Cleveland Spine Review: Hands-On 2015

Presented by Cleveland Clinic Center for Spine Health

New This Year
“Management of Spine Tumors” didactic lectures on July 14 & 15

Call For Abstracts
Details on General Information Page

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

July 14-21, 2015
Cleveland Clinic Lutheran Hospital
Hyatt Regency at the Arcade
Cleveland, OH
Cleveland Spine Review: Hands-On 2015 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 at noon 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 a continuing education activity that has been approved by a nationally recognized accreditation system of continuing education approval. Therefore 53.75 physician AMA PRA Category 1 Credits™ will be accepted for nursing credits. Nurses from other states should contact their State Board of Nursing.

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.

Register online at www.ccfcme.org/spinereview15
The Art Steffee Honored Guest Lecturer

Zoher Ghogawala, MD, FACS
Charles A. Fager Chair of Neurosurgery
Lahey Clinic, Burlington, MA

Course Directors

Lilyana Angelov, MD
Cleveland Clinic, Cleveland, OH

Edward C. Benzel, MD
Cleveland Clinic, Cleveland, OH

Marc E. Eichler, MD
Newton Centre, MA

Doug Orr, MD
Cleveland Clinic, Cleveland, OH

Richard Schlenk, MD
Cleveland Clinic, Cleveland, OH

Gregory R. Trost, MD
University of Wisconsin, Madison, WI

Planning Committee Members

Alfred Melillo, PA-C
Cleveland Clinic, Cleveland, OH

Andrea Strayer, MS, A/G NP, CNRN
University of Wisconsin, Madison, WI

Zoher Ghogawala, MD, FACS
The Art Steffee Honored Guest Lecturer

Zoher Ghogawala, MD, FACS, serves as the Charles A. Fager Chair of Neurosurgery at Lahey Clinic. He is active in the surgical treatment of patients with disorders of the spine, carotid vascular disease and pituitary brain tumors. His research focuses on comparative effectiveness, cost-effectiveness, and neurosurgical outcomes, exploring the effectiveness, benefits and sometimes harmful results of different treatment options.

Previously at Yale-New Haven Hospital and Greenwich Hospital in Greenwich, Conn, Dr. Ghogawala founded and directed the Wallace Clinical Trials Center, which measured patients’ quality of life after surgery. He is the principal investigator for several national, externally funded clinical trials, including the SLIP, a randomized clinical trial that compared fusion versus no fusion following spinal decompression. Dr. Ghogawala has recently received NIH and PCORI funding support to conduct a multi-center prospective RCT that aims to compare ventral versus dorsal surgery options for cervical spondylotic myelopathy (CSM-S Trial).

Dr. Ghogawala recently edited and published a textbook entitled, The Evidence for Neurosurgery as well as co-authored the newly updated Lumbar Fusion Guidelines. Dr. Ghogawala serves as Vice-President for the Congress of Neurological Surgeons as well as serving on the Executive Committee for the AANS/CNS Joint Section on Disorders of the Spine and Peripheral Nerves. He is currently serving as the Scientific Program Chair for the 2015 Spine Section Meeting. He is also on the Board of Directors of the Collaborative Spine Research Foundation, the North American Spine Society (NASS), and the Neuropoint Alliance. Dr. Ghogawala completed his undergraduate degree magna cum laude at Harvard University, and graduated from Harvard Medical School with high honors in 1991. He completed his residency training in neurological surgery at Massachusetts General Hospital.

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

Mark Adams, MD
Michigan Spine and Brain Institute
Saginaw, MI

Basem Awad, MD
Mansoura University Hospital
Mansoura, Egypt

Abdul A Baker, MD
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Cerebrovascular Center

Gordon Bell, MD
Center for Spine Health

Ryan Brennan, MD
Center for Spine Health

Sam Chao, MD
Radiation Oncology

Table Faculty

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Sam Chao, MD
Radiation Oncology
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 15 through Tuesday, July 21.
- The physician program begins at 4 pm on July 15 and ends at 10:15 am on July 21.
- The pre-course non-surgical lectures begin at 12 noon on July 15 and end at 10:15 am on July 21.
- Round-trip transportation from the Hyatt Regency Hotel at the Arcade to Cleveland Clinic Lutheran Hospital will be provided each day.
- Lab sessions are Non-CME.
- New This Year – “Management of Spine Tumors” didactic lectures on July 14 & 15. This is an optional add-on to the Cleveland Spine Review Course (see page 6).
Spine Course Agenda

### Optional Lectures

**Management of Spine Tumors**
Participants may attend this in addition to the Cleveland Spine Review course.

#### Tuesday, July 14

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Presenter</th>
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<tbody>
<tr>
<td>8:00</td>
<td>Welcome and Introductions</td>
<td>Lilyana Angelov</td>
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<tr>
<td>8:15</td>
<td>Introduction to Spine Tumors</td>
<td>Lilyana Angelov</td>
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<tr>
<td>8:40</td>
<td>Surgery for Spine Tumors</td>
<td>Richard Schlenk</td>
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<tr>
<td>9:05</td>
<td>Surgical Navigation for Spine Tumor Resection</td>
<td>Iain Kalfas</td>
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<tr>
<td>9:30</td>
<td>Case Studies</td>
<td>Richard Schlenk, Ian Kalfas, Ed Benzel</td>
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<tr>
<td>10:15</td>
<td>Break</td>
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<tr>
<td>10:30</td>
<td>Vertebral Augmentation in Spinal Tumors</td>
<td>Tom Mroz</td>
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<tr>
<td>10:55</td>
<td>Minimally Invasive Options in the Management of Malignant Spinal Tumors</td>
<td>Ajit Krishnaney</td>
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<tr>
<td>11:20</td>
<td>Case Studies</td>
<td>Tom Mroz, Ajit Krishnaney, Lilyana Angelov</td>
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<tr>
<td>12:00</td>
<td>Lunch</td>
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<tr>
<td>13:00</td>
<td>The Role of En Bloc Resection in Malignant Spine Tumors</td>
<td>Michael Steinmetz</td>
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<tr>
<td>13:25</td>
<td>Instrumentation Failure in Metastatic Spine Disease</td>
<td>Douglas Orr</td>
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<tr>
<td>13:50</td>
<td>Conventional Radiotherapy in the Management of Spine Tumors</td>
<td>John Suh</td>
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<tr>
<td>14:15</td>
<td>Introduction to Radiosurgery</td>
<td>Lilyana Angelov</td>
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<tr>
<td>14:40</td>
<td>Case Studies</td>
<td>Michael Steinmetz, Doug Orr, John Suh</td>
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<tr>
<td>15:30</td>
<td>Break</td>
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<tr>
<td>16:00</td>
<td>Symptomatic Spine Metastases: A Palliative Approach</td>
<td>Susan LeGrand</td>
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<tr>
<td>16:25</td>
<td>Surgical Management of Pain in Spine Tumor Patients</td>
<td>Andre Machado</td>
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<td>16:50</td>
<td>Adjourn</td>
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#### Wednesday, July 15

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<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Presenter</th>
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<tbody>
<tr>
<td>8:00</td>
<td>Cranio/Cervical Junction Tumors</td>
<td>Pablo Recinos</td>
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<tr>
<td>8:25</td>
<td>Malignant Sacral Tumors</td>
<td>Abdelfattah Saoud</td>
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<tr>
<td>8:50</td>
<td>Management of Intradural Extramedullary Tumors</td>
<td>Edward Benzel</td>
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<tr>
<td>9:15</td>
<td>Radiosurgery for Benign Tumors</td>
<td>Sam Chao</td>
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<td>9:40</td>
<td>Break</td>
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<tr>
<td>10:00</td>
<td>Case Studies</td>
<td>Abdelfattah Saoud, Greg Trost, Marc Eichler, Sam Chao</td>
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<tr>
<td>10:40</td>
<td>Surgery for Intramedullary Tumors</td>
<td>Marc Eichler</td>
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<tr>
<td>11:05</td>
<td>Management of Myxopapillary Tumors</td>
<td>Greg Trost</td>
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<tr>
<td>12:00</td>
<td>Adjourn</td>
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Cleveland Spine Review

Wednesday, July 15, 2015

Non-surgeon Lectures
12:40  Cervical Spine Pathology and Correlative Neuro Assessment – Al Melillo
13:15  Radiology Fundamentals – Paul Ruggieri
13:40  Fundamentals of Biomechanics – Marc Eichler
14:40  Spinal Column Pathology and Medical Decision Making: The Surgeon’s Perspective – Greg Trost
15:20  Discussion/Q&A
15:30  Break

Cleveland Spine Review

16:00  Welcome and Introduction – Ed Benzel
16:30  Pain Management – Santhosh Thomas
17:00  Case: Mimics of Spinal Pathology – Daniel Mazanec
17:25  Case: Psychology of Pain – Judith Scheman
17:45  Interventional Techniques to Guide Surgery – Eric Mayer
18:15  Case SCI – Doug Orr/Greg Trost/Marc Eichler
19:30  Adjourn

Thursday, July 16, 2015

6:45-7:00  Short Subjects – Ed Benzel
7:00-7:30  Fundamentals of Biomechanics – Ed Benzel
7:30-8:15  Case Craniocervical Pathologies and Approaches – Greg Trost
8:15-9:00  Craniocervical Stabilization – Ian Kalfas
9:00-9:10  It’s All About the Hike – Ed Benzel
9:10-9:25  Case Discussion – Faculty
9:25-9:30  Transition to Lab and Instructor Meeting
9:30-11:30  Lab 1: Trans Oral and Whitesides Approach
11:30-12:30  Lunch with Cases – Greg Trost/Ian Kalfas
12:30-13:00  Case Ventral Approaches and Techniques/Tricks – Thomas Mroz
13:00-13:30  Cervical Arthroplasty – Greg Trost
13:30-13:45  Break
13:45-14:15  Cervical Subaxial Trauma – Tim Moore
14:15-14:30  Peds Spine Trauma: Injury Pattern vs Adult – Tsulee Chen
14:30-14:45  Case Discussion – Faculty
14:45-15:00  Transition to Lab
15:00-17:00  Lab 2: Ventral Exposures and Instrumentation
17:00-17:30  Cases – Faculty
**Spine Course Agenda**

**Friday, July 17, 2015**
- 6:45-7:00 Short Subjects – Ed Benzel
- 7:00-7:30 Instrumentation and Construct Design – Ed Benzel
- 7:30-7:50 Case Cervical Laminoplasty: Indications and Techniques – Gordon Bell
- 7:50-8:20 Dorsal Subaxial Fixation – Eldad Hadar
- 8:20-8:50 Cervical Deformity Diagnosis and Treatment – Russ Nockels
- 9:20-9:30 Transition to Lab
- 9:30-11:30 Lab 3: Dorsal Exposure and Instrumentation and Deformity
- 11:30-12:20 Lunch with Cases – Eldad Hadar
- 12:20-12:30 It’s All About the Hike 2 – Ed Benzel
- 12:30-13:00 Biomechanics 301 Back Pain: Fusion and Motion Preservation – Ed Benzel
- 13:00-13:50 Case-based Cervical Complications and Avoidance – Rakesh Patel
- 13:50-14:00 Transition to Lab
- 14:00-16:00 Lab 4: Dorsal Exposure Instrumentation and Deformity
- 16:00-16:45 Art Steffee Lecture – Zoher Ghogawala
- 16:45-17:30 Spine Bowl – Greg Trost, Marc Eichler

**Saturday, July 18, 2015**
- 8:00-8:15 Short Subjects – Ed Benzel
- 8:15-8:45 Spine Surgical Infection – Alex Jones
- 8:45-9:15 Spine Vascular Pathologies – Mark Bain
- 9:15-9:45 Steve Halton Jr Lecture – Zoher Ghogawala
- 9:45-10:15 Panel: How to Look at the Literature – Daniel Resnick
- 10:15-10:45 Surgery of the Geriatric Spine – Doug Orr
- 10:45-11:05 Positioning for Spine Surgery: Tricks of the Trade – Nevan Baldwin
- 11:05-11:35 SI Joint Fusion: Show Me the Evidence – Sharad Rajpal
- 11:35-12:00 It’s All About the Hike – Ed Benzel
- 12:00-13:00 Cases – Faculty
### Sunday, July 19, 2015

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>8:00-8:15</td>
<td><strong>Short Subjects</strong> – Ed Benzel</td>
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<tr>
<td>8:15-8:45</td>
<td><strong>Case Spine Tumor Work-up and Treatment Options</strong> – Ajit Krishnaney</td>
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<td>8:45-9:15</td>
<td><strong>Spinal Radiosurgery</strong> – Lilyana Angelov</td>
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<td>9:15-9:30</td>
<td><strong>Case Resolution</strong> – Faculty</td>
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<tr>
<td>9:30-10:00</td>
<td><strong>Case Exposures and Techniques: Cervicothoracic Junction</strong> Richard Schlenk</td>
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<td>10:00-10:30</td>
<td><strong>Dorsal Thoracic and Lumbar Instrumentation</strong> – Michael Steinmetz</td>
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<tr>
<td>10:30-10:45</td>
<td><strong>Transition to Lab</strong></td>
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<tr>
<td>10:45-12:15</td>
<td><strong>Lab 5: Dorsal Thoracic Exposures and Instrumentation</strong></td>
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<tr>
<td>12:45-13:30</td>
<td><strong>Working Lunch with Cases Patient Selection for Fusion</strong> – Marc Eichler</td>
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<td>13:30-14:00</td>
<td><strong>Case based Lumbar Complications Avoidance and Treatment</strong> Andrew Wakefield</td>
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<td>14:00-14:30</td>
<td><strong>Ventral Exposures and Techniques: Thoracolumbar Spine</strong> – Marc Eichler</td>
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<td>14:30-14:50</td>
<td><strong>Case Interbody Fusion Options and Techniques</strong> – Richard Schlenk</td>
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<td>14:50-15:00</td>
<td><strong>Transition to Lab</strong></td>
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<tr>
<td>15:00-17:00</td>
<td><strong>Lab 6 Ventral Exposures and Instrumentation</strong></td>
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<tr>
<td>17:00-18:00</td>
<td><strong>Spine Bowl II</strong> – Greg Trost, Marc Eichler</td>
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### Monday, July 20, 2015

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<tr>
<td>6:45-7:00</td>
<td><strong>Short Subjects</strong> – Ed Benzel</td>
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<td>7:00-7:30</td>
<td><strong>Thoracolumbar Trauma</strong> – Tim Moore</td>
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<td>7:30-8:15</td>
<td><strong>Scoliosis: Measurement Modifiers and Surgical Indications</strong> – Russ Nockels</td>
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<td>8:15-8:45</td>
<td><strong>Degenerative Spondy and Scoliosis</strong> – Richard Schlenk</td>
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<td>8:45-9:00</td>
<td><strong>Iatrogenic Deformity Prevention</strong> – Ajit Krishnaney</td>
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<td>9:00-9:30</td>
<td><strong>Deformity Correction Techniques</strong> – Doug Orr</td>
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<td>9:30-10:00</td>
<td><strong>Lumbosacral Fixation Techniques</strong> – Abdelfattah Saoud</td>
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<td>10:00-10:15</td>
<td><strong>Transition to Lab</strong></td>
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<td>10:15-12:15</td>
<td><strong>Lab 7 Deformity</strong></td>
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<tr>
<td>12:15-13:00</td>
<td><strong>Spine Bowl Finale</strong> – Faculty</td>
</tr>
<tr>
<td>13:00-13:30</td>
<td><strong>MIS Decompression Techniques</strong> – Thomas Mroz</td>
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<tr>
<td>13:30-14:00</td>
<td><strong>MIS Fusion Techniques</strong> – Doug Orr</td>
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<td>14:00-14:30</td>
<td><strong>MIS in Deformity and Trauma</strong> – Doug Orr</td>
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<td>14:30-15:00</td>
<td><strong>Ventral Augmentation Options and Evidence</strong> – Vincent Miele</td>
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<td><strong>Transition to Lab</strong></td>
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<tr>
<td>15:05-18:00</td>
<td><strong>Lab 8 MIS Lab</strong></td>
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</tbody>
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### Tuesday, July 21, 2015

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>6:45-7:00</td>
<td><strong>Short Subjects</strong> – Ed Benzel</td>
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<tr>
<td>7:00-7:30</td>
<td><strong>Intraoperative Spinal Imaging and Radiation Exposure</strong> – Thomas Mroz</td>
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<td>7:30-8:00</td>
<td><strong>Cost Effectiveness of Spinal Surgery</strong> – Nathaniel Brooks</td>
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<td>8:00-8:30</td>
<td><strong>Primary Spinal Infections Investigation and Treatment</strong> – Rakesh Rajpal</td>
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<td>8:30-9:00</td>
<td><strong>Bone and Bone Substitutes</strong> – Thomas Mroz</td>
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<td>9:00-9:30</td>
<td><strong>Assessment and Treatment of the Failed Back</strong> – Doug Orr</td>
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<tr>
<td>9:30-10:00</td>
<td><strong>Swimming with the Sharks</strong> – Don Moore</td>
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</table>
Non-surgeon Lectures

Wednesday, July 15, 2015, at Hyatt Regency Hotel at the Arcade

11:00-12:00  Registration/Meet & Greet/Lunch
12:00-12:10  Welcome and Introductions – Andrea Strayer and Al Melillo
12:40-13:15  Cervical Spine Pathology and Correlative Neuro Assessment
             Al Melillo
13:40-14:40  Fundamentals of Biomechanics – Marc Eichler
14:40-15:20  Spinal Column Pathology and Medical Decision Making:
             The Surgeon’s Perspective – Greg Trost
15:20-15:30  Discussion/Q&A
15:30-16:00  Break

Thursday, July 16, 2015 at Lutheran Hospital

16:30-17:00  Non-surgeon Lecture: Pre and Postoperative Care – Al Melillo

Friday, July 17, 2015 at Lutheran Hospital

11:00-11:30  Non-surgeon Lecture: Implementing Evidence Based Practice
             Denise Niklasch
15:30-16:00  Non-surgeon Lecture: Intensive Care Management of SCI
             Denise Niklasch

Sunday, July 19, 2015 at Lutheran Hospital

16:00-17:00  Non-surgeon Lecture: Cervical Cases – Shelly Schmoller

Monday, July 20, 2015 at Lutheran Hospital

15:00-15:30  Non-surgeon Lecture: Lumbar Anatomy Correlative Exam – Erin Anderson
15:30-16:00  Non-surgeon Lecture: Lumbar Cases – Shelly Schmoller
16:00-17:00  Non-surgeon Lecture: Postoperative Pain Management – Andrea Strayer
General Information

Call For Abstracts
Abstracts for oral presentation now being accepted.
Posters will be on display throughout the course with dedicated sessions for oral presentation. Notification of acceptance, presentation details and poster size will be sent on or before June 15, 2015.

Abstract Requirements
• Deadline for Submission: June 1, 2015. One entry per presenter.
• 250 word limit
• Send via email to tobinm@ccf.org

Looking ahead next year to the 2016 Cleveland Spine Review
Due to the Republican National Convention taking place in Cleveland July 18-20, 2016, the Cleveland Spine Review will be held August 10-16, 2016. The locations will remain the same. Mark your calendars now to attend in 2016!

Location
Lectures and Labs – Cleveland Clinic Lutheran Hospital:
1730 W. 25th Street, Cleveland
Lodging – Hyatt Regency Cleveland Hotel at the Arcade
(Note: The opening lectures on Wednesday, July 15, 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
$110 plus tax, per night
Telephone: 216.575.1234 or 1.888.421.1442
Visit the hotel link at www.cccfcme.org/spinereview15 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.
The cut-off date for the special rate is Monday, June 24, 2015.
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.

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 53.75 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.

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.

Special Needs
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 Monet Smith 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) 216.445.4527

Registration/Refund Policy
Register at www.cccfcme.org/spinereview15. The course size is limited. The registration deadline is Wednesday, July 1, 2015 at 5:00 PM EST, or until all available slots have been taken. To register after July 1, 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 1.

Register online at www.cccfcme.org/spinereview15
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 2015!

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

Rock and Roll Hall of Fame and Museum

Progressive Field

Great Lakes Science Center

Cleveland Zoo
Cleveland Spine Review: Hands-On 2015

July 14-21, 2015

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

Name ___________________________________________________________________ Degree _____________
First M.I. Last
Company/Organization _________________________________________________________________________
Address ______________________________________________________________________________________
City, State, Country, Zip Code __________________________________________________________________
Phone # ______________________________________ Fax # _________________________________________
E-mail __________________________________________ Specialty _____________________________

SPECIALTY
Surgeon:    □ Neuro    □ Ortho
Non-Surgeon: □ Nurse    □ Advance Practice Nurse    □ PA    □ Physiatrist    □ Other___________
Non-Surgeon Practice Environment: □ OR    □ Outpatient    □ Inpatient

Course Registration Fees
(please check appropriate box)

☒ Surgeons:                           $3,750
☒ Surgical Residents/Fellows:            $2,500
☒ Physiatrists and Non-Physicians:        $1,500

(Conditional) Managing Spine Tumors Lectures
☒ If attending Cleveland Spine Review
☒ If NOT attending Cleveland Spine Review $75 $150

Course fee includes registration materials, continental breakfasts and lunches, Opening Reception, Crawfish Boil, and Bowling Night.
☒ I require a vegetarian meal.

PAYMENT OPTIONS
☒ Credit Card: If you would like to register using a credit card, please go to www.ccfcme.org/spinereview15 or call 216.448.0777 where it will be handled directly by a certified processor.

☒ Check: Make check payable and mail to The Cleveland Clinic Educational Foundation, PO Box 931653, Cleveland, OH 44193-1082

Total Amount Paid $_______________

Mail completed registration form and check to:
Cleveland Clinic Educational Foundation, P.O. Box 931653, Cleveland, OH 44193-1082

Register online at www.ccfcme.org/spinereview15