Introduction

In the past few years, there has been nothing short of a revolution in the diagnosis and treatment of cerebrovascular disease. What was almost unimaginable in the past is now common: diffusion-perfusion imaging to define the potential salvagability of tissue, emergent reperfusion therapy to restore cerebral blood flow, multi-modal monitoring to ensure optimal physiological conditions for healing, and advanced medical management to prevent stroke recurrence. For the 11th Annual Cleveland Neurocritical Care & Stroke Conference, we have gathered many of the internationally renowned experts who have led this revolution. Our 5th Annual Transcranial Doppler Ultrasound Workshop will also provide a complete review of ultrasound principles, techniques, and interpretation.

Please join us for this extraordinary forward-looking conference covering the latest in state-of-the-art stroke care.

Who Should Attend

This symposium is designed for neurologists, neurosurgeons, neurointensivists, internists, family medicine physicians, and emergency medicine physicians. Nurses and other allied health professionals may also find this education of value.

Objectives

After attending the 11th Annual Cleveland Neurocritical Care & Stroke Conference participants will be able to:

• Recognize how to apply the new AHA Guidelines to patients with stroke
• Identify where and why the new AHA Guidelines differ from the old guidelines
• Understand the advantages and disadvantages of the new anticoagulant agents for stroke prevention
• Identify the risk and benefits of IV versus IV/IA thrombolysis for patients with acute stroke
• Identify the role that targeted temperature management plays in patients after cardiac arrest

After attending the 5th Annual Transcranial Doppler Ultrasound Workshop participants will be able to:

• Describe the underlying principles of TCD Sonography
• Recognize the role of TCD monitoring in patients with subarachnoid hemorrhage and vasospasm
• Discuss the role of TCD sonography in determining brain death
• Discuss the role of emboli monitoring with TCD sonography
• Describe how to best document, code and bill for TCD services

Continuing Education

Case Western Reserve University School of Medicine is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education to physicians.

Case Western Reserve University School of Medicine designates the 11th Annual Cleveland Neurocritical Care & Stroke Conference live activity for a maximum of 7.25 AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Case Western Reserve University School of Medicine designates the 5th Annual Transcranial Doppler Ultrasound Workshop live activity for a maximum of 3.75 AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.
Faculty

Karen Lidsky, MD
Associate Professor of Pediatrics
Director, Pediatric Critical Care Transport

Benjamin Miller, MD
Department of Neurology
University Hospitals Case Medical Center

Svetlana Pundik, MD
Assistant Professor of Neurology
Department of Neurology
Louis Stokes Cleveland VA Medical Center

Warren Selman, MD
The Harvey Huntington Brown Jr. Professor and Chair
Department of Neurological Surgery
Director, University Hospitals Neurological Institute
University Hospitals Case Medical Center

Tanzila Shams, MD
Department of Neurology
University Hospitals Case Medical Center

Daniel Simon, MD
Herman K. Hellerstein Chair in Cardiovascular Research and Professor of Medicine
Director, University Hospitals Harrington Heart & Vascular Institute
Chief, Division of Cardiovascular Medicine
University Hospitals Case Medical Center

Cathy Sila, MD
George M. Humphrey II Professor of Neurology
Case Western Reserve University School of Medicine
Director, Stroke & Cerebrovascular Center
Director, Neurosonology
University Hospitals Case Medical Center

Matthew Smith, MD
Department of Neurology
University Hospitals Case Medical Center

Sophia Sundararajan, MD, PhD
Assistant Professor of Neurology
Department of Neurology
University Hospitals Case Medical Center

Robert Tarr, MD
Professor of Neuroradiology
Section Chief, Neuroradiology
Associate Director, University Hospitals Neurological Institute
University Hospitals Case Medical Center

Benjamin Walter, MD
Assistant Professor of Neurology
Director, Center for Movement Disorders
University Hospitals Case Medical Center

Michael De Georgia, MD
Course Director
Maxeen Stone and John A. Flower Professor of Neurology
Case Western Reserve University School of Medicine
Director, Neurocritical Care Center
Co-director, Cerebrovascular Center
University Hospitals Case Medical Center

Gary Bernardini, MD, PhD
Professor of Neurology and Neurosurgery
Director of Stroke and Neurocritical Care
Albany Medical Center
Albany, NY

David Crippen, MD
Professor of Critical Care Medicine
Co-Director, Neurovascular ICU
University of Pittsburgh
Pittsburgh, PA

Stephan Mayer, MD
Director, Institute for Critical Care Medicine
Departments of Neurology and Neurosurgery
Icahn School of Medicine at Mt. Sinai
New York, NY

Larry Raber, RDMS, RVT, RT(R)
Director, Neurosonology
Cleveland Clinic

Case Western Reserve University

Nicholas Bambakidis, MD
Associate Professor of Neurological Surgery
Director, Cerebrovascular and Skull Base Surgery
University Hospitals Neurological Institute
University Hospitals Case Medical Center

Kristine Blackham, MD
Assistant Professor of Radiology
Program Director, Neuroradiology
University Hospitals Case Medical Center

Anthony Furlan, MD
Gilbert W. Humphrey Professor and Chair
Department of Neurology
Co-director, University Hospitals Neurological Institute
University Hospitals Case Medical Center

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Associate Director, University Hospitals Neurological Institute
University Hospitals Case Medical Center

Benjamin Walter, MD
Assistant Professor of Neurology
Director, Center for Movement Disorders
University Hospitals Case Medical Center
Program Agenda

Friday, May 30, 2014

7:30 – 8:30am  Registration and Continental Breakfast

8:30 – 8:40  Opening Remarks and Welcome
   Michael De Georgia, MD

Session 1: Updates in Stroke Prevention
   Cathy Sila, MD

8:40 – 9:00  New AHA Guidelines for Cardiovascular Prevention
   Daniel Simon, MD

9:00 – 9:20  New Anticoagulant Agents for Atrial Fibrillation
   Sophia Sundararajan, MD, PhD

9:20 – 9:40  New Approaches for Cryptogenic Stroke
   Gary Bernardini, MD, PhD

9:40 – 10:00  New Approaches for Carotid Stenosis
   Nicholas Bambakidis, MD

10:00 – 10:10  Panel Discussion

10:10 – 10:30 Break

Session 2: Updates in Stroke Treatment
   Anthony Furlan, MD

10:30 – 10:50  Update on Neuroimaging for Acute Stroke Therapy
   Kristine Blackham, MD

10:50 – 11:20  Update on Intravenous Thrombolysis for Acute Stroke
   Cathy Sila, MD

11:20 – 11:50  Update on Interventional Therapy for Acute Stroke
   Robert Tarr, MD

11:50 – 12:00  Panel Discussion

12:00 – 1:30 Lunch

Session 3: Updates in Neurosurgery and Neurocritical Care
   Michael De Georgia, MD

1:30 – 1:50  Update on Intracerebral Hemorrhage
   Alan Hoffer, MD

1:50 – 2:10  Update on Subarachnoid Hemorrhage
   Stephan Mayer, MD
### 11th Annual Cleveland Neurocritical Care & Stroke Conference
#### Friday, May 30

<table>
<thead>
<tr>
<th>Time</th>
<th>Session Title</th>
<th>Speaker(s)</th>
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<tbody>
<tr>
<td>2:10 – 2:30</td>
<td>Update on Hypothermia for Cardiac Arrest</td>
<td>Michael De Georgia, MD</td>
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<tr>
<td>2:30 – 3:00</td>
<td>Update on Brain Death</td>
<td>David Crippen, MD</td>
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<td>3:00 – 3:10</td>
<td>Panel Discussion</td>
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<td>3:10 – 3:30</td>
<td>Break</td>
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#### Session 4: Updates in Stroke Rehabilitation
*Warren Selman, MD*

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<tr>
<th>Time</th>
<th>Session Title</th>
<th>Speaker(s)</th>
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<tbody>
<tr>
<td>3:30 – 3:50</td>
<td>Stroke Rehabilitation Using Transcranial Magnetic Stimulation</td>
<td>Svetlana Pundik, MD</td>
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<tr>
<td>3:50 – 4:10</td>
<td>Stroke Rehabilitation Using Computer-Brain Interface Technology</td>
<td>Benjamin Walter, MD</td>
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<tr>
<td>4:10 – 5:00</td>
<td>Looking Forward</td>
<td>Anthony Furlan, MD</td>
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<td>8:00</td>
<td>The Codes at Panini's Bar and Grill, 1825 Coventry Road, Cleveland Heights</td>
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### 5th Annual Transcranial Doppler Ultrasound Workshop
#### Saturday, May 31

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<tr>
<th>Time</th>
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<tr>
<td>7:30 – 8:00</td>
<td>Registration and Continental Breakfast</td>
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<tr>
<td>8:00</td>
<td>Physiology</td>
<td>Cathy Sila, MD</td>
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<td>8:20</td>
<td>Subarachnoid Hemorrhage</td>
<td>Matthew Smith, MD</td>
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<td>8:40</td>
<td>Intracranial Stenosis</td>
<td>Benjamin Miller, MD</td>
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<tr>
<td>9:00</td>
<td>Cerebrovascular Reactivity and Hyperperfusion</td>
<td>Benjamin Miller, MD</td>
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<td>9:20</td>
<td>Increased ICP and Brain Death</td>
<td>Michael De Georgia, MD</td>
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<td>9:40</td>
<td>Break</td>
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<tr>
<td>10:00</td>
<td>PFO and Right to Left Shunts</td>
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<tr>
<td>10:30</td>
<td>(with Demonstration of Bubble Study)</td>
<td>Tanzila Shams, MD</td>
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<td>10:30</td>
<td>Pediatric TCD</td>
<td>Karen Lidsky, MD</td>
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<td>10:50</td>
<td>Emboli Monitoring</td>
<td>Larry Raber, RDMS, RVT, RT(R)</td>
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<tr>
<td>11:10</td>
<td>Documentation, Coding and Billing</td>
<td>Larry Raber, RDMS, RVT, RT(R)</td>
</tr>
<tr>
<td>11:30 – 12:00</td>
<td>Panel Discussion</td>
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Meeting Location and Parking
Iris S. and Bert L. Wolstein Research Building
Case Western Reserve University
2103 Cornell Road
Cleveland, OH 44106

Parking is available in the Health Sciences Parking Garage, located under the Biomedical Research Building, accessible from both Cornell Road and Circle Drive; in the Rainbow Babies and Children’s Parking Garage on Adelbert Road; or in the University Hospitals Parking Garage located on University Hospitals Drive, just off of Euclid Avenue. You are responsible for your own parking charges.

The Codes
Following the educational sessions on Friday, come to Panini’s Bar and Grill, 1825 Coventry Road, and hear the Codes play at 8pm. Admission and dancing are free. Drinks and food available for purchase.

Cancellation Policy
Full refunds will be made for cancellations on or prior to May 16 only. Cancellations after May 16 but prior to May 23 require a cancellation fee of $25.00. No refunds will be made after May 23.

Registration Information
Conference tuition includes all educational sessions, materials, continental breakfast and lunch.

Suggested Accommodations:
Courtyard by Marriott Cleveland University Circle
2021 Cornell Rd., Cleveland, Ohio 44106
Phone (216) 791-5678; (800) 321-2211;
Fax (216) 791-5342
www.courtyard.com/CLECE

Doubletree by Hilton—The Tudor Arms Hotel
10660 Carnegie Avenue
Cleveland, Ohio 44106
Phone (216) 452-1260; Fax (216) 231-1816
www.doubletreehilton.com

The Glidden House
1901 Ford Drive, Cleveland, Ohio 44106
Phone (216) 231-8900; (866) 812-4537;
Fax (216) 231-2130
www.gliddenhouse.com

Acknowledgments
This symposium will be supported by grants from industry. A complete listing of supporters will be provided in the syllabus materials distributed at the meeting. Acceptance of funding in support of this symposium does not constitute endorsement of any product or manufacturer.

Disclosure Policy
The policy of the Case Western Reserve University School of Medicine CME Program (CWRU) requires that the Activity Director, planning committee members and all activity faculty (that is, anyone in a position to control the content of the education activity) disclose to the activity participants all relevant financial relationships with commercial interests. Disclosure will be made to activity participants prior to the commencement of the activity. CWRU also requires that faculty make clinical recommendations based on the best available scientific evidence and that faculty identify any discussion of “off-label” or investigational use of pharmaceutical products or medical devices.

University Hospitals Case Medical Center
Case Western Reserve University

The commitment to exceptional patient care begins with revolutionary discovery. University Hospitals Case Medical Center is the primary affiliate of Case Western Reserve University School of Medicine, a national leader in medical research and education and consistently ranked among the top research medical schools in the country by U.S. News & World Report. Through their faculty appointments at Case Western Reserve University School of Medicine, physicians at UH Case Medical Center are advancing medical care through innovative research and discovery that bring the latest treatment options to patients.
REGISTRATION FORM
11th Annual Cleveland Neurocritical Care & Stroke Conference:
Don’t Look Back / CID 2487

How to Register:

Mail this registration form with your check or credit card number to:
Registrar, CME Program
Case Western Reserve University
10524 Euclid Avenue
Cleveland, OH 44106-6026

Register online with a credit card at http://casemed.case.edu/cme

Fax this form with your credit card number to (216) 844-8133

Telephone (216) 983-1239 or (800) 274-8263 with the information requested below and
your credit card number

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First Last Degree(s)

SSN (last 4 digits) ___ ___ ___ ___

Business Phone:_________________________________________________________________

Street Address:_________________________________________________________________

City/State:____________________________Zip:_____________________________________

Email:_________________________________________________________________________

Conference Tuition

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<tr>
<th>May 30 Stroke Conference</th>
<th>May 31 TCD Workshop</th>
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<td>___ Physician</td>
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TOTAL AMOUNT ENCLOSED OR TO BE CHARGED: $________________

___ Enclosed is my check payable to Case Western Reserve University

Charge my: ___ Visa    ___ MasterCard   ___ Discover

Card #: ___________________________ Expiration Date: ___________________

Signature: _________________________ Security Code: ___________________
11th Annual
Cleveland Neurocritical Care
& Stroke Conference

Don't Look Back

May 30 & 31, 2014