

***5th Annual Mayo Clinic Neurosurgery and
Neurology Advances Update:
Brain, Spine, and Peripheral Nerves***
April 4-6, 2024

Thursday, April 4, 2024

- 7:00 a.m. **Registration, Continental Breakfast, and Exhibits**
- 8:00 a.m. **Welcome and Introductions**
Bernard R. Bendok, M.D.
- 8:05 a.m. **Course Overview, Daily Goals, and Objectives**
Bernard R. Bendok, M.D.
- SESSION I:** **Artificial Intelligence and Robotics in Neurosurgery**
- MODERATOR(S):** Ramiro Del Valle, M.D.; Alejandro Zavala, M.D.;
Chandan Krishna, M.D.; and Bernard R. Bendok, M.D.
- 8:15 a.m. **The Origins of AI in Healthcare and It's Potential**
Chandan Krishna, M.D.
- 8:25 a.m. **Evolving Artificial Intelligence Applications in Neurosurgery**
Devi P. Patra, M.B.B.S.
- 8:35 a.m. **Remote Magnetic Navigation Enables Precision Telesurgery**
Bradley Nelson, Ph.D.
- 8:50 a.m. **Artificial Intelligence for the Diagnosis and
Management of Aneurysms**
Bernard R. Bendok, M.D.
- 9:00 a.m. **Artificial Intelligence Round Table Panel Discussion**
Speakers and Moderators
- SESSION II:** **Spine and Peripheral Nerve Oncology**
- MODERATOR(S):** Shannon P. Fortin Ensign, M.D., Ph.D. and Shelley S. Noland, M.D.
- 9:20 a.m. **Spine Oncology Recent Surgical Innovations**
Maziyar A. Kalani, M.D.

Thursday, April 4, 2024 (continued)

- 9:35 a.m. **Peripheral Nerve Tumors**
Robert J. Spinner, M.D.
- 9:45 a.m. **Radiotherapy and Proton Beam for Spine and
Peripheral Nerve Oncology**
Sujay A. Vora, M.D.
- 10:00 a.m. **Round Table Panel Discussion**
Speakers and Moderators
- 10:20 a.m. **Refreshment Break and Exhibits**
- SESSION III:** **Innovations in Spine Care Management**
- MODERATOR(S):** Naresh P. Patel, M.D. and Sally B. Alcott, M.D.
- 10:35 a.m. **Innovations in Neuromonitoring in Spinal Surgery**
Jaime Lopez, M.D.
- 10:45 a.m. **Pediatric and Adult Deformity**
Jamal McClendon Jr., M.D.
- 10:55 a.m. **Robotics in Spine Surgery**
Chandan Krishna, M.D.
- 11:05 a.m. **Advances in Neuromodulation for Back Pain**
Naresh P. Patel, M.D.
- 11:15 a.m. **Innovations in Pain Management**
Christopher S. Wie, M.D.
- 11:25 a.m. **Case-Based Panel Discussion and Q&A**
Speakers and Moderators
- 11:55 a.m. **Spine Hands-On Workshop #1 | Spine Hands-On Workshop #2 | Spine
Hands-on Workshop # 3 | Spine Hands-on Workshop #4 | Spine Hands-
on Workshop #5| Robotics Hands-on Workshop**
Bernard R. Bendok, M.D., Chandan Krishna, M.D., Jamal McClendon Jr.,
M.D., Maziyar A. Kalani, M.D.; Nora J. Schaefer, R.N., CNRN
- 12:55 p.m. **Lunch and Exhibits (optional non-CME Product Theater)**

Thursday, April 4, 2024 (continued)

- 1:55 p.m. **APP Session Opening Remarks**
JoDee A. Winter, P.A.-C.
- 2:00 p.m. **Examination of Neck and Shoulder Complaints**
Susan M. Lemens, P.A.-C.
- 2:20 p.m. **Epilepsy Surgery**
Taylor A. Phelps, P.A.-C.
- 2:40 p.m. **Neuroimaging Review**
Lexi Adamski, P.A.-C.
- 3:00 p.m. **Moyamoya Disease and Anesthesia Needs**
Patrick B. Bolton, M.D. and JoDee A. Winter, P.A.-C.
- 3:20 p.m. **Trigeminal Neuralgia Diagnosis and Treatment Options**
Maggie A. Weeks, P.A.-C., M.S.
- 3:40 p.m. **APP Hands-On Stations:**
Lexi Adamski, P.A.-C.; Susan M. Lemens, P.A.-C.; Devi P. Patra, M.B.B.S.;
Taylor A. Phelps, P.A.-C.; Nora J. Schaefer, R.N., CNRN; Maggie A. Weeks,
P.A.-C., M.S.; JoDee A. Winter, P.A.-C.
- 1) Headframe Application**
 2) Cranial Plating
 3) Virtual Reality Walkthrough
- 5:00 p.m. **Adjourn**

Friday, April 5, 2024

Neurology Sessions

7:00 a.m. **Continental Breakfast and Exhibits (optional non-CME Product Theater)**

8:00 a.m. **Daily Overview of Goals and Objectives**
Bernard R. Bendok, M.D.

SESSION IV: Innovations in Neurophysiological Monitoring and Epilepsy Surgery

MODERATOR(S): Joseph I. Sirven, M.D.; Richard S. Zimmerman, M.D.;
Jaime Lopez, M.D.; and Alejandro Zavala, M.D.

8:15 a.m. **Technological Advancements in Epilepsy Neuromodulation: Focal, Regional, & Global Approaches**
Jonathon J. Parker, M.D., Ph.D.

8:30 a.m. **Intersections of Neurophysiology and Neurosurgery**
Joseph I. Sirven, M.D.

8:45 a.m. **Innovations in Neurophysiological Monitoring for Neurosurgery**
Jaime Lopez, M.D.

9:00 a.m. **Round Table Panel Discussion**
Speakers and Moderators

SESSION V: Neurovascular: Acute Stroke Intervention

MODERATOR(S): Bernard R. Bendok, M.D. and Ayan Sen, M.D.

9:15 a.m. **Telehealth in Stroke Management**
Bart Demaerschalk, M.D.

9:30 a.m. **Dural Fistula Management**
Bernard R Bendok, M.D.

9:45 a.m. **Carotid Disease Management**
Chandan Krishna, M.D.

10:00 a.m. **IA Stroke Therapy**
Ali Turkmani, M.D.

10:15 a.m. **Vagus Nerve Stimulation for Stroke**
Jonathon J. Parker, M.D., Ph.D.

Friday, April 5, 2024 (continued)

- 10:30 a.m. **Case-Based Panel Discussion and Q&A**
Speakers and Moderators
- 10:45 a.m. **Refreshment Break and Exhibits**
- SESSION VI: Neurovascular: Aneurysm and AVM Innovations**
- MODERATOR(S): Chandan Krishna, M.D. and Ayan Sen, M.D.**
- 11:00 a.m. **Subarachnoid Hemorrhage Management**
Ayan Sen, M.D.
- 11:15 a.m. **Familial Aneurysms and Arteriovenous Malformations**
Devi P. Patra, M.D.
- 11:30 a.m. **Innovations in Aneurysm Management**
Bernard R. Bendok, M.D.
- 11:50 a.m. **Advances in Arteriovenous Malformations Management**
Bernard R. Bendok, M.D.
- 12:10 p.m. **Case-Based Panel Discussion and Q&A**
Speakers and Moderators
- 12:30 p.m. **Lunch and Exhibits (optional non-CME Product Theater)**
- 1:30 p.m. **Cranial Hands-On Workshops:**
Bypass: Chandan Krishna, M.D. and Bernard R. Bendok, M.D.
Endovascular: Chandan Krishna, M.D.; Devi P. Patra, M.B.B.S.;
and Bernard R. Bendok, M.D.
Epilepsy Stations: Jonathon J. Parker, M.D. and Cornelia N. Drees, MD
- 3:00 p.m. **General Session Adjourns**
- 3:00 p.m. **Poster Session**
- 4:00 p.m. **Optional non-CME Product Theater**
- 5:00 p.m. **Optional Educational Session: Neurology of Wine Tasting**
Youbirt Aissa and Jaime Lopez, M.D.
- 6:00 p.m. **Welcome Reception Dinner**
Merging Personal and Professional Journeys: Crossword Puzzles and Peripheral Nerve Tumors
Invited Guest Speaker: Robert J. Spinner, M.D.

Saturday, April 6, 2024

7:00 a.m. **Continental Breakfast and Exhibits**

8:00 a.m. **Daily Overview of Goals and Objectives**
Bernard R. Bendok, M.D.

SESSION VII: Tumor and Skull Base Session

MODERATOR(S): Chandan Krishna, M.D.

8:15 a.m. **Medical Management of Pituitary Adenomas**
Aditi Kumar, M.B.B.S.

8:30 a.m. **Neuro-ophthalmology of Pituitary Tumors**
Marie A. Di Nome, M.D.

8:45 a.m. **Advances in Endoscopic Approaches to the Sella**
Amar Miglani, M.D.

9:00 a.m. **Innovations in Pituitary Surgery**
Bernard R. Bendok, M.D.

9:15 a.m. **When a Headache is Not Just a Headache**
Rashmi B. Halker Singh, M.D.

9:25 a.m. **Case-Based Panel Discussion and Q&A**
Speakers and Moderators

SESSION VIII: Chordomas

MODERATOR(S): Maciej M. Mrugala, M.D., Ph.D.

9:35 a.m. **Medical Options and Clinical Trials for Chordomas**
Maciej M. Mrugala, M.D., Ph.D.

9:50 a.m. **Surgical Management for Chordomas**
Bernard R. Bendok, M.D.

10:05 a.m. **Radiotherapy for Chordomas**
Sameer R. Keole, M.D.

Saturday, April 6, 2024 *(continued)*

- 10:20 a.m. **Case-Based Panel Discussion and Q&A**
Speakers and Moderators
- 10:35 a.m. **Refreshment Break and Exhibits**
- SESSION IX:** **Acoustic Neuromas**
- MODERATOR(S):** Shannon P. Fortin Ensign, M.D., Ph.D.
- 10:50 a.m. **Radiosurgery for Acoustic Neuromas**
Ramiro Del Valle, M.D.
- 11:05 a.m. **Translabyrinthine Approaches**
Nicholas L. Deep, M.D.
- 11:20 a.m. **Retrosigmoid Approach**
Bernard R. Bendok, M.D.
- 11:35 a.m. **Medical Options and Clinical Trials for Acoustic Neuromas**
Shannon P. Fortin Ensign, M.D., Ph.D.
- 11:50 a.m. **Tumor Board**
Speakers and Moderators
- 12:35 p.m. **Closing Remarks**
- 12:40 p.m. **Adjourn**