

Preliminary Program

Principles and Treatment of Spinal Disorders for Residents

September 8 – 9, 2017

The Renaissance Hotel

Phoenix, Arizona

A photograph showing three individuals, two men and one woman, focused on a task. They are gathered around a table, working on a model of a spine. The man on the left, wearing a white shirt and glasses, is leaning over the model. The man in the center, wearing a blue and white checkered shirt and glasses, is also looking down. The woman on the right, wearing a pink hijab, glasses, and a denim jacket, is using a blue and black power drill to work on the model. They are all wearing lanyards with identification badges. The background is slightly blurred, showing what appears to be a conference setting.

Advancing
spine care
worldwide



Our purpose and responsibility is to shape our members' skills and understanding of spine principles; to establish new values and incentives for the creation of knowledge, the sharing of wisdom and the development of new tools and techniques that improve patient care, patient outcomes and the cost effectiveness of spine surgery.

Excellence in Spine

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Message from AOSpine North America Chairperson

Welcome to AOSpine North America!

I am pleased to introduce you to this unique and exciting organization and invite you to play an active role in advancing interdisciplinary spine care, education and research through the many opportunities afforded by AOSpine North America. We pride ourselves in being part of the largest global, academic, interdisciplinary fellowship of spine surgeons.

The AO ('Arbeitsgemeinschaft Osteosynthesefragen') is a noncommercial, surgeon-led, organization. It is a fellowship of like-minded surgeons spanning the globe dedicated to education, research and advancement of surgical care. Based on the concepts and philosophies of the AO, AOSpine International (AOSI) has enjoyed significant growth and success in membership and activities, and as one of the five regions making up AOSI, AOSpine North America has likewise enjoyed this success. AOSI oversees global educational and research offerings, from coordinating international research projects and Knowledge Forums (which focus on knowledge creation, direct translation, and adoption through our educational programs), to the creation of a worldwide spine curriculum and an outstanding faculty development program. In addition, AOSI runs the annual Global Spine Congress and publishes of The Global Spine Journal, both dedicated to global knowledge dissemination.

Activities of AOSpine North America include regional educational events delivered by leaders in their fields. In addition, there is a multicenter clinical research network with award-winning projects, and North America's largest peer-reviewed fellowship program. Along with our parent organization, AO North America, we feature a well-established Continuing Medical Education organization with common commitment to the sound AO principles. We are part of the "AO Family".

These are very exciting times. Dramatic challenges to health care and expectations around patient care delivery are mandating a shift in the way we practice. Evidenced-based, multidisciplinary care is replacing previous models of practice and this is an area where AOSpine contributes significant educational value. We hope you will enjoy your exposure to AOSpine North America and join us in our further development as an active participant!



Darrel S Brodke, MD

Chairperson, AOSpine North America

CME Mission Statement

The Continuing Medical Education (CME) mission of AO North America (AONA®) is to provide comprehensive multidisciplinary needs-based education to surgeons, fellows, and residents in the specialties of orthopedic, hand, craniomaxillofacial, spine, neurosurgery, and veterinary surgery in the areas of trauma (i.e., operative reduction and fixation), degenerative disorders, deformities, tumors and reconstruction.

Expected results of AONA's CME activities for surgeons, fellows, and residents are to:

- Increase their knowledge base and surgical skill level
- Improve competence by applying advances of knowledge in patient care in the areas of trauma, degenerative disorders, deformities, tumors, and reconstructive surgical techniques
- Address practice performance gaps by improving management of all aspects of musculoskeletal injuries and disorders (i.e., pre-operative planning to post-operative care)





Course Overview

AOSpine North America Principles courses are intended to address the additional training needs and practice gaps of the orthopedic and neurological spine residents. This course is designed to offer residents the opportunity to learn the AO principles of anatomic reduction of fracture fragments; stable fixation to ensure proper healing while allowing the surrounding tissue to strengthen; atraumatic surgical technique to preserve the blood supply to the bone fragments and soft tissue; and early, pain-free mobilization so the patient can be returned to function as soon as possible as they apply to spinal surgery. The course will also provide basic exposure to spinal disorders from expert teaching faculty from both orthopedic and neurological spine surgery.

The modular course format will focus on the spine patient in a conceptual case study and practical exercise format. Participants in small groups will rotate through each module over the 2 day period. All participants are encouraged to bring HIPAA-compliant cases for discussion to maximize their experience at the course.

Target Audience

Enrollment in the Course is limited to orthopedic and neurological surgery residents PGY levels 1-8.

Learner Objectives

At the conclusion of this Course, the participant should be able to:

- Perform a complete neurological assessment and identify potentially unstable spinal injuries
- Order appropriate imaging
- Classify the injury according to fracture morphology, instability, and neurological status
- Describe the best operative and nonoperative treatment option for each patient based on the available evidence
- Reduce/decompress/stabilize appropriately
- Demonstrate the basic knowledge of the principles of bone and soft tissue healing
- Identify the anatomic and biomechanical issues in spinal fixation
- Collaborate in the rehabilitation plan for the patient
- Identify and manage postinjury and postoperative complications
- Apply psychomotor skills developed during practical exercises into surgical practice.

Accreditation



AO North America is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

AONA has been resurveyed by the Accreditation Council for Continuing Medical Education (ACCME) and awarded **Accreditation with Commendation**.

Designation Statement

AO North America designates this live educational activity for a maximum of 13 *AMA PRA Category 1 Credits™*. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

For Canadian Based Physicians Attending AONA Courses

All live conferences or live courses held outside of Canada can be reported as accredited group learning activities under Section 1 of the MOC Program if they are developed by a university, academy, college, academic institution or physician organization.

Courses sponsored by AO North America meet the criteria of the Royal College of Physicians and Surgeons for accredited group learning activities.

CME for Neurosurgeons

The AANS manually tracks credits earned from neurosurgery Category 1 AMA PRA activities not sponsored or joint-sponsored by the AANS. To add these credits to your file, please forward a copy of your certificate of attendance to the AANS for processing. Please allow 4-6 weeks for processing. Please mail, fax or email copies to: AANS

Member Services Department
5550 Meadowbrook Drive
Rolling Meadows, IL 6008
Fax: 847-378-0638
Email: cme@aans.org

Faculty

The faculty of this Course is composed of international surgeons distinguished in the field of operative fracture care.

Course Co-Chairpersons

Gurvinder S. Deol, MD

Assistant Clinical Professor

Department of Orthopaedics

University of North Carolina School of Medicine

WakeMed Health and Hospitals

Raleigh, North Carolina

W. Bradley Jacobs, MD, FRCSC

Assistant Professor

Division of Neurosurgery

Calgary Spine Program

University of Calgary

Calgary, Alberta

Education Advisor

Robert Molinari, MD

Professor

Chief, Division of Spinal Surgery

Department of Orthopaedic Surgery

University of Rochester

Rochester, New York



Invited Faculty *(continued)*

Ali A. Baaj, MD

Assistant Professor of Neurosurgery
Adult and Pediatric Spine Surgery
Weill Cornell Medical College
New York Presbyterian Hospital
New York, New York

Richard Bransford, MD

Associate Professor
Spine Fellowship Director
Department of Orthopedics and Sports Medicine
Department of Neurosurgery
Harborview Medical Center
University of Washington
Seattle, Washington

John C. France, MD

Professor, Orthopaedics & Neurosurgery
Vice Chairman and Chief of Spine Surgery
Department of Orthopaedic Surgery
West Virginia University
Morgantown, West Virginia

Christina L. Goldstein, BSc, MD, FRCSC

Assistant Professor
Director of Spine Research
Department of Orthopaedics
University of Missouri
Columbia, Missouri

Gregory Grabowski, MD

Associate Professor
University of South Carolina School of Medicine
Residency Program Director
Palmetto Health USC Orthopedic Center
Columbia, South Carolina

Gregory Hawryluk, MD, PhD, FRCSC

Assistant Professor of Neurosurgery
Director of Neurosurgical Critical Care
Salt Lake City, Utah

Eric Massicotte, MD, MSc, FRCSC

Associate Professor
University of Toronto
Toronto, Ontario

James M. Schuster, MD, PhD

Associate Professor of Neurosurgery
Director of Neurotrauma
Chief of Service, Neurosurgery
Penn Presbyterian Medical Center
University of Pennsylvania
Philadelphia, Pennsylvania

Daniel Sciubba, MD

Professor of Neurosurgery, Oncology
and Orthopaedic Surgery
Director, Spine Research
Johns Hopkins Hospital
Baltimore, Maryland

Suzanne Tharin, MD, PhD

Assistant Professor
Department of Neurosurgery
Stanford University
& Palo Alto VA
Stanford, California

Faculty list subject to change.

Preliminary Program

Friday, September 8, 2017

Time	Agenda Item
08:00 – 08:30	Welcome / Course Objectives / AOSpine / Pre-Assessment
08:30 – 08:40	Travel to Modules
	SESSION I
08:40 – 10:10	MODULE A: CERVICAL TRAUMA – Case 1: OC-C1 Dislocation – Case 2: C2 Fracture (Odontoid) – Case 3: Cervical Facet Dislocation
08:40 – 10:10	MODULE B: THORACOLUMBAR DEFORMITY – Case 1: Deformity Principles – Case 2: Thoracolumbar Kyphosis – Case 3: Degenerative Scoliosis with Back and Leg Pain
08:40 – 10:10	MODULE C: THORACOLUMBAR TRAUMA – Case 1: T12 B2 Injury without Deficit – Case 2: L1 A3 Injury with Conus Medullaris Syndrome – Case 3: T6 C2 Injury
08:40 – 10:10	MODULE D: CERVICAL SPINE LAB – A. Cervical Lateral Mass Screws – B. C2 Pedicle Screws – C. C1 Lateral Mass Screws
10:10 – 10:30	Coffee Break / Travel to Modules
	SESSION II
10:30 – 12:00	MODULE A: CERVICAL TRUAMA – Case 1: OC-C1 Dislocation – Case 2: C2 Fracture (Odontoid) – Case 3: Cervical Facet Dislocation
10:30 – 12:00	MODULE B: THORACOLUMBAR DEFORMITY – Case 1: Deformity Principles – Case 2: Thoracolumbar Kyphosis – Case 3: Degenerative Scoliosis with Back and Leg Pain

Preliminary Program

Friday, September 8, 2017 (continued)

Time	Agenda Item
10:30 – 12:00	MODULE C: THORACOLUMBAR TRAUMA – Case 1: T12 B2 Injury without Deficit – Case 2: L1 A3 Injury with Conus Medullaris Syndrome – Case 3: T6 C2 Injury
10:30 – 12:00	MODULE D: CERVICAL SPINE LAB – A. Cervical Lateral Mass Screws – B. C2 Pedicle Screws – C. C1 Lateral Mass Screws
12:00 – 12:30	Lunch
12:30 – 13:00	Group Lecture: Radiographic and Clinical Assessment of Adult Scoliosis
13:00 – 13:10	Travel to Modules
	SESSION III
13:10 – 14:40	MODULE A: CERVICAL TRAUMA – Case 1: OC-C1 Dislocation – Case 2: C2 Fracture (Odontoid) – Case 3: Cervical Facet Dislocation
13:10 – 14:40	MODULE B: THORACOLUMBAR DEFORMITY – Case 1: Deformity Principles – Case 2: Thoracolumbar Kyphosis – Case 3: Degenerative Scoliosis with Back and Leg Pain
13:10 – 14:40	MODULE C: THORACOLUMBAR TRAUMA – Case 1: T12 B2 Injury without Deficit – Case 2: L1 A3 Injury with Conus Medullaris Syndrome – Case 3: T6 C2 Injury
13:10 – 14:40	MODULE D: CERVICAL SPINE LAB – A. Cervical Lateral Mass Screws – B. C2 Pedicle Screws – C. C1 Lateral Mass Screws
14:40 – 15:00	Coffee Break / Travel to Modules

Preliminary Program

Friday, September 8, 2017 (continued)

Time	Agenda Item
	SESSION IV
15:00 – 16:30	MODULE A: CERVICAL TRAUMA – Case 1: OC-C1 Dislocation – Case 2: C2 Fracture (Odontoid) – Case 3: Cervical Facet Dislocation
15:00 – 16:30	MODULE B: THORACOLUMBAR DEFORMITY – Case 1: Deformity Principles – Case 2: Thoracolumbar Kyphosis – Case 3: Degenerative Scoliosis with Back and Leg Pain
15:00 – 16:30	MODULE C: THORACOLUMBAR TRAUMA – Case 1: T12 B2 Injury without Deficit – Case 2: L1 A3 Injury with Conus Medullaris Syndrome – Case 3: T6 C2 Injury
15:00 – 16:30	MODULE D: CERVICAL SPINE LAB – A. Cervical Lateral Mass Screws – B. C2 Pedicle Screws – C. C1 Lateral Mass Screws
16:30 – 17:30	Reception



Preliminary Program

Saturday, September 9, 2017

Time	Agenda Item
	SESSION V
07:30 – 08:55	MODULE A: LUMBAR DEGENERATIVE DISEASE – Case 1: L4 Disk Herniation – Case 2: Lumbar Spinal Stenosis – Case 3: Degenerative and Isthmic Spondylolisthesis
07:30 – 08:55	MODULE B: CERVICAL DEGENERATIVE DISEASE – Case 1: C5/6 Disk Herniation with Radiculopathy (anterior and posterior options) – Case 2: Cervical Stenosis with Myeloradiculopathy – Case 3: Multilevel Cervical Stenosis with Myelopathy and Kyphosis
07:30 – 08:55	MODULE C: TUMOR / INFECTION – Case 1: Hematogenous Osteomyelitis – Case 2: Metastatic Tumor – Case 3: Primary Tumor
07:30 – 08:55	MODULE D: LUMBAR SPINE LAB – A. Lumbar Pedicle Screws – B. Thoracic Pedicle Screws – C. Pelvic Fixation
08:55 – 09:05	Travel to Modules
	SESSION VI
09:05 – 10:30	MODULE A: LUMBAR DEGENERATIVE DISEASE – Case 1: L4 Disk Herniation – Case 2: Lumbar Spinal Stenosis – Case 3: Degenerative and Isthmic Spondylolisthesis
09:05 – 10:30	MODULE B: CERVICAL DEGENERATIVE DISEASE – Case 1: C5/6 Disk Herniation with Radiculopathy (anterior and posterior options) – Case 2: Cervical Stenosis with Myeloradiculopathy – Case 3: Multilevel Cervical Stenosis with Myelopathy and Kyphosis

Preliminary Program

Saturday, September 9, 2017 (continued)

Time	Agenda Item
09:05 – 10:30	MODULE C: TUMOR / INFECTION – Case 1: Hematogenous Osteomyelitis – Case 2: Metastatic Tumor – Case 3: Primary Tumor
09:05 – 10:30	MODULE D: LUMBAR SPINE LAB – A. Lumbar Pedicle Screws – B. Thoracic Pedicle Screws – C. Pelvic Fixation
10:30 – 10:50	Coffee Break / Travel to Modules
	SESSION VII
10:50 – 12:15	MODULE A: LUMBAR DEGENERATIVE DISEASE (with lunch) – Case 1: L4 Disk Herniation – Case 2: Lumbar Spinal Stenosis – Case 3: Degenerative and Isthmic Spondylolisthesis
10:50 – 12:15	MODULE B: CERVICAL DEGENERATIVE DISEASE (with lunch) – Case 1: C5/6 Disk Herniation with Radiculopathy (anterior and posterior options) – Case 2: Cervical Stenosis with Myeloradiculopathy – Case 3: Multilevel Cervical Stenosis with Myelopathy and Kyphosis
10:50 – 12:15	MODULE C: TUMOR / INFECTION (with lunch) – Case 1: Hematogenous Osteomyelitis – Case 2: Metastatic Tumor – Case 3: Primary Tumor
10:50 – 12:15	MODULE D: LUMBAR SPINE LAB (with lunch) – A. Lumbar Pedicle Screws – B. Thoracic Pedicle Screws – C. Pelvic Fixation
12:15 – 12:25	Travel to Modules

Preliminary Program

Saturday, September 9, 2017 (continued)

Time	Agenda Item
	SESSION VIII
12:25 – 13:50	MODULE A: LUMBAR DEGENERATIVE DISEASE – Case 1: L4 Disk Herniation – Case 2: Lumbar Spinal Stenosis – Case 3: Degenerative and Isthmic Spondylolisthesis
12:25 – 13:50	MODULE B: CERVICAL DEGENERATIVE DISEASE – Case 1: C5/6 Disk Herniation with Radiculopathy (anterior and posterior options) – Case 2: Cervical Stenosis with Myeloradiculopathy – Case 3: Multilevel Cervical Stenosis with Myelopathy and Kyphosis
12:25 – 13:50	MODULE C: TUMOR / INFECTION – Case 1: Hematogenous Osteomyelitis – Case 2: Metastatic Tumor – Case 3: Primary Tumor
12:25 – 13:50	MODULE D: LUMBAR SPINE LAB – A. Lumbar Pedicle Screws – B. Thoracic Pedicle Screws – C. Pelvic Fixation
13:50 – 14:10	Post Assessment Test / Closing Remarks

Preliminary program subject to modification.

Acknowledgement:

AO North America gratefully acknowledges in-kind support for equipment and technical staff from DePuy Synthes.

AO North America gratefully acknowledges funding for its educational activities from the AO Foundation. The AO Foundation receives funding for education from Synthes GmbH.

Presentation Information

Faculty Disclosure

It is the policy of AO North America to abide by the Accreditation Council for Continuing Medical Education Standards for Commercial Support. Standard 2: "Disclosures Relevant to Potential Commercial Bias and Relevant Financial Relationships of Those with Control over CME Content," requires all planners, including course directors, chairs, and faculty, involved in the development of CME content to disclose their relevant financial relationships prior to participating in the activity. Relevant financial relationships will be disclosed to the activity audience. The intent of the disclosure is not to prevent faculty with a relevant financial or other relationships from teaching, but to provide participants with information that might be of importance to their evaluation of content. All potential conflicts of interest have been resolved prior to the commencement of this activity.

Conflict of Interest Resolution Statement

When individuals in a position to control or influence the development of the content have reported financial relationships with one or more commercial interests, AO North America utilizes a process to identify and resolve potential conflicts to ensure that the content presented is free of commercial bias.

Off-Label / Experimental Discussions

Some medical devices used for teaching purposes and/or discussed in AO North America's educational activities may have been cleared by the FDA for specific uses only or may not yet be approved for any purpose. Faculty may discuss off-label, investigational, or experimental uses of products/devices in CME certified educational activities. Faculty have been advised that all recommendations involving clinical medicine in this CME activity are based on evidence that is accepted within the profession of medicine as adequate justification for their indications and contraindications in the care of patients. All scientific research referred to, reported or used in this CME activity in support or justification of a patient care recommendation conforms to the generally accepted standards of experimental design, data collection and analysis.

Liability Statement

AO North America faculty and staff assume no personal liability for the techniques or the use of any equipment and accessories used for teaching purposes in the laboratory. The certificate provided pertains only to the participants' completion of the course and does not, in any way, attest to the proficiency of the participants' clinical experience.

AONA Disclaimer

AONA does not endorse nor promote the use of any product/device of commercial entities. Equipment used in this course is for teaching purposes only with the intent to enhance the learning experience.

General Information

Registration Fees

The tuition for this course has been waived for all orthopedic and neurological spine surgery residents. However, there is a no-show fee of \$100.00 that will be charged to your credit card in the event that you do not cancel two weeks prior to the course start date.

Registration Procedure

Registration is available online only at www.aona.org

We encourage early registration, as seating is limited. Upon receipt of your online registration and payment, you will be sent via email a confirmation of your registration in the course, along with hotel and travel information to assist you in making your arrangements. Participants who register after the course is full will be placed on a wait list and contacted if space becomes available.

PLEASE NOTE: Registration deadline is **August 8, 2017**.

Refund Policy

Full refunds will be made only if written notice of cancellation is received by the cancellation deadline date. Cancellations received after **August 8, 2017** will be subject to a 10% cancellation fee. No tuition refund will be issued for cancellations after the start date of the course.

ADA Statement

AO North America fully intends to comply with the legal requirements of the Americans with Disabilities Act. If any registrant is in need of accommodation, please do not hesitate to submit a written request at least one month prior to this activity.

Until an email confirmation is received, please do not consider yourself registered in this Course.

For Information:

Contact AONA Customer Service Department

Phone: (800) 769-1391 Ext 5123
(610) 695-2459

Fax: (610) 695-2420

Email: customerservice@aona.org

Hotel and Travel

Hotel Reservations

A block of rooms has been reserved at The Renaissance Glendale Hotel. If you have not done so, please make your hotel reservations as soon as possible as the room block tends to fill quickly. Be sure to indicate that you are attending the "AO North America Course" when making reservations to ensure you receive the group discount rate of \$179.00 single / double (available until **August 8, 2017** or until the room block fills, whichever comes first). Check-in time is 3:00 p.m. and check-out time is 11:00 am. For more information on The Renaissance Glendale Hotel, please visit their web site at: **www.renaissanceglendale.com**

Reservations procedure – book by August 8, 2017

To make your hotel reservation, please call the Renaissance Glendale Hotel **1-800-HOTELS1** or **1- 623 937-3700** and ask to book a room for the "AONorth America Principles and Treatment of Spinal Disorders for Residents" group.

Deadline: It is strongly recommended that participants book their hotel rooms as soon as possible, as space will fill rapidly. Reservations at the group rate may not be available after **August 8, 2017**.

Course Site

Renaissance Glendale Hotel
9495 W Coyotes Blvd
Glendale, AZ 85305

While at the Renaissance Glendale Hotel you will enjoy:

*Complimentary guestroom wireless internet

Air Transportation

AAA is AO North America's preferred travel agent. Please contact AAA Travel (**800-259-4023**) or **www.concursolutions.com** to make your flight arrangements. Refer to code GL# N17US5352 when making your reservations.

Travel

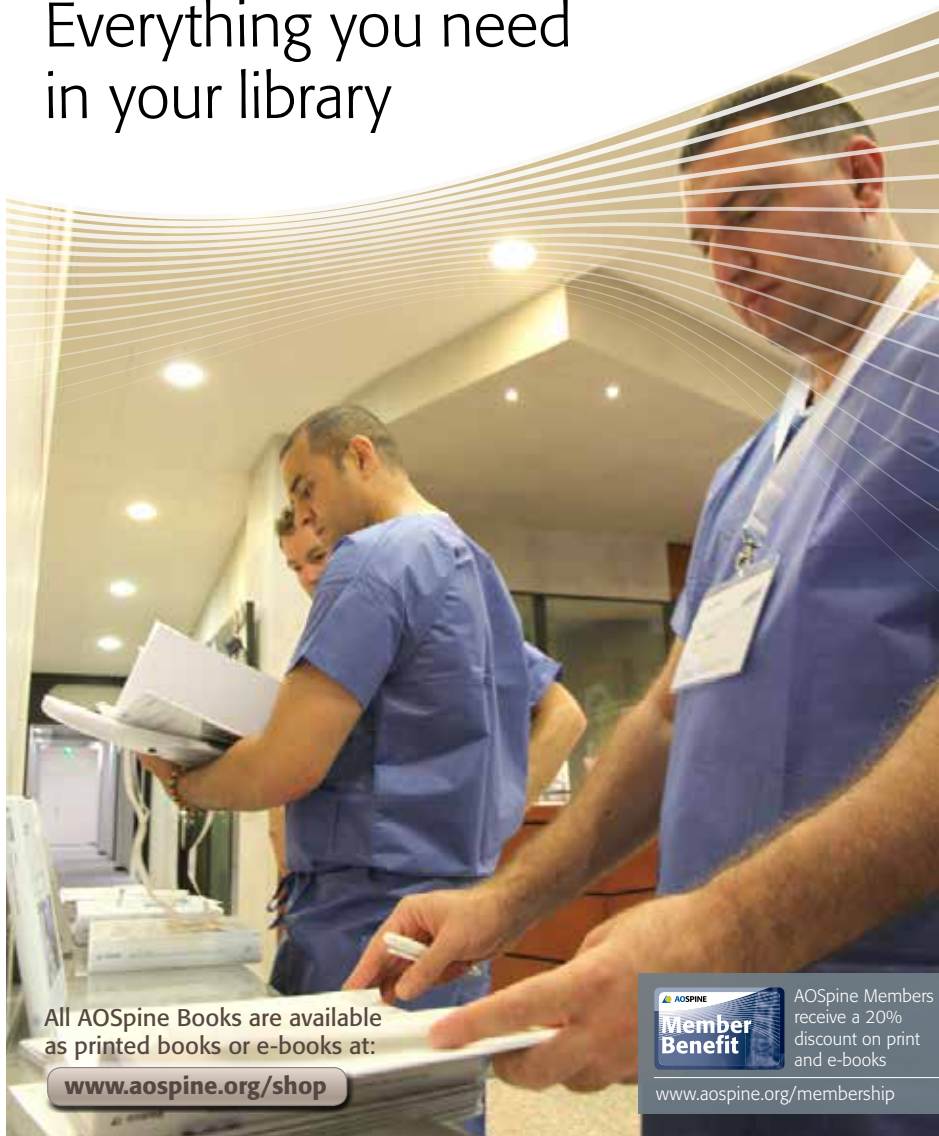
For assistance with travel to and from Glendale, you are invited to contact AAA Travel (**800-259-4023**). The Renaissance Glendale Hotel is approximately 25 minutes from Phoenix Sky Harbor International Airport (PHX). Taxis and shuttles are available. Complete information will be provided in the confirmation email.

Please visit our website: **www.aona.org** to register for this Course and for other course offerings.



The AOSpine bookshelf

Everything you need in your library



All AOSpine Books are available
as printed books or e-books at:

www.aospine.org/shop



AOSpine Members
receive a 20%
discount on print
and e-books

www.aospine.org/membership

AOSpine — the leading global academic community
for innovative education and research in spine care,
inspiring lifelong learning and improving patients' lives.

AOSpine North America
1700 Russell Road
Paoli, PA 19301
USA

T +1 610-993-5131
F +1 610-695-2420
aosna@aospine.org
www.aospine.org



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Registration Deadline: August 8, 2017