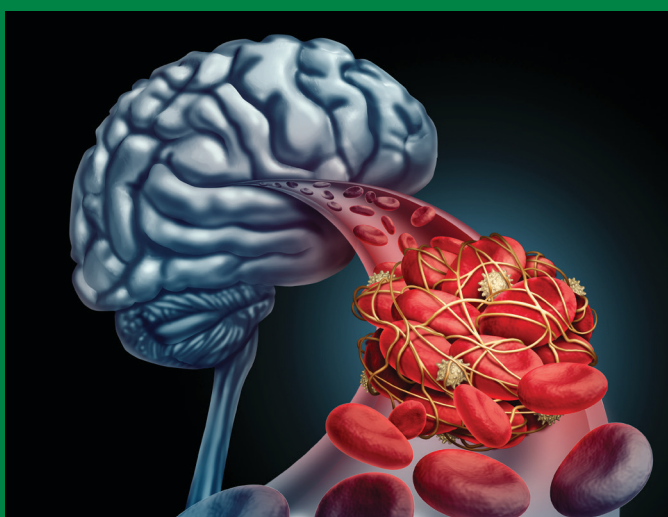
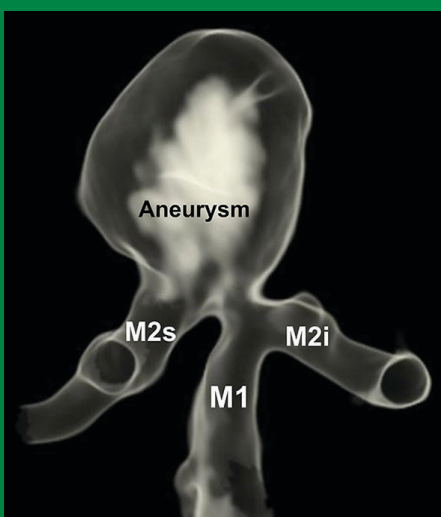
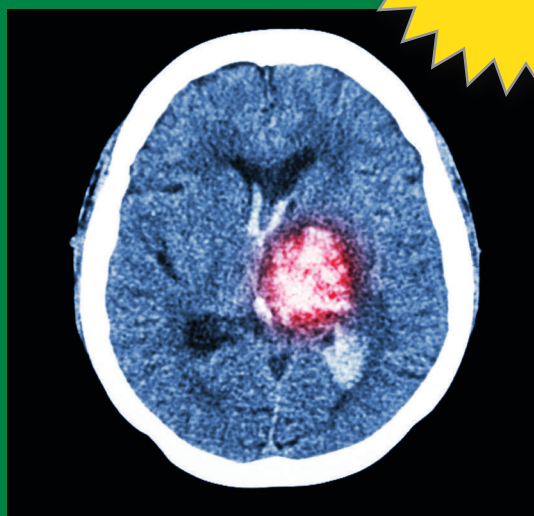


# Innovations in Cerebrovascular Care 2024

**Tuesday June 18 – Wednesday June 19**

InterContinental Hotel and Conference Center  
Cleveland, OH and Live Stream

**Attend  
In Person  
or  
Live Stream**



**Register Today! [www.ccfcmcme.org/IICC](http://www.ccfcmcme.org/IICC)**

# Innovations in Cerebrovascular Care 2024

## Overview

Care of cerebrovascular conditions continues to advance at a rapid pace. The Cleveland Clinic Innovations in Cerebrovascular Care 2024 meeting aims to focus on clinical care and technological advances in the field, as well as provide a multidisciplinary discussion around some of the greatest challenges practitioners from the neurosciences and other fields face in caring for these complex patients.

## Who Should Attend?

This educational activity is intended for emergency medicine physicians, fellows, neurointensivists, neurointerventionalists, neurologists, neuroradiologists, neurosurgeons, nurse practitioners, nurses, pharmacists, physician assistants, primary care physicians, and residents who treat cerebrovascular patients.

## Learning Objectives

After completing this educational activity, participants will be able to do the following:

- Critically review the evidence on the potential indications for anticoagulation in cerebral amyloid angiopathy and the risks and benefits of anticoagulation for each potential indication.
- Describe the latest techniques in the treatment of hemorrhagic stroke and arteriovenous malformation, and candidate selection for each, including minimally invasive techniques, based on current knowledge.
- Elucidate the clinical evidence to support the use of flow diversion for the treatment of intracranial aneurysms, and the efficacy and safety profile of this treatment, and for which patients this treatment option is feasible.
- Discuss the management of complex cerebrovascular lesions, especially intracranial aneurysms and arteriovenous malformations.
- Describe the evidence for administering IV thrombolysis outside the approved 4.5-hour time window in patients suffering acute ischemic stroke, the evidence for anticoagulation in the treatment of cervical artery dissection, and the use of GLP-1 receptor agonists to reduce the risk of stroke.
- Express how the control of modifiable risk factors can prevent dementia and stroke in older individuals.
- Recall the process of normothermic regional perfusion to preserve organ function to increase the pool of donors in heart transplantation.

## Cleveland Clinic Course Director



### **M. Shazam Hussain, MD, FRCP(C), FAHA**

Director, Cerebrovascular Center  
Staff, Vascular Neurology and  
Endovascular Surgical Neuroradiology  
Associate Professor, Cleveland Clinic Lerner  
College of Medicine

## Cleveland Clinic Co-Directors



### **Mark Bain, MD, MS, FAANS**

Head of Cerebrovascular Neurosurgery and  
Endovascular Surgical Neuroradiology  
Staff, Department of Neurosurgery  
and Cerebrovascular Center  
Assistant Professor, Cleveland Clinic Lerner  
College of Medicine Department of Surgery



### **Andrew Russman, DO, FAAN, FAHA**

Head, Cleveland Clinic Stroke Program  
Medical Director, Comprehensive  
Stroke Center  
Staff, Vascular Neurology



### **Joao Gomes, MD, FCCM, FAHA**

Head, Neurointensive Care Unit  
Staff, Cerebrovascular Center



### **Ken Uchino, MD, FAHA, FANA**

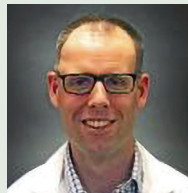
Director, Vascular Neurology Fellowship  
Head, Research and Education,  
Cerebrovascular Center  
Staff, Vascular Neurologist  
Associate Professor, Cleveland Clinic  
Lerner College of Medicine

# Innovations in Cerebrovascular Care 2024

## Guest Faculty



**Steven Greenberg, MD, PhD**  
Massachusetts General Hospital  
Boston, Massachusetts



**Scott Raymond, MD**  
The University of Vermont Medical Center  
Burlington, Vermont



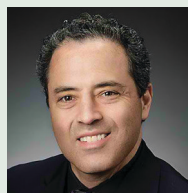
**Ferdinand Hui, MD**  
The Queen's Health System  
Honolulu, Hawaii



**Ashfaq Shuaib, MD, FRCP(C)**  
University of Alberta  
Edmonton, Alberta, Canada



**Dinesh Jillella, MD**  
Emory University School of Medicine  
Atlanta, Georgia



**Brian Silver, MD, FRCP(C)**  
UMass Memorial Health  
Worcester, Massachusetts



**Ashutosh Mahapatra, MD**  
The University of Texas Health Science Center  
at Houston  
Houston, Texas



**John Trahanas, MD**  
Vanderbilt University Medical Center  
Nashville, Tennessee



**Jason Mathew, DO**  
Stony Brook University  
Stony Brook, New York

## Cleveland Clinic Faculty

Christine Ahrens, PharmD  
Khaled Asi, MD  
Marc Babi, MD  
Adam Barron, MD  
A. Blake Buletko, MD  
Morgan Carter, PhD  
Rodica Di Lorenzo, MD  
Van Fagert, CNP  
G. Abbas Kharal, MD  
Varun Kshetry, MD

Nina Moore, MD  
Michal Obrzut, MD  
Ela Plow, PhD  
Peter Rasmussen, MD  
Tina Resser, MSN, ACNP-BC, FNP-BC, CNRN  
Gabor Toth, MD  
Jenny Tsai, MD  
Daniel Wadden, CNP  
Wei Zhang, MD, PhD, MS

## Planning Committee

Christine Ahrens, PharmD  
Marc Babi, MD  
Adam Barron, MD  
Dhimant Dani, MD  
Rodica Di Lorenzo, MD  
Brad Douglas, MSN, ACNP-BC  
G. Abbas Kharal, MD  
Nina Moore, MD  
Amre Nouh, MD, MBA, FAHA, FAAN  
Tina Resser, MSN, ACNP-BC, FNP-BC, CNRN  
Nicole Smith, PA-C  
Gabor Toth, MD  
Jenny Tsai, MDCM, FRCP(C)

# Agenda

## Tuesday, June 18

- 7:00 am Registration/Continental Breakfast/Exhibits  
8:00 am Welcome and Introduction  
Andrew Russman

### CAA

- Moderators: G. Abbas Kharal, Andrew Russman  
8:10 am What's new and hot in CAA  
Steven Greenberg  
8:30 am Debate: Can a patient with numerous cerebral microbleeds or possible CAA be anticoagulated?  
Pro: Brian Silver Con: Andrew Russman  
9:00 am Panel Discussion. Challenging cases in acute stroke management among patients with numerous cerebral microbleeds  
Steven Greenberg, Andrew Russman, Brian Silver, Gabor Toth  
10:00 am Refreshment Break/Exhibits  
Moderators: Rodica Di Lorenzo, Andrew Russman  
10:30 am Not all cerebral microbleeds are CAA  
Brian Silver  
10:50 am Clinical and subclinical CAA-RI  
G. Abbas Kharal  
11:10 am Emerging therapeutic approaches for CAA  
Steven Greenberg  
11:30 am Panel Discussion. Challenging cases in CAA management  
Steven Greenberg, G. Abbas Kharal, Brian Silver, Ken Uchino  
12:15 pm Lunch/Exhibits

### 360° Management of Hemorrhagic Stroke

- Moderators: Dhimant Dani, Nina Moore, Tina Resser  
1:00 pm MMA embolization. Where we are and what questions remain?  
Michael Obrzut  
1:20 pm Debate: Minimally invasive ICH evacuation for basal ganglia hemorrhage  
Pro: Varun Kshetry Con: Peter Rasmussen  
1:50 pm Debate: Are lumbar drains the new standard in SAH?  
Pro: Marc Babi Con: Adam Barron  
2:20 pm Panel Discussion: Challenging cases in management of hemorrhagic stroke  
Marc Babi, Adam Barron, Varun Kshetry, Nina Moore, Michael Obrzut, Peter Rasmussen  
3:00 pm Refreshment Break/Exhibits

### The Next Frontier in Cerebrovascular Care

- Moderators: Shazam Hussain, Gabor Toth  
3:30 pm AI and machine learning in the angiography suite  
Scott Raymond  
3:50 pm Novel advances in stroke rehabilitation  
Ela Plow  
4:10 pm Personalized care for AVMs: Ready for prime time?  
Nina Moore  
4:30 pm How to approach innovations  
Morgan Carter  
4:50 pm Panel Q&A  
5:00 pm Adjourn. Reception all attendees welcome

## Wednesday, June 19

- 7:00 am Continental Breakfast/Exhibits  
8:00 am Welcome and Introduction  
Shazam Hussain

### Aneurysm/AVM

- Moderators: Peter Rasmussen, Van Fagert  
8:10 am Novel devices for aneurysm embolization  
Jenny Tsai  
8:30 am Debate: Intrasaccular flow diversion is the new standard for bifurcation aneurysms  
Pro: Gabor Toth Con: Ashutosh Mahapatra  
9:00 am Panel Discussion: Complex cases in treatment of cerebral aneurysm and AVM  
Ashutosh Mahapatra, Nina Moore, Peter Rasmussen, Jenny Tsai, Gabor Toth  
10:00 am Refreshment Break/Exhibits

### Acute Stroke Therapy

- Moderators: Khaled Asi, Nicole Smith, Ken Uchino  
10:30 am Updates in stroke after ISC and ESOC  
Shazam Hussain  
10:55 am Debate: Late Window Thrombolysis With Tenecteplase  
Pro: Rodica Di Lorenzo Con: Dinesh Jillella  
11:25 am Panel Discussion: Complex cases in acute stroke management  
Rodica Di Lorenzo, Shazam Hussain, Dinesh Jillella  
12:15 pm Lunch/Exhibits

### Secondary Prevention of Stroke

- Moderators: Christine Ahrens, Andrew Russman  
1:00 pm GLP1- receptor agonist and stroke prevention in patients with and without diabetes  
Wei Zhang  
1:20 pm Debate: Anticoagulation has a role in management of cervical artery dissection  
Pro: Jason Mathew Con: A. Blake Buletko  
1:50 pm Debate: It's time to abandon the ESUS concept  
Pro: Ashfaq Shuaib Con: Ken Uchino  
2:20 pm Panel Discussion: Complex scenarios in secondary prevention of stroke  
A. Blake Buletko, Jason Mathew, Ashfaq Shuaib, Ken Uchino  
3:00 pm Refreshment Break/ Exhibits

### Expanding Indications

- Moderators: Joao Gomes, Daniel Wadden  
3:30 pm Vascular Health and the Aging Brain  
Ashfaq Shuaib  
3:50 pm A framework for cerebral venous congestion  
Ferdinand Hui  
4:10 pm Normothermic regional perfusion in donation after cardiac death  
John Trahanas  
4:30 pm Panel Discussion: What will Neurointerventional Looks like in 20 years  
Shazam Hussain, Gabor Toth, Jenny Tsai  
5:00 pm Adjourn

All presentations include a 5-minute question and answer period.



# Innovations in Cerebrovascular Care 2024

## Fees

**In Person Fee includes:** Continental breakfast, refreshment breaks, lunch and faculty PowerPoint presentations in PDF format

**Virtual Fee includes:** Access to webinar and faculty PowerPoint presentations in PDF format

|                  | In Person | Virtual |
|------------------|-----------|---------|
| Physician        | \$250     | \$250   |
| Non Physician    | \$125     | \$125   |
| Resident/Fellow* | \$125     | \$0     |

\*Letter from program director is required to receive the discounted fee. Cleveland Clinic employee fees and registration are available online only.

## Registration and Cancellation

Preregistrations are accepted online until 5:00 pm (EST), June 5, 2024. In case of cancellation, a full refund will be made if cancelled by June 11, 2024. After June 11, 2024, a 50% cancellation fee will be deducted from your refund. Written notification of your cancellation is required in order to process your refund. **NO REFUNDS WILL BE ISSUED AFTER JUNE 18, 2024.**

For questions about registration, call 216.448.8710 or email [cmeregistration@ccf.org](mailto:cmeregistration@ccf.org)

## General Information

### Location

**InterContinental Hotel and Bank of America Conference Center**  
9801 Carnegie Avenue Cleveland, OH 44106  
Phone: 216.707.4100 or 877.707.8999  
[www.intercontinentalcleveland.com](http://www.intercontinentalcleveland.com)

### Hotel Accommodations

Hotel reservations are separate from the course registration and are the responsibility of the participant. A block of rooms have been reserved at the InterContinental Hotel for a rate of \$179 plus tax. Please call 216.707.4100 to make your reservation.

**The cut-off date for the special rate is May 17, 2024.**

### Parking

Parking is available in the 100th Street Visitor's Parking Garage at prevailing rates. Valet parking at the hotel is available for an additional charge.

### Information

For further information about this activity, contact Liz Eaton at:

Phone: 800.223.2273 x55431  
Email: [eatonl3@ccf.org](mailto:eatonl3@ccf.org)

## Accreditation

In support of improving patient care, Cleveland Clinic Center for Continuing Education is jointly accredited by the Accreditation Council for Continuing Medical Education (ACCME), the Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC), to provide continuing education for the healthcare team.

## Credit Designation

### • American Medical Association (AMA)

Cleveland Clinic Center for Continuing Education designates this live activity for a maximum of 14.50 AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Participants claiming CME credit from this activity may submit the credit hours to the American Osteopathic Association for Category 2 credit.

### • American Nurses Credentialing Center (ANCC)

Cleveland Clinic Center for Continuing Education designates this live activity for a maximum of 14.50 ANCC contact hours.

### • American Academy of PAs (AAPA)

Cleveland Clinic Center for Continuing Education has been authorized by the American Academy of PAs (AAPA) to award AAPA Category 1 CME credit for activities planned in accordance with AAPA CME Criteria. This activity is designated for 14.50 AAPA Category 1 CME credits. PAs should only claim credit commensurate with the extent of their participation.

### • American Board of Surgery (ABS) MOC

Successful completion of this CME activity enables the learner to earn credit toward the CME requirements of the American Board of Surgery's Continuous Certification program. It is the CME activity provider's responsibility to submit learner completion information to ACCME for the purpose of granting ABS credit.

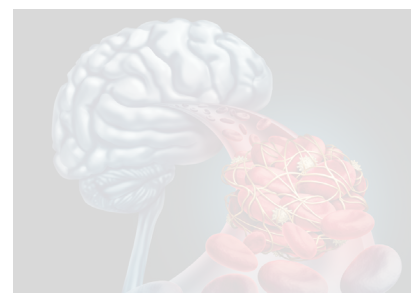
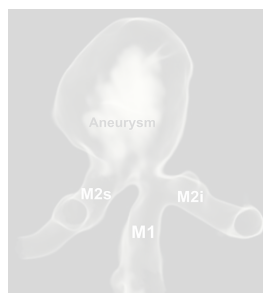
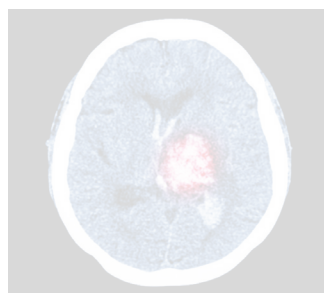
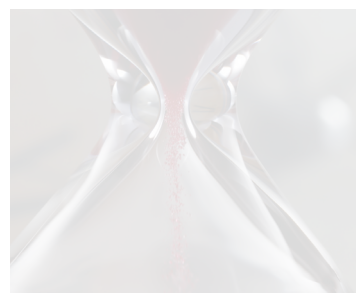
Credit will be reported within 30 days of claiming credit.

## Faculty Disclosure Statement

The Cleveland Clinic Center for Continuing Education has implemented a policy to comply with the current Accreditation Council for Continuing Medical Education Standards for Integrity and Independence requiring mitigation of all faculty conflicts of interest. Faculty declaring a relevant financial relationship will be identified in the activity syllabus.

## Americans with Disabilities Act

The Cleveland Clinic Center for Continuing Education fully intends to comply with the legal requirements of the Americans with Disabilities Act. If you need assistance, please notify us at least two weeks prior to the activity.



Cleveland Clinic Center for Continuing Education reserves the right to cancel or postpone an activity at our sole discretion. In the unlikely event that this occurs, any registration fee(s) paid will be refunded. Be advised that Cleveland Clinic is not responsible for related costs including airline tickets, hotel costs, or any similar fee penalties incurred as a result of any trip cancellations or changes.