



ARIZONA NEUROSURGICAL SOCIETY

2026 Annual Meeting

PROGRAM · AWARDS · JUDGING

DATE

**Saturday
October 10, 2026**

VENUE

**Barrow Neurological
Institute
Sontag Pavilion, Phoenix**

PRESIDENT

**Laura Snyder, MD
Barrow Neurological
Institute**

JOINTLY PROVIDED BY



MORE Foundation · Arizona Neurosurgical Society



The Day at a Glance

Welcome to the Society's annual gathering of Arizona's neurosurgical residents, fellows, medical students and faculty. The scientific program runs from breakfast through late afternoon; award winners are announced at the close of the meeting.

7:30 – 8:30 AM	<i>Breakfast, Registration & Poster Viewing</i>	
8:30 – 8:40 AM	Welcome & Opening Remarks · Laura Snyder, MD, President	
8:40 – 9:50 AM	Medical Student Presentations · 14 talks, 5 minutes each	p. 3
9:50 – 10:05 AM	<i>Break & Poster Viewing</i>	
10:05 – 10:45 AM	Additional Resident & Fellow Presentations · 12 minutes each	p. 4
10:45 – 11:30 AM	Resident Finalists · Barrow Neurological Institute	p. 4
11:30 – 11:45 AM	Resident Finalist · Banner University Medical Center, Phoenix	p. 4
11:45 AM – 12:30 PM	Resident Finalists · University of Arizona, Tucson	p. 4
12:30 – 1:15 PM	<i>Lunch · residents & medical students until 1:30 PM</i>	
1:15 – 1:30 PM	Business Meeting · members only	
1:30 – 2:30 PM	Faculty Presentations	p. 5
2:30 – 3:00 PM	<i>Break & Poster Viewing</i>	
3:00 – 4:30 PM	Faculty Presentations, continued	p. 5
4:30 PM	Awards Announced & Adjourn	

CONTINUING MEDICAL EDUCATION

This activity has been planned and implemented in accordance with the accreditation requirements and policies of the Arizona Medical Association (ArMA) through the joint providership of MORE Foundation and Arizona Neurosurgical Society. MORE Foundation is accredited by ArMA to provide continuing medical education for physicians.

MORE Foundation designates this live activity for a maximum of **7.0 AMA PRA Category 1 Credits™**. Physicians should only claim credit commensurate with the extent of their participation in the activity.



To claim CME credit, you **MUST** sign in at the registration desk and complete the online evaluation: <https://www.surveymonkey.com/r/AzNS2026> You have **30 days** to claim.

DISCLOSURES

The MORE Foundation adheres to the ACCME's Standards for Integrity and Independence in Accredited Continuing Medical Education. Any individuals in a position to control the content of a CME activity including faculty, planners, reviewers, or others, are required to disclose all relevant financial relationships with ineligible entities (commercial interests). All relevant conflicts of interest have been mitigated prior to the commencement of the activity.



AWARDS AT A GLANCE

\$1,300

across three prizes — the John Green Award, the Philip Carter Award and the Medical Student Award. Award details and the namesakes are on page 6.

Medical Student Presentations

8:40 – 9:50 AM

5 minutes per talk, including questions · one \$100 award

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| 8:40 | Medicare Reimbursement Trends for Stroke Mechanical Thrombectomy Across Different Specialties and Geographic Locations
Jude Kolodisner · MS2, University of Arizona – Tucson |
| 8:45 | Pedicle Inlet Navigation with Robotic-Assisted Cortical Fixation (PINNACLE): A Technical Note and Case Series
Wyatt Comin · MS3, University of Arizona – Phoenix |
| 8:50 | A Case of Midbrain Deafness Following Blunt Traumatic Head Injury
Jack Platacz · MS2, Creighton University |
| 8:55 | Machine Learning-Based Evaluation of Tremor Severity and Treatment Response Using Wearables Following Focused Ultrasound
Harrison Cole · Medical Student, Barrow Neurological Institute |
| 9:00 | Early Pain Relief Without Activity Recovery Is Associated with Worse Disability Following Full-Endoscopic Decompression for Lumbar Spinal Stenosis
Matthew Scarsbrook · MS2, University of Arizona – Tucson |
| 9:05 | Subdural Evacuating Port System for the Management of Acute-on-Chronic Subdural Hemorrhage
Rose Zach · MS3, University of Arizona – Phoenix |
| 9:10 | FDA-Authorized Artificial Intelligence-Enabled Medical Devices for Neurosurgical Practice: A Landscape Analysis and Clinical Evidence Audit
Kashif Qureshi · MS3, Yale University |
| 9:15 | Aberrant CDK5/p25 Activity Drives Phosphorylation of Novel Chromatin-Associated Substrates in Diffuse Intrinsic Pontine Glioma: A Candidate Therapeutic Axis
Andres Diaz · MD/PhD G4, University of Arizona – Tucson |
| 9:20 | Development and Validation of a Synthetic Cranial Model for EVD Placement
Cameron Nikjou · MS2, University of Arizona – Phoenix |
| 9:25 | The Natural History of an Adult Patient with Primary Diffuse Leptomeningeal Glioblastoma Multiforme and Review of the Literature
Keshav Nandakumar · MS3, Creighton University |
| 9:30 | Intracranial Hemorrhage During Systemic Anti-Neoplastic Therapy: A Review of Incidence, Fatality, and Risk
Julio Camacho · MS3, University of Arizona – Tucson |
| 9:35 | The Effects of Vagus Nerve Stimulation on Outcomes in Patients with Stroke
Matthias Glass · MS2, University of Arizona – Phoenix |
| 9:40 | Current Global Trajectories in Surgical and Device-Based Interventions for Epilepsy: A Comparative Analysis of International Clinical Neuromodulation Trials
Azeez Abdul · MS3, Texas Tech – El Paso |
| 9:45 | A Replicable Framework for Developing Student-Led Neurosurgery Groups and Educational Initiatives
Manlin Shao · G3, University of Arizona – Tucson |



9:50 – 10:05 AM *Break & Poster Viewing*

Resident & Fellow Presentations

Finalist talks in this block are scored by faculty judges for the John Green and Philip Carter Awards. The judging rubric is provided on table tents and by QR code at each table.

ADDITIONAL RESIDENT & FELLOW PRESENTATIONS

10:05 – 10:45 AM · 12 minutes per talk

- 10:05** Comparing Failure Rates for Minimally Invasive Versus Open Posterior Approaches for the Treatment of Multilevel Degenerative Lumbar Spine Conditions
Nicholas Rabah, MD · PGY5, Barrow Neurological Institute
- 10:17** Cooler the Second Time Around? The Role of Skull Density Ratio in Staged Bilateral MRgFUS Thalamotomy
Alex Greven, MD · PGY5, Barrow Neurological Institute
- 10:29** Assessment of Deep Brain Stimulation Candidacy for Idiopathic Parkinson's Disease
James Kelbert, MD · Pre-Residency Fellow, University of Arizona – Tucson

RESIDENT FINALISTS · BARROW NEUROLOGICAL INSTITUTE

10:45 – 11:30 AM · 15 minutes per talk

- 10:45** Unbiased CSF Proteomics Identifies Distinct Targetable Pathways of Early Brain Injury, Vasospasm, and Delayed Cerebral Ischemia After Aneurysmal Subarachnoid Hemorrhage
Sirin Gandhi, MD · PGY6, Barrow Neurological Institute
- 11:00** Favorable or Unfavorable? An Evaluation of State-Specific Factors Affecting Projected Neurosurgical Workforce Inadequacy
Sarah Sternbach, MD · PGY2, Barrow Neurological Institute
- 11:15** Toward Saving Lives Through Improved Communications: Implementation of a Structured Neurosurgical ICU Rounding Checklist
Cyrus Elahi, MD · PGY7, Barrow Neurological Institute

RESIDENT FINALIST · BANNER UNIVERSITY MEDICAL CENTER, PHOENIX

11:30 – 11:45 AM

- 11:30** Indirect Versus Atlas-Guided Targeting of the VIM for Deep Brain Stimulation in Essential Tremor
Kristin Nosova, MD · PGY7, Banner University Medical Center – Phoenix

RESIDENT FINALISTS · UNIVERSITY OF ARIZONA, TUCSON

11:45 AM – 12:30 PM · 15 minutes per talk

- 11:45** Effect of Prone Positioning on Intracranial Anatomy: Quantitative Comparison of Supine and Prone MRI for Stereotactic Planning
Ryan Palsma, MD · PGY7, University of Arizona – Tucson
- 12:00** Research Currency in Neurosurgery: An Analysis of Authorship Expansion, Collaboration, and Funding Efficiency from 1995–2025
Dara Farhadi, MD · PGY4, University of Arizona – Tucson
- 12:15** Comparison of Subdural Drains and Subdural Evacuating Port Systems in Bedside Decompression of Chronic Subdural Hematomas: A Single Tertiary Trauma Center Experience
Kareem El Naamani, MD · PGY3, University of Arizona – Tucson



12:30 – 1:15 PM *Lunch*

1:15 – 1:30 PM *Business Meeting · members only*

Faculty Presentations

AFTERNOON SESSION

1:30 – 4:30 PM

1:30 Spinal AVM Management: A Proposed Classification System

Michael Lawton, MD · Barrow Neurological Institute

1:45 Optimal Closed-Loop Feedback Control of Blood Flow After Spinal Cord Injury with Norepinephrine

Nicholas Theodore, MD · Banner University of Arizona – Phoenix

2:00 Hacking the Brain: Modulation, Ablation, and Actuation

Francisco Ponce, MD · Barrow Neurological Institute

2:15 The Use of MRI Spectroscopy to Identify Discogenic Pain Generators in Degenerative Disease of the Spine

Dean Karahalios, MD · Mayo Clinic – Scottsdale

2:30 – 3:00 PM *Break & Poster Viewing*

3:00 Targeting Multiple Phagocytosis Checkpoints to Potentiate Immunotherapy in Glioblastoma

Kristin Huntoon, DO · University of Arizona – Tucson

3:15 AI in Spine Surgery

Nikolay Martirosyan, MD · University of Arizona – Phoenix

3:30 Electrochemistry of Human Cognition and Social Interaction

Robert Bina, MD · Banner University – Phoenix

3:45 Nerve Transfers for the Neurosurgical Patient

Ken Porche, MD, MA · Mayo Clinic

4:00 Temporal Lobe Epilepsy: Neurosurgical Perspectives

Marty Weinand, MD · University of Arizona – Tucson

4:15 Thoracic Disc Herniations

Laura Snyder, MD · Barrow Neurological Institute

4:30 Awards Announced & Adjourn

NOTES FOR ATTENDEES

- Medical student presentations are 5 minutes each, including questions. Resident and faculty presentations retain full-length slots.
- Poster presentation is available to any accepted author as an alternative or addition to a podium talk. Posters may be viewed during breakfast and both breaks.
- Award funding is not limited to designated finalists; non-finalist presenters receiving high attendee-voting scores remain eligible.
- Registration is required for all attendees, including presenters whose abstracts have been accepted.



The Awards

Three prizes are presented at the close of the meeting. The two resident awards carry the names of the surgeons who built neurosurgery in this state.

FIRST PLACE · RESIDENT \$700 John Green Award Highest average judge score among resident presentations.	SECOND PLACE · RESIDENT \$500 Philip Carter Award Second-highest average judge score among resident presentations.	MEDICAL STUDENT \$100 (NEW Prize) Medical Student Award One award, for the top medical student presentation of the morning session.
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The Namesakes

The Society's two resident research prizes carry the names of a teacher and his resident — the surgeon who brought neurosurgery to Arizona, and one of the first men he trained.

\$700 · FIRST PLACE

John Raymond Green, MD

1915 – 1990

Green graduated from Northwestern University in 1941 and trained under Eric Oldberg — Harvey Cushing's last resident — at the Illinois Neuropsychiatric Institute, where he also completed a fellowship in epilepsy surgery with Percival Bailey.

Navy service in the Pacific left him with rheumatic fever and early arthritis that Chicago winters aggravated. In 1947, studying a map in Paul Bucy's office, he noticed that Arizona had no neurosurgeon at all. He moved to Phoenix and became the state's first.

His care of Julia Barrow through four operations for an oligodendroglioma moved her husband, the coal magnate Charles Barrow, to fund a neuroscience institute in her memory. Barrow Neurological Institute was founded in 1961 and opened its doors in September 1962 — one of only three such institutes in the country. Green led it as founding medical director until his retirement in 1985.

\$500 · SECOND PLACE

L. Philip Carter, MD

d. 2010

Carter graduated from Washington University School of Medicine in 1964, served in the Air Force, and began general surgery training in New York before entering neurosurgical residency at the newly formed Barrow Neurological Institute in 1968, under John Green.

In the BNI laboratory, working alongside James R. Atkinson, he developed a technique for measuring cortical blood flow continuously — work that shaped the rest of his career. After an International College of Surgeons fellowship in Europe and Canada, he returned to BNI in 1973 and built its microsurgery research laboratory.



He led the University of Arizona's Division of Neurosurgery from 1988 to 1993 and was instrumental in the partnership with BNI that still trains UA residents. He then chaired neurosurgery at the University of Oklahoma, returning to Tucson in 1997. He led this Society as president, and was to preside over the Western Neurosurgical Society's 2010 meeting when he died that July, at 71. The University of Arizona honors him through the L. Philip Carter, MD, Neurosurgical Alumni Society.

Both awards recognize resident research presented at this meeting — a tradition the Society has carried for decades.

2025 Winners' Circle

2026 winners will be announced at the close of the meeting, 4:30 PM. Recipients are welcome to a photograph with the Program Chair immediately afterward.

\$700 FIRST PLACE	John Green Award 2025 Winner Baltazar Zavala, MD <i>Human Subthalamic Nucleus Beta and Theta Oscillations Are Involved in Gating the Encoding of Memories</i> RECIPIENT
\$500 SECOND PLACE	Philip Carter Award 2025 Winner Ashley Carter, MD <i>The Research Pilot Grant Program: Early Outcomes of a National Initiative to Address Mentorship and Research Inequities in Neurosurgery</i> RECIPIENT
MEDICAL STUDENT	Medical Student Award 2025 Winner Manlin Shao <i>External Validation of a Graded CSF Leak Repair Protocol in Expanded Endoscopic Endonasal Approaches: Retrospective Analysis of a Single Surgical Team's Experience</i> RECIPIENT



THIS YEAR'S RESIDENT FINALISTS

Every finalist below is judged for the Green and Carter awards.

BARROW NEUROLOGICAL INSTITUTE

Sirin Gandhi, MD

PGY6

Sarah Sternbach, MD

PGY2

Cyrus Elahi, MD

PGY7

BANNER UNIVERSITY MEDICAL CENTER, PHOENIX

Kristin Nosova, MD

PGY7

UNIVERSITY OF ARIZONA, TUCSON

Ryan Palsma, MD

PGY7

Dara Farhadi, MD

PGY4

Kareem El Naamani, MD

PGY3

Award funding is not limited to designated finalists; non-finalist presenters receiving high attendee-voting scores remain eligible.

THANK YOU TO OUR SPONSORS

The Arizona Neurosurgical Society extends its sincere thanks to the sponsors and exhibitors who make this meeting possible. Their generous support helps us bring Arizona's neurosurgical community together each year. Please take a moment to visit their booths during breakfast and the breaks.

Breakfast & Lunch Sponsors

Omega Medical · NeuroIOM

Exhibitors

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