses are able to obtain CE that has been approved or provided by a nationally recognized accreditation system of continuing education. Examples include:

- The American Nurses Credentialing Center (ANCC)
- The Accreditation Council for Continuing Medical Education (ACCME)
- The International Association for Continuing Education and Training (IACET)

## Faculty Disclosure

The Cleveland Clinic Foundation Center for Continuing Education has implemented a policy to comply with the current Accreditation Council for Continuing Medical Education Standards for Commercial Support requiring resolution of all faculty conflicts of interest. Faculty declaring a relevant commercial interest will be identified in the activity syllabus.

## Americans with Disabilities Act

The Cleveland Clinic Foundation Center for Continuing Education fully intends to comply with the legal requirements of the Americans with Disabilities Act. If you need assistance, please notify Shana Spade at 216.444.9380 at least two weeks prior to the activity.

For additional information: Ms. Martha Tobin – 800.223.2273 ext. 53449; (e-mail) [tobinm@ccf.org](mailto:tobinm@ccf.org) / (fax) 216.445.9908

## 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 2022!

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!





## Cleveland Spine Review: *Hands-On 2022*

**July 20-25, 2022**

Hyatt Regency Hotel at the Arcade and  
Lutheran Hospital  
Cleveland, Ohio

### Course Registration Fees

<b>Surgeons</b>	\$3850
<b>Surgical Residents/Fellows*</b>	\$2600
<b>Physiatrists and Non-Physicians</b>	\$1600

\*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, Summer Barbeque, Crawfish Boil, and Bowling Night.**

### Registration and Cancellation

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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 AUGUST 5.**

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



**Register online at [www.ccfme.org/spinereview22](http://www.ccfme.org/spinereview22)**