Eighth Annual Cerebrovascular Symposium: Controversies in Stroke and Cerebrovascular Disease

Thursday and Friday, May 15-16, 2014

Swedish Education and Conference Center
Swedish Medical Center/Cherry Hill
500 17th Avenue
Seattle, Washington
Needs Statement
Health-care providers today are faced with a rapidly growing population of patients with both acute and chronic cerebrovascular disease. Stroke is the fourth leading cause of death in the United States. Each year, approximately 795,000 people experience a new or recurrent stroke in the United States. On average, one American dies from stroke every four minutes. Clinicians may not be aware of all of the factors in the development of stroke and the complications of stroke presentation and management.

Cerebrovascular disease and stroke management is complex and requires ongoing education for neurologists, neurosurgeons and other sub-specialists who work with these patients. There are several conditions associated with cerebrovascular disease and stroke. Aortic aneurysms were the primary cause of 10,597 deaths and a contributing cause in more than 17,215 deaths in the United States in 2009. A ruptured aneurysm in the brain can cause a stroke. When a patient suffers a stroke, treatment must begin immediately. With the rapid advancements in technology and treatment modalities, clinicians and hospitals need to quickly adapt their practices. Practitioners are faced with a magnitude of choices for detecting and treating stroke and cerebrovascular disease and have expressed a need to be more informed on how to select the best option for their patients.

Course Description
This meeting provides information that will give providers updated data to apply in their practices. Participants will be presented with the latest findings in stroke care, including endovascular treatments, trends in neurocritical care, analysis of complex case studies and cognitive deficits resulting from stroke. Various treatment options will be explored and debated; and case discussions will be used to help determine which option is best for each case.

Faculty from a multidisciplinary team of neurovascular specialists will provide an update on technological advances in the field from the perspectives of stroke neurology, neuroradiology, interventional radiology, neurosurgery, cardiology and tele-neurology. The first day of the symposium will focus on controversies in aneurysm and carotid treatment, stroke treatment and guidelines, neurointensive care options and updates in neuro-interventions. The second day of the symposium will consist of controversies in imaging, and an update on telestroke. Hands-on demonstrations will provide learners with the opportunity to view and practice various techniques related to stroke and cerebrovascular disease.

Course Objectives
At the conclusion of this symposium, the participant will provide better patient care through an increased ability to:

- Describe current indications for systemic thrombolytic therapy for ischemic stroke, outline limitations of systemic thrombolysis for severe stroke and review ways of experimental augmentation of tPA therapy
- Outline the major research effects on neuro-interventions, discuss the role of research in determining treatments and predict the future trends in research
- Discuss the latest trends in treating atrial fibrillation as it relates to stroke risk
- List and describe factors that correlate acute ischemic stroke and endovascular therapy that have a good outcome, discuss how age relates to this outcome and decide what imaging factors as useful tools for patient selection
- Review the indications for surgical intervention, describe the novel surgical treatments of ICH and discuss potential future surgical treatment of ICH
- Describe the mechanism of action of the newer and older anticoagulants, outline methods to reverse acute hemorrhage and define the risks and complications involved in transfusion and identity transfusion alternatives
- Outline the benefit and risk of the novel anticoagulants relative to warfarin in atrial fibrillation and review the emerging data that supports catheter-based approaches to stroke risk reduction in atrial fibrillation
- Describe indications and expected outcomes of TCD in SAH; outline indications and expected outcomes in acute stroke and review diagnostic criteria, current limitations and solutions for vasospasm
- Review the current state of evidence, including randomized, controlled trials, for the use of therapeutic hypothermia for the prevention of secondary brain injury
- Discuss intracranial aneurysm symptoms, review aneurysm treatment and describe long-term follow up of aneurysms
- Describe the significance of carotid stenosis, determine the need for carotid treatment and review the follow up plan for carotid disease
- Describe the methods and results of the ARUBA trial and discuss the implications of the ARUBA trial on the day-to-day management of AVMs
- List the indications and outcomes for surgical vs. endovascular treatment of intracranial aneurysms and discuss the utilization of new technologies in endovascular therapy including flow diverting stents
- Describe an evidence-based review of acute stroke imaging algorithm with a focus on controversies surrounding recently published data from “MR Rescue”
- Explain the basics of imaging parameters and the clinical applications
- Explain the role of telemedicine in the care of stroke patients and describe the new technologies and their potential impact on treatment of cerebrovascular disease
- Review diagnostic clues to implicate aortic arch-associated cerebral infractions, identify highest risk lesions by location and morphology and describe research regarding anti-thrombotic medications and other secondary therapy
- Describe the surgical approach to the skull base and review the anatomy of the parasellar region and sylvian fissure
- Outline basic principles of coiling aneurysms and operate the basic equipment used for coiling aneurysms
- Discuss arteriovenous malformations (AVM) classifications and treatment; and outline aneurysm treatment and outcomes
- Apply hands-on experience in managing carotid endarterectomy with exposure and performance of operative technique
- Review platforms for neuronavigations and discuss the various uses of neuronavigation
### Agenda

#### Thursday, May 15, 2014

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tr>
<td>7:30 a.m.</td>
<td>Registration and Continental Breakfast</td>
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<tr>
<td>8 a.m.</td>
<td>Keynote: Current Progress with Sonothrombolysis: CLOTBUSTER Trial</td>
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<tr>
<td></td>
<td>Andrei V. Alexandrov, M.D.</td>
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<td></td>
<td>* Moderator: William H. Likosky, M.D.</td>
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<tr>
<td>8:45 a.m.</td>
<td>New Research on the Horizon for Cerebrovascular Treatments</td>
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<td>David W. Newell, M.D.</td>
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<tr>
<td>9:30 a.m.</td>
<td>* What’s New in Atrial Fibrillation</td>
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<td>Eric J. Lehr, M.D., Ph.D.</td>
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<tr>
<td>10:15 a.m.</td>
<td>* Break</td>
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<tr>
<td>10:30 a.m.</td>
<td>Stroke – Moderated by William H. Likosky, M.D.</td>
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<tr>
<td></td>
<td>How Can We Better Select Patients with Acute Ischemic Stroke for Endovascular Therapy?</td>
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<td>Yince Loh, M.D.</td>
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<td>11 a.m.</td>
<td>Intracerebral Hemorrhage: New Guidelines and Research</td>
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<td>Stephen J. Monteith, M.D.</td>
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<td>11:45 a.m.</td>
<td>Emergency Reversal of Anticoagulants and Transfusion Management in Acute Hemorrhage</td>
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<td>Lori B. Heller, M.D.</td>
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<tr>
<td>12:15 p.m.</td>
<td>Stroke Risk Reduction in Atrial Fibrillation: Novel Pharmacologic and Procedural Treatments</td>
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<td>Ted J. Lowenkopf, M.D.</td>
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<tr>
<td>12:45 p.m.</td>
<td>Lunch</td>
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<tr>
<td>1:30 p.m.</td>
<td>Neurointensive Care – Moderated by Arthur M. Lam, M.D.</td>
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<td></td>
<td>Transcranial Doppler (TCD) in Neurocritical Care: Subarachnoid Hemorrhage and Stroke</td>
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<td>Andrei V. Alexandrov, M.D.</td>
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<tr>
<td>2:15 p.m.</td>
<td>Therapeutic Hypothermia as an Adjunct for the Prevention of Secondary Brain Injury: Pro</td>
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<td>Alan J. Velander, M.D.</td>
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<tr>
<td>2:45 p.m.</td>
<td>Therapeutic Hypothermia as an Adjunct for the Prevention of Secondary Brain Injury: Con</td>
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<td>Steven A. Deem, M.D.</td>
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<td>3:15 p.m.</td>
<td>* Break</td>
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<td>3:30 p.m.</td>
<td>Decision Making for Aneurysm Treatment</td>
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<td>Johnny B. Delashaw, M.D. and Robert H. Rosenwasser, M.D.</td>
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<td>* Moderator: David W. Newell, M.D.</td>
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<tr>
<td>3:50 p.m.</td>
<td>Treatment of Carotid Stenosis</td>
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<td>* Moderators: William H. Likosky, M.D. and David W. Newell, M.D.</td>
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<tr>
<td>4:10 p.m.</td>
<td>Honored Guest Lecture – Moderated by David W. Newell, M.D.</td>
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<td>Introduction of Honored Guest Lecturer, Robert H. Rosenwasser, M.D.</td>
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<td>David W. Newell, M.D.</td>
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<tr>
<td>4:15 p.m.</td>
<td>Treatment of AVMs: Will ARUBA Change Decision Making?</td>
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<td></td>
<td>Robert H. Rosenwasser, M.D.</td>
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<td>4:45-5 p.m.</td>
<td>* Break</td>
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**Merrill P. Spencer, M.D. Endowed Lectureship – Moderated by David W. Newell, M.D.**

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<tr>
<th>Time</th>
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<tbody>
<tr>
<td>5 p.m.</td>
<td>Introduction of Merrill P. Spencer, M.D. Lecturer, Robert H. Rosenwasser, M.D.</td>
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<tr>
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<td>David W. Newell, M.D.</td>
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<tr>
<td>6 p.m.</td>
<td>Surgical and Endovascular Treatment for Aneurysms</td>
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<tr>
<td></td>
<td>Robert H. Rosenwasser, M.D.</td>
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<tr>
<td>7 p.m.</td>
<td>Adjourn</td>
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#### Friday, May 16, 2014

**Imaging – Moderated by Bart P. Keogh, M.D., Ph.D.**

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<tr>
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<tbody>
<tr>
<td>7:30 a.m.</td>
<td>* Continental Breakfast</td>
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<tr>
<td>8 a.m.</td>
<td>Perfusion/Diffusion vs. MR Rescue et. al.</td>
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<td>Daniel Susanto, M.D. and Brendan J. McCullough, M.D., Ph.D.</td>
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<tr>
<td>8:40 a.m.</td>
<td>Imaging Cases</td>
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<td>Bart P. Keogh, M.D., Ph.D.</td>
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**Telehealth – Moderated by William H. Likosky, M.D.**

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<tr>
<th>Time</th>
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<tr>
<td>9:10 a.m.</td>
<td>Current Trends in Telehealth</td>
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<td>Todd J. Czartoski, M.D.</td>
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<tr>
<td>9:50 a.m.</td>
<td>Break – Transition to BRAIN LAB</td>
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<td>BRAIN LAB: Participants will rotate through 6, 35-minute lab stations from 10 a.m. through 2:30 p.m., with a break for lunch from 11:45 a.m.-12:45 p.m.</td>
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<tr>
<td>10 a.m.</td>
<td>The Aortic Arch: An Often Overlooked Culprit</td>
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<td>Madeline C. Geraghty, M.D.</td>
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<tr>
<td>10 a.m.</td>
<td>Image Guided Navigation for Neurosurgical Interventions</td>
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<td>Esther J. Kim, M.D. and Wendy W. Chang, M.D.</td>
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<tr>
<td>10 a.m.</td>
<td>Anatomy of the Valves and the Appendage: An Odyssey of the Left Heart</td>
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<td>Eric J. Lehr, M.D., Ph.D.</td>
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<tr>
<td>10 a.m.</td>
<td>Endovascular Therapies for Cerebrovascular Disease</td>
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<td>Stephen J. Monteith, M.D. and Justin Santarelli, M.D.</td>
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<tr>
<td>10 a.m.</td>
<td>3-D Surgical Aneurysms</td>
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<td>David W. Newell, M.D.</td>
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<tr>
<td>10 a.m.</td>
<td>Carotid Endarterectomy</td>
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<td>Sarah J. Fouke, M.D. and Elizabeth J. Fontana, M.D.</td>
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**Optional Lab Alternatives to Visit**

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<td>10 a.m.</td>
<td>Transcranial Doppler and Imaging</td>
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<td>Carotid – Vertebral Ultrasound</td>
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<td>2:30 p.m.</td>
<td>Adjourn</td>
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**Honored Guest Lecture – Moderated by David W. Newell, M.D.**

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<td>2:30 p.m.</td>
<td>Adjourn</td>
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Intended Audience
This symposium is intended for neurologists, neurosurgeons, neuroradiologists, vascular surgeons, emergency physicians, nurse practitioners, physician assistants, nurses and allied health professionals who are closely involved in the management of patients with cerebrovascular disease and have a specific focus on comprehensive stroke in Washington, Alaska, Idaho, Montana, Oregon and California.

About The Merrill P. Spencer, M.D. Endowed Lectureship
The Merrill P. Spencer, M.D. Endowed Lectureship was established in 2006 to honor the memory of Dr. Spencer who enjoyed a long and distinguished career as a physician, professor, researcher and innovator. Dr. Spencer earned an international reputation for his groundbreaking work with Doppler ultrasound technology and was a pioneer in stroke prevention. This lectureship, established by an initial gift from The Institute of Applied Physiology and Medicine, founded by Dr. Spencer in 1972, honors his belief in the importance of always searching for new answers and sharing those answers with others through continuing programs of medical education.

The Merrill P. Spencer, M.D. Endowed Lectureship is presented annually at the Cerebrovascular Symposium. This year, we are pleased to welcome Robert H. Rosenwasser, M.D., FACS, FAHA, internationally renowned for his surgical expertise in both preventing and treating life-threatening brain aneurysms. In addition, he has extensive experience in the treatment of acoustic neuromas and post-surgical facial nerve paralysis.

Dr. Robert Rosenwasser is the Jewell L. Osterholm, MD Professor and Chair of The Department of Neurological Surgery, and Professor of Radiology at Jefferson Medical College and Thomas Jefferson University and Hospitals. He is a member of a number of neurosurgery organizations, including the American Academy of Neurological Surgery, the American Society of Therapeutic and Interventional Neuroradiology, the Society of Neurological Surgeons, the Society of Critical Care Medicine and the Society of Neurologic Critical Care. He is also the Acting President of The Brain Aneurysm Foundation. Dr. Rosenwasser is author or co-author of numerous textbooks and over 200 publications or abstracts, and has lectured widely, both nationally and internationally.

Location
Swedish Medical Center/Cherry Hill is located at 500 17th Avenue in Seattle, Washington. The conference will be held in the Swedish Education and Conference Center on the first floor of the James Tower. Parking is available in the garage on 16th Avenue between Cherry and Jefferson at a maximum fee of $16.50. From I-5 (northbound and southbound), take the James Street exit. Travel east on James Street. James will become Cherry Street. Turn right (south) on 16th Avenue. Turn right into the main garage entrance.

Accreditation with Commendation
Swedish Medical Center is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

AMA PRA Category 1 Credits™
Swedish Medical Center designates this live activity for a maximum of 13.25 AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Nursing CE Contact Hours
Swedish Medical Center Clinical Education and Practice is an approved provider of continuing nursing education by the Washington State Nurses Association Continuing Education Approval & Recognition Program (CEARP), an accredited approver by the American Nurses Credentialing Center's Commission on Accreditation.

Acknowledgments
This symposium is financially supported in part by educational grants in accordance with ACCME's Standards for Commercial Support. At the time of this printing, a complete listing of commercial supporters was not available. Appropriate acknowledgment will be given to all supporters at the time of the symposium.

Planning Committee
William H. Likosky, M.D., Course Co-chair
David W. Newell, M.D., Course Co-chair
Colleen M. Douville, BA, RVT
Thomas A. Deuel, M.D.
Madeleine C. Geraghty, M.D.
Laura E. Jacob, MEd, CME Specialist
Bart P. Keogh, M.D., Ph.D.
Arthur M. Lam, M.D.
Ted J. Lowenkopf, M.D.
Ravi Menon, M.D.
Stephen J. Monteith, M.D.
Jennifer L. More, R.N.
Robin E. Shabica, R.N.

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E-mail: CME@swedish.org
Web: www.swedish.org/cme
Eighth Annual Cerebrovascular Symposium
Controversies in Stroke and Cerebrovascular Disease

Faculty

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Director, University of Alabama Comprehensive Stroke Center
University of Alabama
Tuscaloosa, Alabama

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Medical Director, Endovascular Services
Swedish Heart and Vascular Seattle, Washington

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Seattle, Washington

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Director of Neurology
Director of Telehealth
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Issaquah, Washington

Madeleine C. Geraghty, M.D.
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CompHealth
Salt Lake City, Utah

Lori B. Heller, M.D.
Medical Director, Swedish Blood Management Program
Cardiac Anesthesiologist
Swedish Heart and Vascular Institute
Acting Instructor
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Seattle, Washington

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Swedish Medical Center
Seattle, Washington

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Seattle, Washington

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Loma Linda, California

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Seattle, Washington

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University of California, Los Angeles
Los Angeles, California

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Providence Brain and Spine Institute
Portland, Oregon

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Neuroradiologist
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Affiliate Assistant Professor
Health Services Department
University of Washington
Seattle, Washington

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Cerebrovascular and Endovascular Neurosurgeon
Swedish Neuroscience Institute
Seattle, Washington

David W. Newell, M.D.
Chief of Neuroscience
Cerebrovascular Neurosurgeon
Swedish Neuroscience Institute
Seattle, Washington

Robert H. Rosenwasser, M.D.
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Director, Division of Neurovascular Surgery and Endovascular Neurosurgery
Thomas Jefferson University
Philadelphia, Pennsylvania

Justin G. Santarelli, M.D.
Brain and Spine Neurosurgeon
Endovascular Neurosurgeon
Swedish Neurosciences Institute
Everett and Seattle, Washington

Daniel Susanto, M.D.
Neuroradiologist
Radia, Inc.
Medical Director, Radiology
Swedish Medical Center/Cherry Hill
Seattle, Washington

Alan J. Velander, M.D.
Neurologist
Swedish Neuroscience Institute
Seattle, Washington
Registration Information:
Preregistration is required as space is limited. Participants who register by the “Advance Registration” deadline will receive a confirmation postcard after Monday, May 5, 2014. Registrations will only be processed when accompanied by full payment.

Cancellation:
To receive a refund, notice of cancellation must be received no later than Friday, May 9, 2013.

If using the registration form, please mail or fax it to:
Continuing Medical Education
Swedish Medical Center
747 Broadway
Seattle, WA 98122
Fax: 206-320-7462

Please note: No registrations are accepted by phone or e-mail.
If you have special needs, please contact the CME office at 206-386-2755.

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SPECIALTY

Registration Fees: Please check one of the following:

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<thead>
<tr>
<th>Category</th>
<th>Advance Registration</th>
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<tr>
<td>M.D. or D.O.</td>
<td>$530</td>
<td>$560</td>
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<tr>
<td>Allied Health Professional</td>
<td>$265</td>
<td>$295</td>
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<tr>
<td>Medical Student</td>
<td>$25</td>
<td>$55</td>
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<tr>
<td>Resident or Fellow</td>
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Signature ________________________________ Expiration date ____________________

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