

THE BENZEL SYMPOSIUM:

State-of-the-art in Complex Spine Surgery

April 11–12, 2019 | San Diego
San Diego Convention Center

*A Scientific Tribute and
Global Celebration Honoring
Edward C. Benzel, MD, FAANS*

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Edward C. Benzel, MD, FAANS, is emeritus chairman of neurosurgery at Cleveland Clinic (CCF) and professor of neurological surgery at the Cleveland Clinic Lerner College of Medicine. In 2016, he was appointed director of career development and patient experience officer in the CCF Neurological Institute. He is one of the founding members of the Lumbar Spine Research Society, formed in 2007.

Dr. Benzel's major clinical interests focus on spinal disorders, including cervical spondylosis, syringomyelia, complex spine instrumentation and spine tumors. His clinical research has encompassed such issues as hydrocephalus,

neonatal hemorrhage, cerebrovascular disorders, cranial trauma, critical care, brain death, microelectromechanical systems (MEMS) and, of course, spinal disorders.

Dr. Benzel's continual rigorous review of clinical and research content for multiple professional neurosurgical and spine publications contributes significantly to the body of literature. He became the editor-in-chief of *World Neurosurgery* in 2015. Dr. Benzel has participated in several medical advances, but he is best known as an educator.

He initiated and directed the neurosurgery residency training program and the spine fellowship program at the University of New Mexico and has been instrumental in the development and success of these programs at the Cleveland Clinic. His innovations in neurosurgery resident education have won accolades and numerous awards.



WELCOME

It is our pleasure to welcome you to the **Benzel Symposium: State-of-the-art in Complex Spine Surgery**. The Benzel Symposium celebrates Edward C. Benzel, MD, FAANS, who is recognized as one of the most accomplished surgeons in the field of neurosurgery. The symposium contains scientific content delivered via lectures, video, discussion panels, debates and more. Over 60 national and international neurosurgical masters and leaders in the field are presenting and participating in this two-day event. Symposium sessions focus on important topics. Deformity, tumor, minimally invasive surgery, trauma, degenerative disease, cervical spine and OC junction will be covered, as well as leadership and clinical trials.

Dr. Benzel is known across the globe as a leader, educator, mentor and innovator. His interests include numerous aspects of neurosurgery, with focus on spinal disorders, including cervical spondylosis, biomechanics, syringomyelia, complex spine instrumentation and spine tumors. Dr. Benzel is known as a remarkable educator. In that spirit, we are bringing you an exemplary educational program featuring superior speakers and premier events.

We hope you enjoy this once-in-a-lifetime opportunity to celebrate the accomplishments of Dr. Benzel and learn from the extraordinary group of professionals assembled here to honor him. We know you will find this inimitable event interesting and beneficial.

Sincerely,



Gregory R. Trost, MD, FAANS
Course Director



Michael P. Steinmetz, MD, FAANS
Course Director

THURSDAY, APRIL 11

11 a.m.–6 p.m.

Registration

Location: 20A Foyer

11 a.m.–7 p.m.

Exhibit Hall

Location: 20B

12–12:09 p.m.

Opening Remarks: Reflections on
Dr. Benzel

Gregory R. Trost, MD, FAANS

Location: 20A

12:10–12:19 p.m.

Benzel: Longitudinal Mentorship

Michael P. Steinmetz, MD, FAANS

SESSION 1:

KEYNOTE PRESENTATION

Moderators: Perry A. Ball, MD, FAANS;
Lee S. Hwang, MD; Jeffrey P. Mullin, MD

Location: 20A

12:20–12:59 p.m.

Keynote: *Doing What's Right:
Leadership, Knowledge, Wisdom
and Inspiration*

Edward C. Benzel, MD, FAANS

SESSION 2: DEFORMITY

Moderators: Timothy I. Cohen, MD,
FAANS; Ghaith Habboub, MD; Jason
Savage, MD

Location: 20A

CME INFORMATION

The AANS is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians. The AANS designates this live activity for 15.25 *AMA PRA Category 1 Credits*[™]. Attendees are responsible for self-reporting CME earned from the Benzel Symposium.

Certificate of Attendance Information

- International medical attendees may pick up a Certificate of Attendance at the Registration Desk following the conclusion of the Benzel Symposium.
- Certificates are available online through MyAANS at AANS.org. You will need your login information to access and print your certificate, which will be available up to one year after this event.

THURSDAY, APRIL 11

1–1:19 p.m.

How Vertebral Column Resection has Revolutionized Care

Lawrence G. Lenke, MD

1:20–1:39 p.m.

Techniques for Spinal Realignment in Adult Spinal Deformity

Christopher I. Shaffrey, MD, FAANS

1:40–1:59 p.m.

Adult Deformity and Bridging the Gap Between Orthopaedic Surgery and Neurosurgery—What Have We Learned from One Another

Sigurd Berven, MD

2–2:14 p.m.

Improving Your Techniques in Spine Surgery. Iterative and Paradigm Shifting Advances

Tyler R. Koski, MD, FAANS

2:15–2:29 p.m.

Predictive Analytics in Spinal Deformity

Christopher P. Ames, MD, FAANS

2:30–2:44 p.m.

MIS Spinal Deformity Algorithm

Praveen V. Mummaneni, MD, FAANS

2:45–2:54 p.m.

Discussion

2:55–3:14 p.m.

Beverage Break with Exhibitors

Location: 20B

SESSION 3: TUMOR

Moderators: Nevan G. Baldwin, MD, FAANS; Eldan B. Eichbaum, MD, FAANS; Balint Otvos, MD

Location: 20A

3:15–3:44 p.m.

Current Surgical Management of Spinal Neoplasms

Ziya L. Gokaslan, MD, FAANS

3:45–4:14 p.m.

En Bloc Resection for Primary Spinal Column Tumors

Laurence D. Rhines, MD, FAANS

4:15–4:34 p.m.

Spine Radiosurgery—a Game Changer in Spine Tumor Treatment for the 21st Century

Lilyana Angelov, MD, FAANS

4:35–4:54 p.m.

The Evolution of Spine Tumor Treatment has Ed Benzel's Fingerprints all Over It

Daniel M. Sciubba, MD, FAANS

4:55–5:14 p.m.

Ed Benzel's Impact on Spine Oncology

Mark H. Bilsky, MD, FAANS

5:15–5:59 p.m.

Roundtable with Mary, Brian and Matthew Benzel; Morgan and Jason Culverhouse; R. Douglas Orr, MD; Richard P. Schlenk, MD, FAANS

6–7 p.m.

Cocktail Reception with Exhibitors

Location: 20B

7 a.m.–6 p.m.

FRIDAY, APRIL 12

Registration

Location: 20A Foyer

7–7:30 a.m.

Breakfast with Exhibitors

Location: 20B

7 a.m.–3:30 p.m.

Exhibit Hall

Location: 20B

SESSION 4: MINIMALLY INVASIVE SURGERY

Moderators: Nathaniel P. Brooks, MD, FAANS; William Kemp, MD; Salman Y. Sharif, MD, IFAANS (Pakistan)

7:30–7:59 a.m.

History and Current States of MIS

Richard G. Fessler, MD, PhD, FAANS

8–8:29 a.m.

MIS in the Future

Michael Y. Wang, MD, FAANS

8:30–8:49 a.m.

The Development of the Minimally Invasive TLIF

Kevin T. Foley, MD, FAANS

8:50–9:09 a.m.

MIS Deformity Surgery-Lessons Learned and Next Generation Challenges

Juan S. Uribe, MD, FAANS

9:10–9:29 a.m.

Minimally Invasive Surgery in the C-spine

Paulo Pereira, MD, PhD (Portugal)

9:30–9:59 a.m.

Beverage Break with Exhibitors

Location: 20B

SESSION 5: TRAUMA/DEGENERATIVE DISEASE

Moderators: John R. Caruso, MD, FAANS; Iain H. Kalfas, MD, FAANS; Sharad Rajpal, MD, FAANS

Location: 20A

10–10:19 a.m.

Geriatric Odontoid Features: Operate or Not?

Jens Chapman, MD

10:20–10:39 a.m.

SCI trials and Tribulations

James S. Harrop, MD, FAANS

10:40–10:54 a.m.

Bioengineering a Human Spinal Cord Repair Based on Rats

Eve C. Tsai, MD, PhD, FAANS (Canada)

10:55–11:09 a.m.

Implant Surface Technology and Its Effect on Osteointegration

Eric J. Woodard, MD, FAANS

FRIDAY, APRIL 12

11:10–11:24 a.m.

Surgery for T-L Disorders: New Tricks for Old(er) Dogs

Charles B. Stillerman, MD, FAANS

11:25–11:39 a.m.

Surgery for Symptoms of Lumbar Disk Herniations: What Have We Learned, How Has it Changed, Over Dr. Benzel's 30 Years

Steven Garfin, MD

11:40–11:54 a.m.

Biomechanics of Thoracic Pedicle Screws

David W. Polly Jr., MD

11:55–11:59 a.m.

Discussion

12–12:44 p.m.

Lunch with Exhibitors

Location: 20B

SESSION 6: KEYNOTE PRESENTATION

Moderators: G. Alexander Jones, MD, FAANS; John H. Shin, MD, FAANS

Location: 20A

12:45–1:29 p.m.

Keynote: Biomechanics, Back Pain, and Cervical Spondylosi

Edward C. Benzel, MD, FAANS

SESSION 7: CERVICAL SPINE AND OC JUNCTION

Moderators: John W. German, MD, FAANS; Ajit A. Krishnaney, MD, FAANS; Andrew E. Wakefield, MD, FAANS

Location: 20A

1:30–1:49 p.m.

Craniovertebral Junction Stability—Evolving Thoughts

Atul Goel, MD, IFAANS (India)

1:50–2:09 p.m.

Surgical Strategies in Management of Cervical OPLL, Anterior vs. Posterior

Hiroshi Nakagawa, MD, IFAANS (Japan)

2:10–2:29 p.m.

Treatment of Traumatic injuries of Craniocervical Injuries or Current, Past and future C1C2 Fixation

Volker K. H. Sonntag, MD, FAANS(L)

2:30–2:49 p.m.

C5 Palsy

Vincent C. Traynelis, MD, FAANS

2:50–3:09 p.m.

Don't Think "Out of the Box"...

There is NO BOX

Regis W. Haid Jr., MD, FAANS

3:10–3:30 p.m.

Beverage Break with Exhibitors

Location: 20B

SESSION 8: LEADERSHIP/CLINICAL TRIALS

Moderators: Matthew B. Kern, MD, FAANS; Dominic Pelle, MD; Suzanne Audrey Tharin, MD, FAANS
Location: 20A

3:30–3:49 p.m.

Leadership & Mentorship

Todd Albert, MD

3:50–4:09 p.m.

How Relevant is the Evidence Provided by Clinical Trials

Daniel K. Resnick, MD, FAANS

4:10–4:29 p.m.

Research in a Resource Limited Environment

Abdelfattah Saoud, MD, PhD (Egypt)

4:30–4:49 p.m.

Clinical Decision Making: Big Data and Artificial Intelligence

Thomas E. Mroz, MD

4:50–5:09 p.m.

How the Modern Clinical Trial Finds the Truth in Spinal Surgery

Zoher Ghogawala, MD, FAANS

5:10–5:29 p.m.

Measuring Quality and Safety in Spine Surgery

John J. Knightly, MD, FAANS

5:30–5:49 p.m.

Teaching the Teachers

Mehmet Zileli, MD, IFAANS (Turkey)

5:50–6:09 p.m.

Macroeconomic Trends in Spine Care

A. Jay Khanna, MD

6:10–6:29 p.m.

Discussion

7:15–9:45 p.m.

Gala Dinner Roast

Marina Ballroom FG, Level 3, South Tower



Honor Your Mentor (HYM) Funds recognize the incredible people who have advanced neurosurgery. Please support the mission of the Ed Benzel Honor Your Mentor Fund with a charitable contribution. Your gift will be utilized for Clinical Outcomes Studies to analyze posture and deformity in Cervical Spondylotic Myelopathy patients.

Visit www.nref.org/Donate to learn more.

FACULTY & MODERATORS

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Juan Santiago Uribe, MD, FAANS
Andrew E. Wakefield, MD, FAANS
Michael Y. Wang, MD, FAANS
Eric J. Woodard, MD, FAANS
Mehmet Zileli, MD, IFAANS

EXHIBITORS

- | | | | |
|----------|--|-----------|--|
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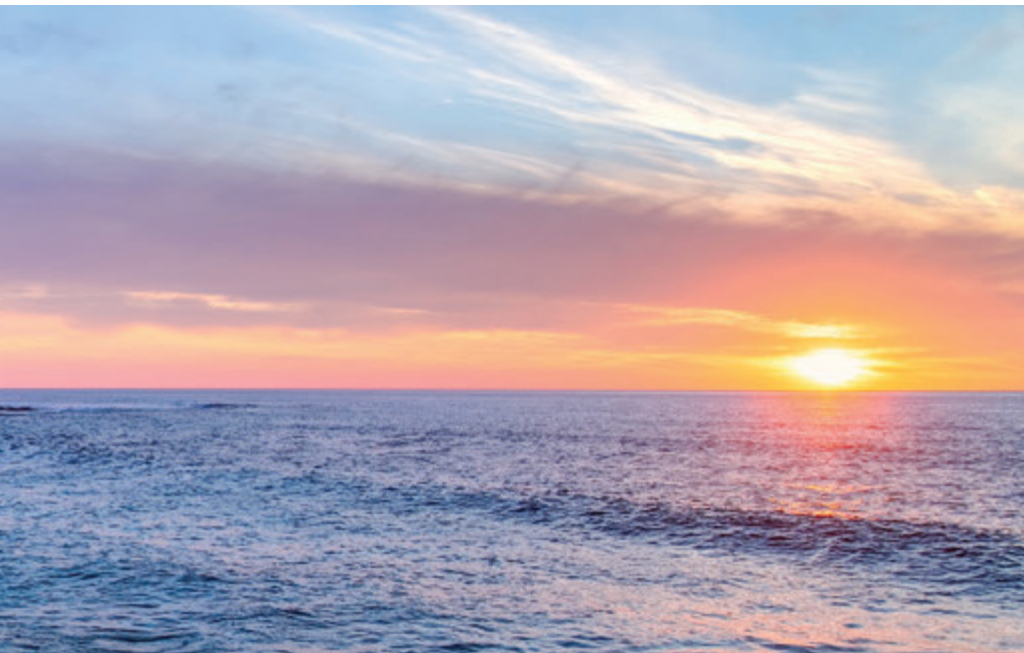
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