# 5th Annual Mayo Clinic Neurosurgery and Neurology Advances Update: Brain, Spine, and Peripheral Nerves

April 4-6, 2024

## Thursday, April 4, 2024

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Presenter(s)</th>
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<tr>
<td>7:00 a.m.</td>
<td>Registration, Continental Breakfast, and Exhibits</td>
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<td>8:00 a.m.</td>
<td>Welcome and Introductions</td>
<td>Bernard R. Bendok, M.D.</td>
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<tr>
<td>8:05 a.m.</td>
<td>Course Overview, Daily Goals, and Objectives</td>
<td>Bernard R. Bendok, M.D.</td>
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**SESSION I:** Artificial Intelligence in Neurosurgery and Neurology

**MODERATOR(S):** Ramiro Del Valle, M.D.; Alejandro Zavala, M.D.; Chandan Krishna, M.D.; and Bernard R. Bendok, M.D.

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<tr>
<td>8:15 a.m.</td>
<td>Artificial Intelligence in Medicine</td>
<td>Bhavik N. Patel, M.D., M.B.A.</td>
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<td>8:30 a.m.</td>
<td>Artificial Intelligence for the Diagnosis and Management of Aneurysms</td>
<td>Bernard R. Bendok, M.D.</td>
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<td>8:45 a.m.</td>
<td>Artificial Intelligence Applications in Neurosurgery</td>
<td>Devi P. Patra, M.B.B.S.</td>
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<td>9:00 a.m.</td>
<td>Artificial Intelligence Round Table Panel Discussion</td>
<td>Speakers and Moderators</td>
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**SESSION II:** Spine and Peripheral Nerve Oncology

**MODERATOR(S):** Shannon P. Fortin Ensign, M.D., Ph.D. and Shelley S. Noland, M.D.

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<tr>
<td>9:20 a.m.</td>
<td>Spine Oncology Recent Surgical Innovations</td>
<td>Maziyar A. Kalani, M.D.</td>
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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. | **Refreshment Break and Exhibits** |
| **SESSION III:** | **Innovations in Spine Care Management** |
| **MODERATOR(S):** | Naresh P. Patel, M.D. and Arthur J. De Luigi, D.O., M.H.A. |
| 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**  
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 (Product Theater)** |
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.  Shunts  
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.; Miles A. Hudson, M.D.; 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
Neurology Sessions

**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.

**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.** The Impact of Dr. Thor Sundt on Neurosurgery and Vascular Neurosurgery
  Robert J. Spinner, 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): 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.

12:00 p.m. Advances in Arteriovenous Malformations Management
Bernard R. Bendok, M.D.

12:15 p.m. Case-Based Panel Discussion and Q&A
Speakers and Moderators

12:30 p.m. Lunch and Exhibits (Product Theater)

1:30 p.m. Cranial Hands-On Workshops:
Bypass, Endovascular, Epilepsy Stations
Chandan Krishna, M.D.; Joseph I. Sirven, M.D.;
Devi P. Patra, M.B.B.S.; Benard R. Bendok, M.D.; and
Jonathon J. Parker, M.D.; Nora J. Schaefer, R.N., CNRN

3:00 p.m. Adjourn

6:00 p.m. Dinner
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): 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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<td>10:35 a.m.</td>
<td><strong>Refreshment Break and Exhibits</strong></td>
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<td><strong>SESSION IX:</strong></td>
<td><strong>Acoustic Neuromas</strong></td>
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<td><strong>MODERATOR(S):</strong></td>
<td>Shannon P. Fortin Ensign, M.D., Ph.D.</td>
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<td>10:50 a.m.</td>
<td><strong>Radiosurgery for Acoustic Neuromas</strong></td>
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<td>Ramiro Del Valle, M.D.</td>
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<td>11:05 a.m.</td>
<td><strong>Translabyrinthine Approaches</strong></td>
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<td>Nicholas L. Deep, M.D.</td>
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<td>11:20 a.m.</td>
<td><strong>Retrosigmoid Approach</strong></td>
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<td>11:35 a.m.</td>
<td><strong>Medical Options and Clinical Trials for Acoustic Neuromas</strong></td>
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<td>Shannon P. Fortin Ensign, M.D., Ph.D.</td>
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<td>11:50 a.m.</td>
<td><strong>Tumor Board</strong></td>
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<td>12:35 p.m.</td>
<td><strong>Closing Remarks</strong></td>
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<td><strong>Adjourn</strong></td>
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