A scenic photograph of the Sedona landscape, showing red rock formations, green trees, and a river reflecting the scene.

1st Annual Mayo Clinic
ADVANCES & INNOVATIONS in
COMPLEX NEUROSCIENCE
PATIENT CARE:
BRAIN & SPINE
with optional hands-on workshop

**\$75 DISCOUNT
IF YOU REGISTER
ON OR BEFORE
AUG 30, 2017**

**HILTON SEDONA RESORT AT BELL ROCK
SEDONA, ARIZONA
NOVEMBER 2–4, 2017**



*Bernard R. Bendok, M.D.
Course Director*



Ruben A. Mesa, M.D.



*Joseph I. Sirven, M.D.
Course Co-Directors*

COURSE HIGHLIGHTS

- Over 200 case presentations and discussions
- Skull base, brain and spinal cord tumors
- Neurovascular diseases, neurosurgical emergencies and acute stroke
- Endoscopic techniques, proton beam and minimally invasive skull base surgery
- Scoliosis, spine oncology, and minimally invasive spine surgery
- Simulation hands-on workshop includes bypass and endovascular techniques (*optional*)
- Friday evening dinner with special “Innovations in Neuroscience” presentation

LEARNING OBJECTIVES

Upon conclusion of this program, participants should be able to:

- Summarize the latest guidelines pertaining to minimally invasive intracerebral hemorrhage treatment and evacuation.
- Discuss the latest guidelines pertaining to medical and endovascular management of large vessel intracranial acute occlusion, carotid disease and moyamoya disease.
- Review modern multimodal management of brain arteriovenous malformations, dural fistulas and aneurysms.
- Describe modern indications for pediatric and adult epilepsy surgery.
- Identify modern indications for pediatric and adult scoliosis and minimally invasive spine surgery.
- Employ modern multimodal management of primary and metastatic brain tumors.
- Demonstrate modern multimodal management of skull base tumors.
- State indications for deep brain stimulation.
- Apply modern management of peripheral nerve tumors and spinal tumors.

TARGET AUDIENCE

This course is designed for physicians practicing in neurology, neurosurgery, emergency medicine, medical oncology and primary care, as well as advanced practice nurse practitioners, physician assistants, nurses and other health care providers interested in the neurosciences.

MEETING LOCATION AND ACCOMMODATIONS

Hilton Sedona Resort at Bell Rock

90 Ridge Trail Drive • Sedona, AZ 86351

Website: <http://www.hiltonsedonaresort.com>

Online Reservations: <http://group.hilton.com/NS2017>

Phone Reservations: (877) 273-3762



The resort has reserved a limited block of one-bedroom suites at a special group rate of \$295 (USD), per night, single or double occupancy, plus applicable local and state taxes, for course participants and guests. Group rates will apply three days prior to and three days after the course dates, based on group room availability. Daily resort fee is \$15. To ensure accommodations, make your reservation before the room block is filled or October 1, 2017. Reference the Mayo Clinic Neuroscience Course.

SOCIAL ACTIVITIES

Welcome Reception – Thursday, November 2, 2017

Attendees and guests are cordially invited to join course faculty at the Welcome Reception on Thursday, November 2, 2017. This casual reception welcomes you to the Hilton Sedona Resort and offers a perfect opportunity to make connections with existing and new colleagues. Pre-registration requested.

Course Dinner – Friday, November 3, 2017

Join us for the course dinner and a special presentation, “Innovations in Neuroscience,” by Issam A. Awad, M.D., University of Chicago. Dinner is included in registrant registration fee. Guest tickets (\$75 adult; \$30 children 12 years and younger) are available for purchase. Pre-registration required.

OPTIONAL EDUCATION ACTIVITY

SIMULATION HANDS-ON WORKSHOP

Thursday, November 2, 2017 • 1:15 – 4:00 p.m.

Friday, November 3, 2017 • 12:50 – 3:45 p.m.

Lunch provided. Pre-registration required.

Space is limited; early registration advised.



ATTEND
THURSDAY OR
FRIDAY

This workshop, offered on both Thursday and Friday, is designed to provide participants with a hands-on experience with cutting edge procedures in neuroscience. Workshop stations include:

- Electrical stimulation for brain cancer
- Ommaya
- Stentriever and stent coil
- Intracerebral hemorrhage evacuation
- Lateral/posterior lumbar and cervical spine fusion
- Fusion navigation with S8 with AR
- Simulation laser ablation
- Endoscopic sinus access
- Microsurgery basics
- SRS radiosurgery planning
- Proton planning
- Carotid stenting
- Robotic innovations in spine and cranial surgery

WORKSHOP LEARNING OBJECTIVES

Upon completion of this workshop, participants should be able to:

- Compare and contrast nuances of suturing vessels together.
- Demonstrate technique of embolectomy for acute stroke.
- Review techniques for endovascular management of carotid stenosis and intracranial aneurysms.
- Develop basic techniques in spinal fusion.
- Describe intraoperative stereotactic navigation and radiation treatment planning.
- Apply minimally invasive techniques for treatment of brain tumors.

REGISTRATION

Register online at:

CE.MAYO.EDU/NS2017

Registration Fee	On or Before Aug 30	After Aug 30
Physicians/Scientists	\$450 USD	\$525 USD
NP, RN, Residents, Other	\$325 USD	\$400 USD

CANCELLATION POLICY

Please visit ce.mayo.edu/cancellation for more information.

COURSE DIRECTOR

Bernard R. Bendok, M.D.

COURSE CO-DIRECTORS

Ruben A. Mesa, M.D.

Joseph I. Sirven, M.D.

GUEST FACULTY

Issam A. Awad, M.D.

University of Chicago

Chicago, Illinois

PHOENIX CHILDREN'S HOSPITAL FACULTY

P. David Adelson, M.D.

Mohan V. Belthur, M.D.

Judson W. Karlen, M.D.

Gregory R. White, M.D.

MAYO CLINIC FACULTY

Maria I. Aguilar, M.D.

Alan H. Bryce, M.D.

Meghan M. Comer, A.P.R.N., M.S.N., C.N.P.

Bart M. Demaerschalk, M.D.

Radhika Dhamija, M.B.B.S.

John A. Freeman, D.O.

Deborah A. Gorman, R.N.

Stefan G. Humphries, M.D.

Timothy Ingall, M.D., Ph.D.

Sameer R. Keole, M.D.

Chandan Krishna, M.D.

Cindy A. Landis, M.S.N., R.N.

Giuseppe Lanzino, M.D.

Michael J. Link, M.D.

Mark K. Lyons, M.D.

Jamal McClendon, Jr., M.D.

Shyamal H. Mehta, M.D., Ph.D.

Samuel R. Money, M.D.

Maciej M. Mrugala, M.D., Ph.D.

Katherine H. Noe, M.D., Ph.D.

Shelley S. Noland, M.D.

Ian F. Parney, M.D., Ph.D.

Mark A. Pichelmann, M.D.

Alyx B. Porter, M.D.

Alfredo Quinones-Hinojosa, M.D.

Allison C. Rosenthal, D.O.

Mithun Sattur, M.B.B.S.

Ayan Sen, M.D.

Robert J. Spinner, M.D.

Kristin R. Swanson, Ph.D.

Rabih G. Tawk, M.D.

Cynthia O. Townsend, Ph.D., L.P.

Vanessa K. Vanderhye, B.S.N., R.N.,

C.C.R.N., N.V.R.N.-B.C.

Sujay A. Vora, M.D.

Peter A. Weisskopf, M.D.

Michael D. Whitaker, M.D.

Richard S. Zimmerman, M.D.

CREDIT

Mayo Clinic College of Medicine and Science is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

Mayo Clinic College of Medicine and Science designates this live activity for a maximum of 16.25 AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

AAFP: Application for CME credit has been filed with the American Academy of Family Physicians. Determination of credit is pending.

AOA: This program has been accredited by the American Osteopathic Association for 16.25 credits of AOA Category 2-A.

Other Health Care Professionals: A certificate of attendance will be provided to other health care professionals for requesting credits in accordance with state nursing boards, specialty societies, or other professional associations.

PROGRAM AT-A-GLANCE

Thursday, November 2, 2017

- Peripheral nerves (tumors and pediatric)
- Minimally invasive spine management (cervical and lumbar disk, chronic pain, MIS and arthroplasty, spinal cord stimulation, MIS lumbar)
- Scoliosis and spinal deformity (infantile scoliosis, early onset, challenging AIS, techniques, Chiari and tethered cord, pediatric versus adult)
- Spine oncology (surgery and embolization, intradural tumors, radiosurgery and proton beam)
- Deep brain stimulation (update and innovations)
- Hands-on workshop (optional)

Friday, November 3, 2017

- Aneurysms (subarachnoid hemorrhage, ruptured, familial, decision making for unruptured aneurysms)
- Intracerebral hemorrhage (medical management, reversal, innovations, AVM, cavernoma, dural fistulas)
- Stroke (triage and telehealth, TPA, thrombectomy, moyamoya disease, carotid disease, and acute stroke simulation)
- Epilepsy (pediatric surgical perspective, neurology and surgical adult perspective, simulation and advanced techniques)
- Hands-on workshop (optional)

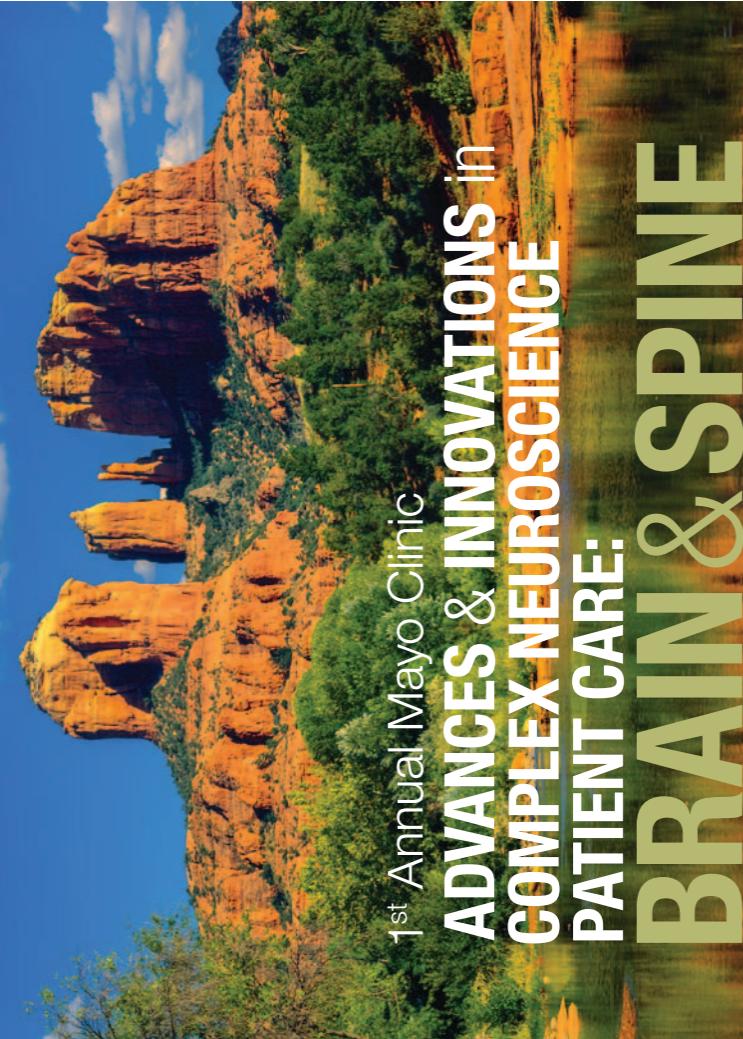
Saturday, November 4, 2017

- Skull base tumors (pituitary endocrinology workup, surgery, meningioma, acoustic neuromas, clival chordomas, endovascular care, proton beam)
- Brain gliomas (medical management, surgery and immune therapy, awake surgery, radiotherapy and proton beam, scientific advances)
- Brain metastasis (screening, medical management, radiosurgery, laser ablation, microsurgery, leptomeningeal disease, CNS lymphoma)

See the full schedule at:

[CE.MAYO.EDU/NS2017](https://ce.mayo.edu/ns2017)





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