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

July 10-17, 2018
Cleveland Clinic Lutheran Hospital
Hyatt Regency at the Arcade
Cleveland, OH

Now Included
“Management of Spine Tumors” didactic lectures on July 10 & 11
Cleveland Spine Review: Hands-On 2018 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, 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)

Register online at www.cccmce.org/spinereview18

Comments from the past course evaluation forms...

This was a one of a kind course! It was wonderful dealing with a very friendly group of people. Everyone was so helpful and willing to teach. The course was intense during the day and the social activities were a great way to unwind from the day. The lectures followed by labs enhanced the learning process.

Another great conference. A+ for the course!

I feel that this was an excellent course, truly one of a kind. Faculty was great. There was a wealth of knowledge and everyone was friendly and did not mind explaining or talking to you.

This is by far the best course I have attended. The topics covered are all pertinent and the course is the right length. The interaction with the faculty during dissections was very valuable. The hike is a great break and occurred at the right time. It would be hard to improve the course.

Happy to work in a small group especially in the lab. Thank you for offering special nursing topics.

This is the best course ever.

Great conference and social events.
Wellington K. Hsu, MD
The Art Steffee Honored Guest Lecturer

Wellington K. Hsu, MD currently serves with distinction as the Clifford C. Raisbeck, MD, Professor of Orthopaedic Surgery at the Northwestern Feinberg School of Medicine. In addition, Dr. Hsu serves as Director of Research for the Musculoskeletal Institute at Northwestern Medicine and also holds a faculty appointment in the Department of Neurological Surgery.

Dr. Hsu’s clinical practice focuses on the use of minimally invasive procedures to treat spinal disorders. This includes the integration of technological advances such as image navigation, percutaneous instrumentation placement, and robotic surgery. He has widely popularized and internationally introduced the use of novel techniques to shorten recovery times and improve outcomes such as lateral interbody lumbar fusions, cortical pedicle screws, and posterior tubular access surgery. As a result of his clinical expertise and reputation, Dr. Hsu was named one of the Top 26 North American Spine Surgeons, by Orthopaedics This Week in 2016. He is also a past winner of the James K. Stack Northwestern Department of Orthopaedic Surgery Teaching Award, voted upon the resident physicians of the program.

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.
Course Faculty

Guest Faculty

Jonathan Belding, MD
MetroHealth Medical Center
Cleveland, OH

Wellington K. Hsu, MD
Northwestern University
Chicago, IL

Alex Jones, MD
Loyola University Medical Center
Chicago, IL

Des Kwok, BSc, MD, FRCS
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Michael Steinmetz, MD
Center for Spine Health

Gandhivarma Subramaniam, MD
Center for Spine Health

John Suh, MD
Radiation Oncology

Santhosh Thomas, DO
Center for Spine Health

Rachel Waite, CNP
Center for Spine Health

Register online at www.ccfcme.org/spinereview18
<table>
<thead>
<tr>
<th>Lab Faculty</th>
<th>Course Faculty</th>
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<tbody>
<tr>
<td>James Anderson, MD St Vincent Charity</td>
<td>James Liu, MD Moffitt Cancer Center Tampa, FL</td>
</tr>
<tr>
<td>Basem Awad, MD Mansoura University School of</td>
<td>Miguel Lopez-Gonzalez, MD Loma Linda University</td>
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<tr>
<td>Medicine Mansoura, Egypt</td>
<td>Loma Linda, CA</td>
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<tr>
<td>Deborah Benzil, MD Cleveland Clinic</td>
<td>Konstantino Margetis, MD Icahn School of Medicine</td>
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<tr>
<td>Avery Buchholz, MD Medical University of South</td>
<td>New York, NY</td>
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<tr>
<td>Carolina Charleston, SC</td>
<td>Konstantino Margetis, MD Icahn School of Medicine</td>
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<tr>
<td>Navjot Chaudhary, MD Stanford University</td>
<td>New York, NY</td>
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<tr>
<td>Dan Coughlin, MD Cleveland Clinic</td>
<td>Konstantino Margetis, MD Icahn School of Medicine</td>
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<tr>
<td>Renato Deusdara SOS Neurologico Brasilia, Brazil</td>
<td>New York, NY</td>
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<tr>
<td>Perry Dhaliwal, MD Orlando Health Neurosurgery</td>
<td>Konstantino Margetis, MD Icahn School of Medicine</td>
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<tr>
<td>Orlando, FL</td>
<td>New York, NY</td>
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<tr>
<td>Payman Farsi, MD Atieh Hospital Tehran, Iran</td>
<td>Konstantino Margetis, MD Icahn School of Medicine</td>
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<tr>
<td>Pablo Fiorillo, MD S.A.P.C.V Rosario, Argentina</td>
<td>New York, NY</td>
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<tr>
<td>Brett Freedman, MD Mayo Clinic Rochester, MN</td>
<td>Konstantino Margetis, MD Icahn School of Medicine</td>
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<tr>
<td>Yousif R. Mohammed, MD Erbil Teaching Hospital</td>
<td>New York, NY</td>
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<tr>
<td>Jeff Mullin, MD University of Virginia Charlottesville, VA</td>
<td>New York, NY</td>
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<td>Jaime Nieto, MD New York Presbyterian</td>
<td>New York, NY</td>
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<tr>
<td>Adeolu Olasunkanmi, MD University of Wisconsin</td>
<td>New York, NY</td>
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<tr>
<td>Joe Ordonez, MD Neurosurgical Associates Norfolk, VA</td>
<td>New York, NY</td>
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<tr>
<td>Kostas Paterakis, MD University of Thessaly</td>
<td>New York, NY</td>
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<tr>
<td>Nikolay Peev, MD Belfast HSC Trust Belfast,</td>
<td>New York, NY</td>
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<tr>
<td>Tiffany Perry, MD Cedars-Sinai Medical Center</td>
<td>New York, NY</td>
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<tr>
<td>Ioanis Polythorakis, MD Hygeia Hospital Athens,</td>
<td>New York, NY</td>
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<tr>
<td>Paul Porensky, MD San Diego, CA</td>
<td>New York, NY</td>
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<tr>
<td>Assem Sultan, MD Cleveland Clinic Cleveland, OH</td>
<td>New York, NY</td>
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Course Overview

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 Tuesday, July 10 through Tuesday, July 17.
- The pre-course non-surgical lectures begin at 11:30 am on Wednesday, July 11.
- Round-trip transportation from the Hyatt Regency Hotel at the Arcade to Cleveland Clinic Lutheran Hospital will be provided each day.
- Now Included – “Management of Spine Tumors” didactic lectures on July 10 & 11.

Register online at www.ccfcme.org/spinereview18
## Management of Spine Tumors

*Hyatt Regency Hotel at the Arcade*

**July 10-11, 2018**

### Tuesday, July 10, 2018

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Speaker</th>
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<tbody>
<tr>
<td>8:30</td>
<td>Welcome and Introductions</td>
<td>Lilyana Angelov</td>
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<tr>
<td>8:40</td>
<td>Introduction to Spine Tumors</td>
<td>Lilyana Angelov</td>
</tr>
<tr>
<td>9:05</td>
<td>Surgical Management of Complex Spine Tumors</td>
<td>Ajit Krishnaney</td>
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<tr>
<td>9:30</td>
<td>Case Studies</td>
<td>Lecturing Faculty</td>
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<tr>
<td>10:15</td>
<td>Break</td>
<td></td>
</tr>
<tr>
<td>10:30</td>
<td>Surgical Navigation for Spine Tumor Resection</td>
<td>Iain Kalfas</td>
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<tr>
<td>10:50</td>
<td>Minimally Invasive Options in the Management of Malignant Spinal Tumors</td>
<td>Jason Savage</td>
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<tr>
<td>11:15</td>
<td>Vertebral Augmentation in Spinal Tumors</td>
<td>Richard Schlenk</td>
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<tr>
<td>11:40</td>
<td>Case Studies</td>
<td>Lecturing Faculty</td>
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<tr>
<td>12:00</td>
<td>Lunch</td>
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<tr>
<td>13:00</td>
<td>Introduction to Primary Bone Tumors of the Spine</td>
<td>Tom Mroz</td>
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<tr>
<td>13:25</td>
<td>The Role of En Bloc Resection and Techniques in Malignant Spine Tumors</td>
<td>Michael Steinmetz</td>
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<tr>
<td>13:50</td>
<td>Instrumentation Failure in Metastatic Spine Disease</td>
<td>Douglas Orr</td>
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<tr>
<td>14:15</td>
<td>Surgical Management of Malignant Sacral Tumors</td>
<td>Abdelfattah Saoud</td>
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<tr>
<td>14:40</td>
<td>Case Studies</td>
<td>Lecturing Faculty</td>
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<tr>
<td>15:00</td>
<td>Break</td>
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<tr>
<td>15:15</td>
<td>Conventional Radiotherapy in the Management of Spine Tumors</td>
<td>John Suh</td>
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<tr>
<td>16:40</td>
<td>Introduction to Radiosurgery</td>
<td>Lilyana Angelov</td>
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<tr>
<td>16:05</td>
<td>Surgical Management of Pain in Spine Tumor Patients</td>
<td>Sean Nagel</td>
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<tr>
<td>16:30</td>
<td>Adjourn</td>
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### Wednesday, July 11, 2018

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Speaker</th>
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<tbody>
<tr>
<td>8:00</td>
<td>Management of Intradural Extramedullary Tumors</td>
<td>Edward Benzel</td>
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<tr>
<td>8:25</td>
<td>Radiosurgery for Benign Tumors</td>
<td>Sam Chao</td>
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<tr>
<td>8:50</td>
<td>Management of Intramedullary Tumors</td>
<td>Gandhivarma Subramaniam</td>
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<tr>
<td>9:15</td>
<td>Case Studies</td>
<td>Lecturing Faculty</td>
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<tr>
<td>9:40</td>
<td>Break</td>
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<tr>
<td>10:00</td>
<td>Chordomas Tumors and Other Craniocervical Junction Tumors</td>
<td>Greg Trost</td>
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<tr>
<td>10:40</td>
<td>Quality of Life and Its Impact on Terminal Patients</td>
<td>Des Kwok</td>
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<td>11:30</td>
<td>Adjourn</td>
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*Register online at www.ccfcme.org/spinereview18*
Spine Course Agenda

Wednesday, July 11, 2018

**Cleveland Spine Review**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Presenter(s)</th>
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</thead>
<tbody>
<tr>
<td>14:30-15:00</td>
<td>Welcome and Introduction</td>
<td>Edward Benzel</td>
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<tr>
<td>15:00-15:30</td>
<td>Assessment and Treatment of the Failed Back</td>
<td>Douglas Orr</td>
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<tr>
<td>15:30-16:00</td>
<td>Mimics of Spine Pathology with Cases</td>
<td>Jason Savage</td>
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<tr>
<td>16:00-16:30</td>
<td>Medical Management of Complex Spine Surgery Patients</td>
<td>Suzanne Tharin</td>
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<tr>
<td>16:30-16:50</td>
<td>Post-Op Pain Management</td>
<td>Andrea Strayer</td>
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<tr>
<td>16:50-18:30</td>
<td>Panel Discussion</td>
<td>Richard Schlenk, Santhosh Thomas, Sean Nagel, Jason Savage</td>
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<tr>
<td>18:30-19:30</td>
<td>Cases</td>
<td>Douglas Orr and Greg Trost</td>
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Thursday, July 12, 2018

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Presenter(s)</th>
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<tbody>
<tr>
<td>6:45-7:00</td>
<td>Short Subjects</td>
<td>Edward Benzel</td>
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<tr>
<td>7:00-7:30</td>
<td>Fundamentals of Biomechanics</td>
<td>Edward Benzel</td>
</tr>
<tr>
<td>7:30-8:30</td>
<td>Craniocervical Pathologies and Approaches with Cases</td>
<td>Greg Trost, Rich Schlenk, Pablo Recinos</td>
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<tr>
<td>8:30-9:00</td>
<td>Current Strategies in Cranio-cervical Stabilization</td>
<td>Iain Kalfas</td>
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<tr>
<td>9:00-9:10</td>
<td>It's All About the Hike</td>
<td>Edward Benzel</td>
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<tr>
<td>9:10-9:30</td>
<td>Case Discussion</td>
<td>Moderator: Greg Trost and Lecturing Faculty</td>
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<tr>
<td>9:30-9:45</td>
<td>Transition to Lab and Instructor Meeting</td>
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<tr>
<td>9:45-11:25</td>
<td>Lab 1: Trans-Oral and Whitesides Approach</td>
<td>Lab Faculty</td>
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<tr>
<td>11:25-12:30</td>
<td>Lunch with Cases</td>
<td>Greg Trost, Iain Kalfas</td>
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<tr>
<td>12:30-13:00</td>
<td>Ventral Approaches and Techniques/Tricks</td>
<td>Tom Mroz</td>
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<tr>
<td>13:00-13:30</td>
<td>Cervical Arthroplasty: Indications, Tips, Tricks</td>
<td>Greg Trost</td>
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<tr>
<td>13:30-14:15</td>
<td>Cervical Subaxial Trauma</td>
<td>Tim Moore</td>
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<tr>
<td>14:15-14:30</td>
<td>Peds Spine Trauma: Injury Pattern vs Adult</td>
<td>Kaine Onwuzulike</td>
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<tr>
<td>14:30-14:45</td>
<td>Case Discussion</td>
<td>Moderator: Greg Trost and Lecturing Faculty</td>
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<td>14:45-15:00</td>
<td>Transition to Lab</td>
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<tr>
<td>15:00-16:55</td>
<td>Lab 2: Ventral Exposures and Instrumentation</td>
<td>Lab Faculty</td>
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<tr>
<td>16:55-17:30</td>
<td>Cases</td>
<td>Moderator: Greg Trost and Lecturing Faculty</td>
</tr>
</tbody>
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Friday, July 13, 2018

6:45-7:00  Short Subjects – Edward Benzel
7:00-7:30  Instrumentation and Construct Design – Edward Benzel
7:30-7:55  Dorsal Decompression Techniques – Don Moore
7:55-8:20  Dorsal Subaxial Fixation – Eldad Hadar
8:20-8:50  Cervical Deformity Diagnosis and Treatment – Richard Schenk
8:50-9:30  Cases: The Decision-Making Process – Greg Trost
9:30-9:45  Transition to Lab
9:45-11:25 Lab 3: Occipito Cervical Dorsal Exposure and Instrumentation – Lab Faculty
11:25-12:20 Lunch with Cases – Eldad Hadar
12:20-12:30 It’s All About the Hike 2 – Edward Benzel
12:30-13:00 Biomechanics 301: Fusion and Motion Preservation – Edward Benzel
13:00-13:20 MIS Cervical Techniques – Michael Steinmetz
13:20-14:05 Spine Bowl – Greg Trost and Suzanne Tharin
14:05-14:15 Transition to Lab
14:15-16:15 Lab 4: Cervicothoracic Dorsal Exposure Instrumentation and Deformity – Lab Faculty
16:15-17:00 Art Steffee Lecture – Wellington Hsu
“Surgery in the High Performance Athlete”

Saturday, July 14, 2018

8:00-8:15  Short Subjects – Edward Benzel
8:15-8:45  Modifiable Factors To Prevent Spine Surgical Infections – Alex Jones
8:45-9:15  Spine Vascular Pathologies – Peter Rasmussen
9:15-9:45  Stephen Halton Jr Lecture – Wellington Hsu
“Current Concepts in Spinal Biologics”
9:45-10:05 How to Write an Article – Edward Benzel
10:05-10:25 Reading and Interpreting Articles – Suzanne Tharin
10:25-10:45 Good Article/Bad Article Examples – Suzanne Tharin
10:45-11:05 Surgery of Geriatric Spine – Douglas Orr
11:05-11:35 Point-Counterpoint: Degenerative Spondylosis/Psithesis with Stenosis: Fuse or Not – Wellington Hsu, Jason Savage
11:35-12:00 It’s All About the Hike 3 – Edward Benzel
12:00-13:00 Cases – Moderator: Doug Orr and Lecturing Faculty

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Spine Course Agenda

Sunday, July 15, 2018
8:00-8:15  Short Subjects – Edward Benzel
8:15-8:45  Spine Tumor Work-up and Treatment Options – Ajit Krishnaney
8:45-9:15  What to Do When Neuromonitoring Changes – Michael Steinmetz
9:45-10:15  Dorsal Thoracic and Lumbar Instrumentation – Nathaniel Brooks
10:15-10:30  Transition to Lab
10:30-12:25  Lab 5: Dorsal Thoracic Exposures and Instrumentation – Lab Faculty
13:30-14:00  Lumbar Complications: Avoidance and Treatment with Cases – Andrew Wakefield
14:00-14:30  Ventral Exposures and Techniques: Thoracolumbar Spine – Greg Trost
14:30-15:00  Interbody Fusion Options and Techniques with Cases – Dom Pelle
15:00-15:15  Transition to Lab
15:15-16:55  Lab 6: Ventral Exposures and Instrumentation – Lab Faculty
16:55-18:00  Spine Bowl II – Greg Trost

Monday, July 16, 2018
6:45-7:00  Short Subjects – Edward Benzel
7:00-7:30  Thoracolumbar Trauma – Jonathan Belding
7:30-8:00  Peds Spine Scoliosis: Include Lenke – Ryan Goodwin
8:00-8:30  Adult Deformity Measurement and Classification – Jason Savage
8:30-9:00  Degenerative Spondy and Scoliosis – Richard Schlenk
9:00-9:15  Iatrogenic Deformity Prevention – Ajit Krishnaney
9:15-9:45  Deformity Correction Techniques – Douglas Orr
9:45-10:05  Where Should I Stop? L5 S1 Pelvis – Abdelfattah Saoud
10:05-10:15  Transition to Lab
10:15-12:10  Lab 7: Deformity – Lab Faculty
12:10-13:00  Spine Bowl Finale – Greg Trost
13:00-13:15  MIS Lumbar Decompression – Tom Mroz
13:30-14:00  MIS Advanced Topics: Deformity and Trauma – Nathaniel Brooks
14:00-14:30  MIS: TLIF – Vince Miele
14:30-14:50  SI Fusion Patient Evaluation – Indications and Techniques – Sharad Rajpal
14:50-15:00  Transition to Lab
15:00-17:00  Lab 8: Participant Choice Lab and Cases – Lab Faculty

Tuesday, July 17, 2018
6:45-7:00  Short Subjects – Edward Benzel
7:00-7:30  Intraoperative Spinal Imaging and Radiation Exposure – Tom Mroz
7:30-8:00  Primary Spinal Infections Investigation and Treatment – Sharad Rajpal
8:00-8:30  Cost Effectiveness of Spinal Surgery – Suzanne Tharin
8:30-10:00  Case-Based Debates – Ed Benzel, Moderator
8:30-9:00  Cervical Radiculopathy – Iain Kalfas, Greg Trost, Tom Mroz
9:00-9:30  Stenosis in Degenerative Scoliosis – Doug Orr, Jason Savage
9:30-10:00  Collapsed L5-S1 w/L5 Radiculopathy – Michael Steinmetz, Richard Schlenk

Register online at www.ccfcme.org/spinereview18
Non-surgeon Lectures

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.

**Wednesday, July 11, at Hyatt Regency Hotel at the Arcade**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>11:00-11:30</td>
<td>Registration/Meet and Greet/Lunch</td>
</tr>
<tr>
<td>11:30-11:40</td>
<td>Welcome and Introductions – Andrea Strayer, Erin Anderson, and Rachel Waite</td>
</tr>
<tr>
<td>11:40-12:10</td>
<td>Spine and Peripheral Nerve Anatomy – Andrea Strayer</td>
</tr>
<tr>
<td>12:10-12:40</td>
<td>Spine Pathology Basics – Al Melillo</td>
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<tr>
<td>12:40-13:05</td>
<td>When to Order Imaging? – Rachel Waite</td>
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<tr>
<td>13:05-13:35</td>
<td>Now That I Have Imaging – How to Interpret – Todd Emch</td>
</tr>
<tr>
<td>13:35-14:10</td>
<td>Spinal Column Pathology and Medical Decision Making: The Surgeon's Perspectives – Greg Trost</td>
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**Thursday, July 12, at Lutheran Hospital**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>10:30-11:25</td>
<td>Spine Cases – Erin Anderson and Shelly Schmoller</td>
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<tr>
<td>16:30-16:55</td>
<td>Chronic Pain – Joanne Schneider</td>
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**Friday, July 13, at Lutheran Hospital**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>11:00-11:25</td>
<td>Pre-Operative Assessment – Shelly Schmoller</td>
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<tr>
<td>15:00-15:30</td>
<td>PostOp Complications and Avoidance – Andrea Stayer</td>
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</table>

**Sunday, July 15, at Lutheran Hospital**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>16:30-16:55</td>
<td>Intensive Care Management of SCI – Denise Niklasch</td>
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**Monday, July 16, at Lutheran Hospital**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>15:15-16:00</td>
<td>Conservative Treatment of Spine Disease – Russ DeMicco</td>
</tr>
<tr>
<td>16:00-16:45</td>
<td>Injections – Kush Goyal</td>
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</tbody>
</table>

Register online at www.cccfme.org/spinereview18
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 Tuesday, July 10, and Wednesday, July 11, will be held at the Hyatt Regency Cleveland Hotel. All other lectures from Thursday through Tuesday 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.cccfme.org/spinereview18 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 $116 USD/night + 16.5% tax.

The cut-off date for the special rate is Wednesday, June 20, 2018.
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.cccfme.org/spinereview18. The course size is limited. The registration deadline is Tuesday, July 3, 2018 at 5:00 pm EST, or until all available slots have been taken. To register after July 3 please contact Martha Tobin at 216.445.3449 or 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 JULY 3.

Accreditation

The Cleveland Clinic Foundation Center for Continuing Education is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.
The Cleveland Clinic Foundation Center for Continuing Education designates this live activity for a maximum of 65.25 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 / (fax) 216.445.9908
Non-Surgeon Lectures

Please Note: Non-surgeons attend the same lectures as the surgeons. They also begin with a 3-hour 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 2018!

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

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
- Quicken Loans Arena
- Progressive Field
- Greater Cleveland Aquarium

Register online at www.ccfcmce.org/spinereview18
Cleveland Spine Review: 
Hands-On 2018

July 10-17, 2018

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

Course Registration Fees

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<tbody>
<tr>
<td>Surgeons:</td>
<td>$3,850</td>
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<tr>
<td>Surgical Residents/Fellows*:</td>
<td>$2,600</td>
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<tr>
<td>Physiatrists and Non-Physicians:</td>
<td>$1,600</td>
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</tbody>
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*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

Register at www.ccfcme.org/spinereview18. The course size is limited. The registration deadline is Tuesday, July 3, 2018 at 5:00 pm EST, or until all available slots have been taken. To register after July 3 please contact Martha Tobin at 216.445.3449 or tobinm@ccf.org.

In case of cancellation, a $50 cancellation fee will be deducted from your refund if cancelled by July 3, 2018. Written notification of your cancellation is required in order to process your refund. NO REFUNDS WILL BE ISSUED AFTER JULY 3.

For questions about registering online, call 216.448.8710 or email cmeregistration@ccf.org.

Register online at www.ccfcme.org/spinereview18