

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

**Thursday, April 4, 2024** *(Times noted are Pacific Daylight Time)*

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- 7:30 a.m.                    **Livestream Registrants Join**
- 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)*

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- 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.           **Break**
- 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
- 12:55 p.m.           **Lunch**

**Thursday, April 4, 2024 (continued)**

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- 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.            **Livestream Session Adjourns**

## Friday, April 5, 2024

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### Neurology Sessions

7:30 a.m. **Livestream Registrants Join**

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):** Robert J. Spinner, 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)*

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- 10:30 a.m.            **Case-Based Panel Discussion and Q&A**  
Speakers and Moderators
- 10:45 a.m.            **Break**
- SESSION VI:**            **Neurovascular: Aneurysm and AVM Innovations**
- MODERATOR(S):**        Robert J. Spinner, 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.            **Livestream Session Adjourns**

## **Saturday, April 6, 2024**

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7:30 a.m.                    **Livestream Registrants Join**

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

**SESSION VII:                    Tumor and Skull Base Session**

**MODERATOR(S):**            Robert J. Spinner, 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)*

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- 10:20 a.m.            **Case-Based Panel Discussion and Q&A**  
Speakers and Moderators
- 10:35 a.m.            **Break**
- 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**