Sun Valley Stroke Conference

Beyond the Trials: Navigating Real World Dilemmas in Stroke Care

March 7-10, 2019

St Luke's®

THE UNIVERSITY OF TENNESSEE HEALTH SCIENCE CENTER

A partnership of St. Luke's Neurosciences and the University of Tennessee Health Science Center

Courtesy of Sun Valley Resort

Welcome to the First Annual Sun Valley Stroke Conference!

Ever since moving to Idaho, and visiting Sun Valley, I had the vision of creating a world-class meeting here. I later discovered that my colleagues at the University of Tennessee have shared that idea for years! As the Alexandrovs always envisioned, a meeting discussing "flow in the snow." We are fortunate to have assembled thought-leaders from across North America in both the ischemic and hemorrhagic stroke worlds. The disciplines of neurology, neurosurgery, neuroradiology, emergency medicine, and cardiology are all represented.

We begin our meeting Thursday night by reviewing the monumental progress that has been forged in all aspects of stroke care over the past decade, and the current best available evidence in the treatment of stroke. After "setting the stage," Friday will focus on real world solutions for patients who don't necessarily read the latest randomized controlled trials. Critical in the care of the stroke patient is having the most appropriate systems in place, but systems must match the regional need and resources; therefore, Saturday is devoted to putting the pieces together in stroke systems of care. Lastly, stroke care is heavily dependent on technology, and physician engagement is crucial to creating innovation. For that reason, our last session Sunday is devoted to what advances we can expect in coming years.

Partnership with industry is essential for putting on an educational conference such as this, and we are grateful for our partners who have graciously supported our venture. Please make sure to visit with them during breakfast and après ski opportunities in order to exchange ideas.

The meeting is designed to provide for excellent educational opportunities as well as recreational ones. Sun Valley is known for skiing, but family-friendly activities abound at the resort and nearby. We have also planned a social program, including an opening reception and a family night activity.

The meeting is designed to be interactive; we encourage audience participation with discussions and polling. We plan on making this an annual conference, so please make sure to complete evaluations at the end of the meeting to help us make the Second Annual Sun Valley Stroke Conference even better!

Sincerely,

Edward A.M. Duckworth, MD, MS
Conference Director

Intended Audience

- Neurologists
- Neurosurgeons
- Primary care providers
- Emergency physicians
- Hospitalists
- Interventional neurologists
- Interventional neuroradiologists
- EMS providers
- Nurses
- Stroke coordinators

Learning Objectives

- Review the history of, and current state-of-the-art treatments for, patients suffering from hemorrhagic and ischemic stroke.
- Describe the latest research in cerebrovascular disorders and stroke.
- Identify elements important in successful stroke systems of care.
- Discuss complex cases involving surgical, endovascular, and medical management of vascular diseases of the brain.

Conference Check-in

Check-in is located in the Limelight Lobby at the Sun Valley Inn, and will be open **Thursday, March 7, from 2-7:30 p.m.** Check-in will also be available outside of Limelight B **every morning from 7-8 a.m. and Friday and Saturday afternoons from 3-4:30 p.m.**

Conference Organizing Committee

Andrei Alexandrov, MD

Anne Alexandrov, APN, PhD

Adam Arthur, MD, MPH

Edward Duckworth, MD, MS

John Perl, MD

Teresa Smith, RN

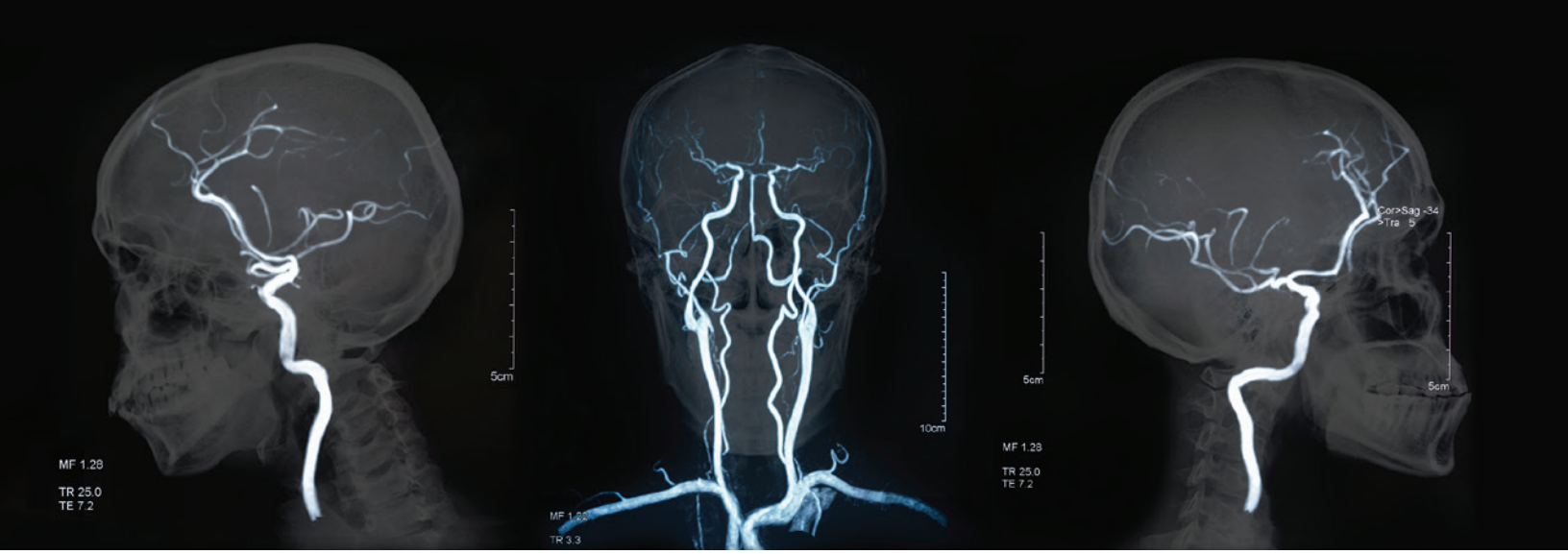
Jim Torres, MD

Special thanks to the invaluable contributions of:

Ben Slee, RN

Shauna Strauch

Shawna Schaeffer



Scientific Program

The program is designed to be dynamic, with short lectures in the morning punctuated by roundtable discussions, followed by case presentations, hot topics, and head-to-head debates during the evening sessions. Discussions will include the historical context of current stroke treatments and devices, as well as emerging therapies and technologies for the treatment of hemorrhagic and ischemic stroke. The meeting will emphasize how to handle patients who don't necessarily fit the landmark randomized, controlled trials.

All conference meetings will be held in the Limelight B room.

Thursday, March 7, 4-7 p.m.		
Setting the Stage: Landmark Trials, Game-Changing Devices and Emerging Technologies *Moderator: Edward Duckworth*		
4-4:05 p.m.	Introduction and Welcome	*Dr. Edward Duckworth*
4:05-4:35 p.m.	Scientific History and Current State of Thrombectomy for Acute Ischemic Stroke	*Dr. Mayank Goyal*
4:35-5:05 p.m.	The Technical History of Clot Retrieval	*Dr. David Fiorella*
5:05-5:35 p.m.	The Original Evidence-Based Surgery: Carotid Endarterectomy and the Emergence of Stenting	*Dr. Adam Arthur*
5:35-6:05 p.m.	A Historical Perspective on the Clip vs. Coil Debate, including ISAT and BRAT	*Dr. Christopher Ogilvy*
6:05-6:35 p.m.	The History of Intracranial Atherosclerotic Disease: Medical and Surgical Promises and Failures	*Dr. Andrei Alexandrov*
6:35-7 p.m.	A History of Cerebral Revascularization	*Dr. Edward Duckworth*
7-8 p.m.	**Opening Wine and Cheese Reception**	

Friday, March 8, 7:30-10:30 a.m.

Not Every Patient Fits the RCTs: Real World Dilemmas in Stroke Care
Moderators: Adam Arthur, Andrei Alexandrov

7-7:30 a.m.	Breakfast with Exhibitors	
7:30-7:50 a.m.	Thrombectomy with LKW Unknown or Beyond Trial Criteria – "How Far Out Should We Go?"	*Dr. Tony Bell*
7:50-8:10 a.m.	Thrombectomy for LVO Infarct Larger Than the Clinical Trials – "How Big is Ok?"	*Dr. David Liebeskind*
8:10-8:30 a.m.	Thrombectomy for LVO with Low NIH – "How Low Can We Go?"	*Dr. Mayank Goyal*
8:30-8:55 a.m.	**Roundtable Discussion:** What Will Ischemic Stroke Treatment Look Like in 5 Years?	*Dr. Andrei Alexandrov* *Dr. Mayank Goyal* *Dr. David Fiorella*
8:55-9:10 a.m.	Coffee Break	
9:10-9:30 a.m.	Options for Ruptured Wide-Necked Aneurysms: Protect the Dome (for Now) vs. Clipping	*Dr. Christopher Ogilvy*
9:30-9:50 a.m.	Differences in Etiologies of Pediatric vs. Adult Stroke and Implications for Acute Treatment	*Dr. John Condie*
9:50-10:10 a.m.	CEA (or CAS) for Asymptomatic Stenosis: "Does the Evidence Still 'Fit'?"	*Dr. Brian Jankowitz*
10:10-10:30 a.m.	Not Every Trial Fits the Real World: Choosing the Most Effective Treatment Modalities for AVMs	*Dr. Babu Welch*
10:30 a.m.-3:30 p.m.	*Free Time for Recreation*	

Friday, March 8, 4-7 p.m.

Patients Don't Always Read the RCTS
Interactive Case Presentations, Hot Topics, and Debates
Moderators: Jim Torres, Brian Jankowitz

3:30-4 p.m.	Après Ski with Exhibitors	
4-4:30 p.m.	**Head-to-Head Debate:** Should IV TPA be Given if a Patient is Heading for Thrombectomy?	*Dr. Brian Jankowitz vs.* *Dr. Andrei Alexandrov* ***Referee:** Mayank Goyal*
4:30-4:45 p.m.	**Hot Topic:** BP Management in Acute Stroke	*Dr. Anne Alexandrov*
4:45-5 p.m.	**Hot Topic:** Options for ICH: Conservative, Decompressive, Evacuation (Minimally Invasive)	*Dr. Brian Jankowitz*
5-5:20 p.m.	Interactive Case: Timing of Endarterectomy or Stent Following Stroke (RE: Infarct Volume)	*Dr. Babu Welch*
5:20-5:40 p.m.	Interactive Case: Surgical Embolectomy for LVO	*Dr. Edward Duckworth*
5:40-6 p.m.	Interactive Case: Extended Time Window for Thrombectomy: Good and Bad Outcomes	*Dr. Tony Bell*
6-6:20 p.m.	Interactive Case: Acute Stroke Treatment in the Pediatric Population	*Dr. John Condie*
6:20-6:40 p.m.	Interactive Case: Arterial Dissections	*Dr. Raymond Grams*
6:40-7 p.m.	Interactive Case: Complex Aneurysm Treatment	*Dr. Christopher Ogilvy*

Saturday, March 9, 7:30-10:30 a.m.

Stroke Systems of Care: Putting the Pieces Together
Moderators: Ricardo Hanel, Babu Welch

7-7:30 a.m.	Breakfast with Exhibitors	
7:30-7:50 a.m.	General Anesthesia vs. Local Anesthesia with Conscious Sedation for Thrombectomy: Data vs. "Data"	*Dr. David Fiorella*
7:50-8:10 a.m.	Mobile Stroke Units – How Feasible Are They for Most Markets and Where Most Relevant?	*Dr. Anne Alexandrov*
8:10-8:30 a.m.	Multidisciplinary Teams for Aneurysmal SAH: Navigating Different Backgrounds and Capabilities	*Dr. Babu Welch*
8:30-8:55 a.m.	**Roundtable Discussion:** Stroke Center Certification: Does it Always Equate to Better Outcomes?	*Dr. Anne Alexandrov* *Dr. John Perl II* *Dr. Jim Torres*
8:55-9:10 a.m.	Coffee Break	
9:10-9:30 a.m.	TIA Observation Centers – The St. Luke's Experience	*Dr. Jim Torres*
9:30-9:50 a.m.	Stroke Severity Scores as a Triage Mechanism	*Dr. Cameron McDougall*
9:50-10:10 a.m.	Care of the Stroke Patient in the Hospital: The Case for the Neurohospitalist	*Dr. Raymond Grams*
10:10-10:30 a.m.	Building a Stroke Center from the Ground Up	*Dr. Ricardo Hanel*
10:30-3:30 p.m.	*Free Time for Recreation*	

Saturday, March 9, 4-7 p.m.

Applying Systems of Care: Teamwork Solutions and Best Practices
Interactive Case Presentations, Hot Topics, and Debates
Moderators: Anne Alexandrov, John Perl

3:30-4 p.m.	Après Ski with Exhibitors	
4-4:30 p.m.	**Head-to-Head Debate:** Hospital Bypass for Patients with LVO (Rural vs. Urban Considerations)	*Dr. John Perl vs. Dr. Andrei Alexandrov,* ***Referee:*** *Adam Arthur*
4:30-4:45 p.m.	**Hot Topic:** Head Positioning with LVO	*Dr. Anne Alexandrov*
4:45-5 p.m.	**Hot Topic:** NOAC Nuances and Cardiac Sources of Stroke	*Dr. David Hinchman*
5-5:20 p.m.	Interactive Case: Preventing the Big One: TIA Management	*Dr. Jim Torres*
5:20-5:40 p.m.	Interactive Case: Stroke Severity Scales in Action	*Teresa Smith RN*
5:40-6 p.m.	Interactive Case: Treating a Stroke Patient in a Rural Setting	*Dr. John Perl II*
6-6:20 p.m.	Interactive Case: Multidisciplinary SAH Treatment	*Dr. Edward Duckworth*
6:20-6:40 p.m.	Interactive Case: Mobile Stroke Unit Cases	*Dr. Andrei Alexandrov*
6:40-7 p.m.	Interactive Case: Stroke Treatment with Teleneurology Capabilities	*Dr. Alicia Bennett*
7:15-8:15 p.m.	Family Night Activity: Hot Chocolate and Ice Skating at the Lodge	

Sunday, March 10, 7:30-10:30 a.m.		
Technology and Treatments on the Horizon for Hemorrhagic and Ischemic Stroke *Moderators: Ray Grams and Dan Abenroth*		
7-7:30 a.m.	Breakfast with Exhibitors	
7:30-7:50 a.m.	Endovascular Technology on the Horizon for Aneurysm Treatment	*Dr. Cameron McDougall*
7:50-8:10 a.m.	The Current State-of-the-Art and Future of Carotid Imaging	*Dr. Andrei Alexandrov*
8:10-8:30 a.m.	Middle Meningeal Artery Embolization for Chronic Subdural Hematoma: A New Paradigm	*Dr. Adam Arthur*
8:30-8:55 a.m.	**Roundtable Discussion:** Thrombectomy Call Coverage Paradigms	*Dr. John Perl II* *Dr. Ricardo Hanel* *Dr. Cameron McDougall*
8:55-9:10 a.m.	Coffee Break	
9:10-9:30 a.m.	Advanced Imaging for Selection of Patients for Thrombectomy	*Dr. Ricardo Hanel*
9:30-9:50 a.m.	Augmented Reality Treatment of Aneurysms in the OR and Angiography Suite	*Dr. Edward Duckworth*
9:50-10:10 a.m.	The Benefits and Limitations of Teleneurology for Stroke	*Dr. Alicia Bennett*
10:10-10:30 a.m.	Emerging Pharmacotherapies for Ischemic Stroke	*Dr. Dan Abenroth*
Adjourn – Enjoy Sun Valley!		

CME Information: This activity has been planned and implemented in accordance with the accreditation requirements and policies of the Utah Medical Association (UMA) through the joint providership of the Ada Canyon Medical Education Consortium and St. Luke's. The Ada Canyon Medical Education Consortium is accredited by the Utah Medical Association to provide continuing medical education for physicians. The Ada Canyon Medical Education Consortium designates this live activity for a maximum of 17 *AMA PRA Category 1 creditTM(s).* Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Claiming CME: You will be able to obtain a total of 17 CME for this conference. In order to get credit for all of the CME offered, please sign in before each session to record your attendance. Sign-in will be located outside of Limelight B in the lobby. There will be a required conference evaluation after the conference. You can access this survey at: surveymonkey.com/r/sunvalleystrokeconference2019

Conference Attire: Mountain casual or ski clothing. Business attire discouraged.

Method of Instruction: This will be a live presentation with oral presentations and interactive discussions. We will be using Poll Everywhere for live audience participation. Download the Poll Everywhere app from the App Store or Play Store or access URL: pollev.com/SVSC or text: SVSC to 22333

Breakfast and Refreshments: Breakfast is offered each day at 7 a.m., and après ski refreshments each afternoon at 3:30 p.m., both located in Limelight C with the exhibitors.

Conference Social Agenda: It is our goal to not only provide an excellent educational opportunity at the Sun Valley Stroke Conference, but to also offer several recreational and interactive social events throughout the conference.

Planned Social Events

Thursday, March 7
7 p.m. Welcome reception with hors d'oeuvres and hosted bar (in the foyer outside of Limelight B & C)

Friday, March 8
3:30-4 p.m. Après ski with exhibitors

Saturday, March 9
3:30-4 p.m. Après ski with exhibitors

7:15-8:15 p.m. Hot chocolate and ice skating at the Lodge



Sun Valley Stroke Conference Recreational Activities

There are ample opportunities for fun and adventure in Sun Valley and at the Sun Valley Resort, including downhill skiing/snowboarding, snowshoeing, Nordic skiing, and ice skating. For those of you who don't want to brave the snowy terrain, there are multiple fun activities indoors as well.

There are heated swimming pools at both the Sun Valley Lodge and Sun Valley Inn.

The spa at the Sun Valley Lodge offers an extensive array of treatments for relaxation and rejuvenation.

For a comprehensive list of recreational opportunities, please visit: sunvalley.com/things-to-do

Discounted lift tickets: These can be purchased on the day of skiing from any Sun Valley Resort lift ticket retail outlet with a conference badge or other proof of identification.

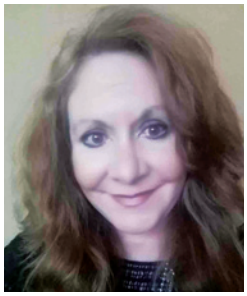


Courtesy of Sun Valley Resort

Featured Speakers

Daniel Abenroth, MD is fellowship trained in vascular neurology and specializes in the care of stroke, transient ischemic attack, intracranial atherosclerosis, cerebral venous sinus thrombosis, and other diseases of cerebral vasculature. He is a neurohospitalist who provides care for the breadth of neurological diseases on an inpatient basis, and has specific clinical interest in neurocritical care. He is Co-director of the St. Luke's Health System Stroke Program.

Dr. Andrei Alexandrov earned his medical degree in 1989 from the 1st Moscow Medical Institute (Sechenov), and specialized in clinical neurology at the Institute of Neurology, Russian Academy of Medical Sciences in Moscow. He completed his fellowship training in stroke and cerebrovascular ultrasound at the University of Toronto with Dr. John W. Norris and at the University of Texas with Dr. James C. Grotta. He also received mentoring from Drs. Dmitry K. Lunev, Patrick M. Pullicino, and Sandra E. Black. Dr. Alexandrov is listed by U.S. News & World Report among Best Doctors, America's Top Doctors in Neurology, in 2011-2014, and by Castle Connoly in the top 1% of specialists in neurology in 2011-2017.



Dr. Anne Alexandrov is a Professor of both Nursing and Neurology, as well as the Mobile Stroke Unit Chief Nurse Practitioner at the University of Tennessee Health Science Center in Memphis. She is also Professor and Program Director for NET SMART at the Health Outcomes Institute, LLC in Fountain Hills, Arizona. Developed in 2007, NET SMART (Neurovascular Education & Training in Acute Stroke Management & Reperfusion Therapies) is the world's first and only post-graduate fellowship training program for advanced practice nurses (APN) in acute stroke, and Dr. Alexandrov has mentored more than 100 APNs from across the U.S. and internationally in this program.

Adam Arthur, MD attended the University of Virginia, and after college joined the University of Virginia Department of Neurosurgery, where he did research on aneurysms and cerebral vasospasm. He completed his internship and residency at the University of Utah, where he also completed his master's degree in public health with a focus on clinical trials methodology. After finishing his Neurosurgery residency, he joined the Semmes Murphey Clinic and the University of Tennessee Department of Neurosurgery. During his first two years in Memphis he completed a fellowship in Endovascular and Cerebrovascular Neurosurgery. He is one of the first neurosurgeons in the country to develop a busy practice in both open cerebrovascular surgery and endovascular neurosurgery.

D. Tony Bell, MD has clinical interests in endovascular coiling of aneurysms, carotid stenting, and acute stroke intervention. He completed residencies in internal medicine and diagnostic radiology at the University of Utah, serving as chief resident in his final year. He also completed his two-year fellowship in interventional and diagnostic neuroradiology at the University of Utah. Dr. Bell has held faculty appointments at Wake Forest University of Medicine, the University of North Carolina, and the Medical University of South Carolina. His recreational interests include climbing and mountain biking.

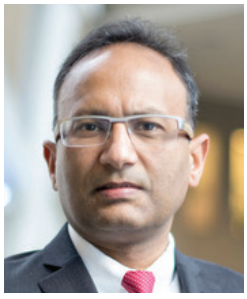
Dr. Alicia Bennett is board certified in neurology and vascular neurology. She earned her medical degree from Des Moines University in Iowa and continued on to complete an internal medicine internship and adult neurology residency at the University of Utah. During this time, Dr. Bennett

developed a passion for stroke and remained at the University of Utah to complete a fellowship in vascular neurology as that year's StrokeNet trainee. She enjoys inpatient neurology with a particular passion for helping victims of stroke.

John Condie, MD is a pediatric neurologist within St. Luke's Health System. He is board certified in neurology with an emphasis in child neurology and is also board certified in neurocritical care. He was Chair of Pediatric Neurocritical Care and Stroke for the Department of Neurology at Phoenix Children's Hospital, Clinical Assistant Professor in the Department of Neurology at the University of Arizona, and Assistant Professor in the Clinician Scientist Track in the Division of Neurology at the Barrow Neurological Institute.

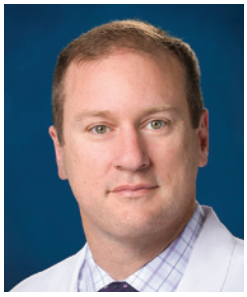
Edward Duckworth, MD, MS, FAANS is an intracranial-focused neurosurgeon, specializing in the treatment of complex cranial disorders, including the surgical treatment of hemorrhagic and ischemic stroke. He is Director of Neurosurgery for St. Luke's Health System. Dr. Duckworth holds the distinction of being "dual-fellowship trained," having completed fellowship training in open cerebrovascular and cranial base surgery at Northwestern University, and in endovascular neurosurgery/interventional neuroradiology at Semmes-Murphey Neurologic and Spine Institute/ University of Tennessee Health Science Center. He has particular stroke expertise in the treatment of complex aneurysms, and in cerebral revascularization.

Dr. David Fiorella, a board certified neuroradiologist, has been Co-director of the Cerebrovascular and Stroke Center since 2009. He received his neuroradiology and neuroendovascular training at Duke University and the Barrow Neurological Institute. Dr. Fiorella is highly regarded as a pioneer in the introduction of novel devices for neurointerventional treatment of brain aneurysms and intracranial atherosclerosis. He has co-authored more than 200 original publications. He has expertise in neurointerventional treatment of cerebral aneurysms, neurointerventional management of acute stroke, embolization of CNS tumors, and neurointerventional treatment of cerebral and spinal arteriovenous malformations, dural arteriovenous fistulas, and carotid and intracranial atherosclerosis.



Dr. Mayank Goyal is a Clinical Professor in the Department of Radiology and Clinical Neurosciences at the University of Calgary. He is Director of Imaging and Endovascular Treatment at the Calgary Stroke Program. Dr. Goyal is world renowned for his groundbreaking work in efficiency and workflow in acute stroke intervention. He has led multiple global trials in the acute stroke space such as ESCAPE and SWIFT PRIME and the ongoing ESCAPE-NA1 trial. He is also Chair of the HERMES collaboration. He has over 200 publications in peer-reviewed journals. He is the inventor of the imaging technique multiphase CTA. Dr. Goyal loves teaching and travels extensively around the world helping with stroke care organization, workflow, imaging, and intervention.

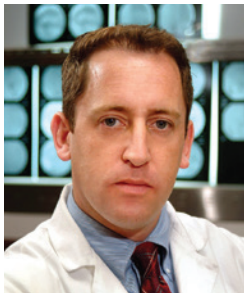
Raymond Grams, DO specializes in the treatment of ischemic and hemorrhagic strokes, transient ischemic attack, cerebral venous thrombosis, and intra- and extra-cranial atherosclerotic disease. His clinical interests include cardioembolic sources of stroke, arterial dissection, and other causes of stroke in young people; evaluation for carotid stenting or endarterectomy; and neurosonology. Dr. Grams has been a co-investigator of nine stroke trials and has published and presented original research on the use of perfusion MRI in acute stroke imaging. He was a clinical instructor at the University of Utah and Stroke Medical Director of Dixie Regional Medical Center—Intermountain Healthcare prior to joining St. Luke's, where he now serves as Director of the Neurohospitalist program.



Ricardo Hanel, MD, PhD is Director of the Baptist Neurological Institute, Co-director of Stroke and Cerebrovascular Surgery and Endowed Chair of Stroke and Cerebrovascular Surgery at Baptist Medical Center Jacksonville. Dr. Hanel is an endovascular and microsurgical neurosurgeon with significant experience in mechanical thrombectomy for stroke, endovascular and microsurgical treatment of cerebrovascular diseases. He has an extensive background in scientific research, academic achievements and health care practice in the neurosurgical and cerebrovascular field. Dr. Hanel specializes in groundbreaking minimally invasive procedures to treat aneurysms, including flow diverter technology, stenting and coiling, as well as more traditional methods, such as clipping and bypasses.

David A. Hinchman, MD, FACC is a fellow of the American College of Cardiology. He is board certified in cardiovascular disease and specializes in cardiac prevention, stress testing, hyperlipidemia, anticoagulation, and clinical research. Dr. Hinchman earned his medical degree from the University of Colorado School of Medicine. He completed his residency at the University of California, San Francisco and his fellowship at the University of Washington School of Medicine.

Dr. Brian Jankowitz is Assistant Professor of Neurological Surgery at the University of Pittsburgh School of Medicine. He specializes in both open and endovascular neurosurgery. Dr. Jankowitz earned his medical degree from Temple University and completed the University of Pittsburgh Department of Neurological Surgery's seven-year residency program before joining the faculty in 2010. He partners with vascular neurologist Tudor Jovin, MD, Director of the UPMC Stroke Institute, to lead UPMC's Endovascular Neurosurgery Services. Dr. Jankowitz has published articles in the Journals of Neuroimaging, Neurosurgery, Stroke, and Clinical Neurology and Neurosurgery. He is a member of the American Association of Neurological Surgeons and the Congress of Neurological Surgeons.



David S. Liebeskind, MD, FAHA, FAAN, FANA is Professor of Neurology at the University of California, Los Angeles (UCLA) where he is Director of Outpatient Stroke and Neurovascular Programs. He is Director of the Neurovascular Imaging Research Core, leading global efforts to advance data science and precision medicine of stroke imaging for prevention, acute therapies and recovery after stroke. He is Director of the UCLA Cerebral Blood Flow Laboratory, Associate Director of the UCLA Stroke Center, and Director of the UCLA Vascular Neurology Residency Program, training the next generation of vascular neurologists and stroke experts.

Dr. Cameron McDougall is Director of Endovascular Neurosurgery at Johns Hopkins and has focused his entire career on the treatment of stroke and cerebrovascular disease. He was one of the first neurosurgeons in the country to receive fellowship training in endovascular techniques. He has been extensively involved in research to improve endovascular techniques, including being the principal investigator in large, randomized, international studies. He is a past president of the Society of NeuroInterventional Surgery, has published more than 200 papers in peer-reviewed journals, and his publications have been cited more than 14,000 times.

Christopher Ogilvy, MD is Director of Endovascular and Operative Neurovascular Surgery at Beth Israel Deaconess Medical Center Brain Aneurysm Institute, and Professor of Neurosurgery at Harvard Medical School. Dr. Ogilvy is known nationally and internationally for his work in neurointerventional and operative procedures. He has published extensively, with more than 350 original manuscripts and over 100 book chapters in the area of neurovascular surgery.

John Perl II, MD completed his diagnostic radiology residency at the University of Alabama at Birmingham. He completed fellowships in neuroradiology at the Cleveland Clinic Foundation and neurointerventional radiology at the University of Wisconsin. He was on staff at the Cleveland Clinic Foundation following his fellowship training, ultimately becoming head of the section of Endovascular Neurosurgery in the Department of Neurosurgery and Neuroradiology at the Cleveland Clinic Foundation. In addition to working at some of the most prestigious facilities in the country, Dr. Perl has been actively participating in research programs with multiple publications. He has been a featured presenter and guest lecturer throughout the United States, Canada, Europe, and Asia.

Teresa E. Smith, RN, CEN, SCRN has served as Manager of the St. Luke's Health System Stroke Program since 2013. She is also an Idaho Time Sensitive Emergency Program state surveyor and evaluates Idaho hospitals for Level 2 and Level 3 stroke designation. In her spare time, she moonlights as a registered nurse in the St. Luke's Nampa Medical Center Emergency Department.

James C. Torres, MD is an emergency medicine physician for St. Luke's Health System and Emergency Medicine of Idaho. He also serves as St. Luke's Health System Stroke Medical Director. Dr. Torres earned his medical degree from Mount Sinai School of Medicine, completed his internal medicine residency at St. Luke's Roosevelt, and completed his emergency medicine residency at Bronx Municipal Hospital. He has been practicing emergency medicine for more than 25 years.

Dr. Babu G. Welch serves as Medical Director for the UT Southwestern Cranial Clinic, Director of the Paul M. Bass Center for Neurosurgical Innovation, and Co-director of the Rogers Comprehensive Stroke Center. In recognition of his contribution to local and national cerebrovascular care, he was appointed as the inaugural holder of the Duke Samson Chair in Neurological Surgery 2015. Over the past 14 years, his practice has evolved toward the urgent and elective management of cerebrovascular disease. He is married to Dr. JoAnn Welch and has two girls, Ameenah and Ilori.

Speaker Disclosures

A.) Grant/Research Support B.) Consultant C.) Stockholder D.) Speakers Bureau E.) Other

NAME:	DISCLOSURE:
Abenroth	**B:** Coleman Research Group
Alexandrov	**B:** Cerebrotech, Inc; **D:** Genentech
Arthur	**A:** Microvention, Stryker, Siemens, Cerenovus, Penumbra; **B:** Microvention, Stryker, Siemens, Cerenovus,Penumbra, Balt, Scientia; **C:** Marblehead, Serenity, Synchron, Cerebrotech, Endostream, Magneto, Bendit, Neurogami, Vascular Simulations, Triad Medical
Fiorella	**A:** Penumbra, Sequent Medical, Microvention; **B:** Sequent Medical, Microvention, Balt, Codman, Vascular Simulations; **E:** Codman (Royalties), Vascular Simulations (Ownership)
Goyal	**A:** Medtronic, Stryker; **B:** Medtronic, Stryker, Microvention, Cerenevus
Hanel	**B:** Covidien, Stryker, Codman, Microvention
Liebeskind	**B:** Cerenovus, Stryker, Medtronic; **E:** Cerenovus, Stryker, Medtronic (imaging core lab)
Perl	**B:** Stryker Neurovascular
Welch	**B:** Stryker & Covidien (Proctor), Medtronic

Commercial Support and Exhibitors

The Sun Valley Stroke Conference committee gratefully acknowledges the following companies for their generous support of this conference.

Platinum Supporter

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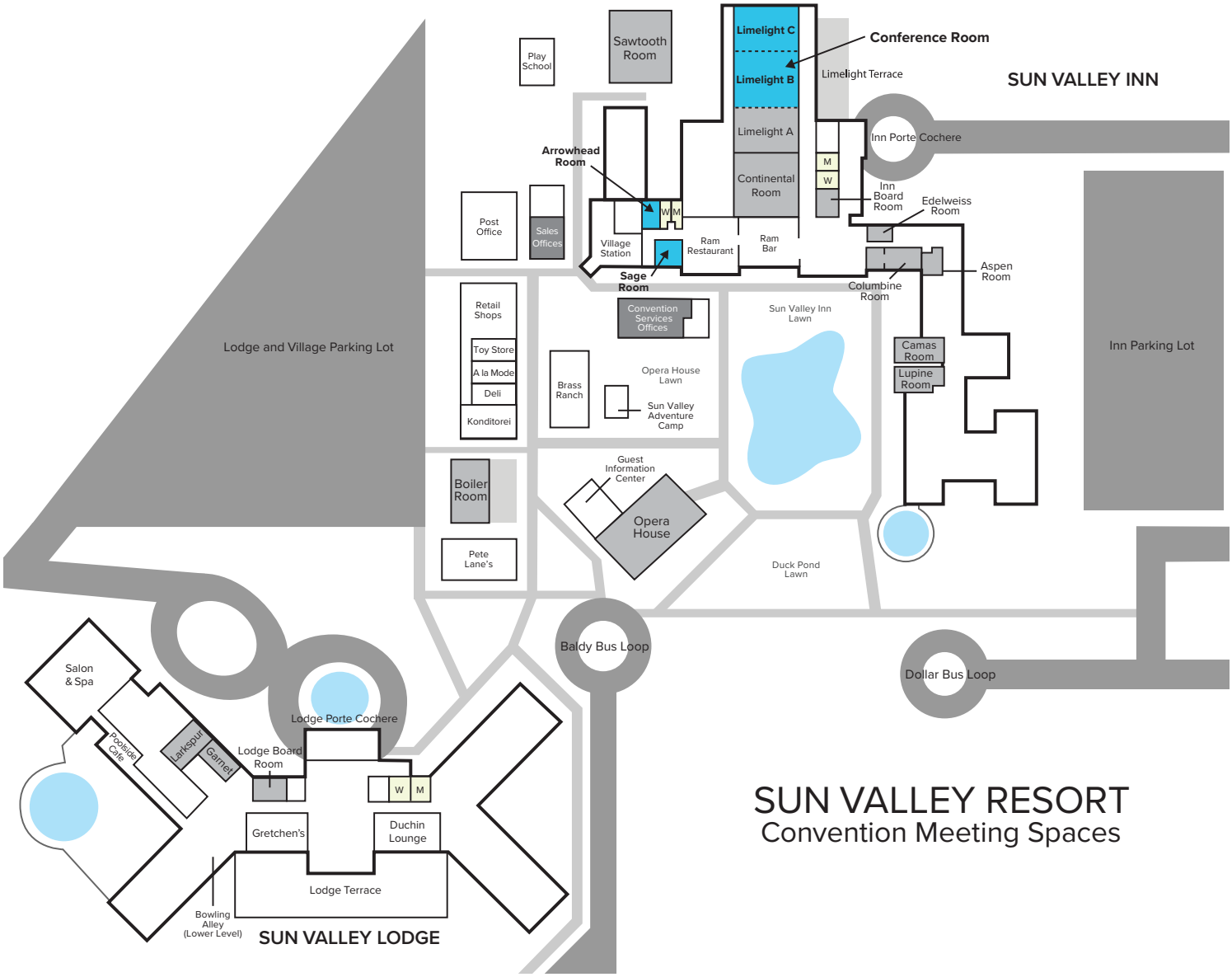
Educational Grants

The Sun Valley Stroke Conference committee gratefully acknowledges the following companies for their educational support of this conference.

Chiesi

State of Idaho EMS TSE

Conference and Exhibitor Floor Plan



SUN VALLEY RESORT
Convention Meeting Spaces

Sun Valley Stroke Conference

Beyond the Trials: Navigating Real World Dilemmas in Stroke Care

March 7-10, 2019

PRESENTATION _____ **DATE** _____

NOTES

QUESTIONS

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St. Luke's Health System Stroke Program

St. Luke's comprehensive stroke system of care encompasses our nine hospitals. Three of our sites are Joint Commission Primary Stroke Centers and our main Boise hospital is designated as a Level 1 Stroke Center with the Idaho TSE Program. St. Luke's has a robust neuroendovascular program, led by three fellowship-trained neuroendovascular specialists, including a dual-fellowship-trained vascular neurosurgeon. St. Luke's was the first in the country to acquire the Zeiss Kinevo robotic operating microscope for open cerebrovascular procedures, and is nearing completion of a new Siemens advanced biplane hybrid neurovascular operating suite at our Boise hospital. Two board-certified vascular neurologists provide both emergency department and inpatient care at our Boise and Meridian sites. St. Luke's has standardized the emergent evaluation of transient ischemic attack and stroke patients, including implementing protocols for the workup, imaging, and destination of these patients at all hospitals. St. Luke's has two longstanding TIA observation centers as part of our Treasure Valley Emergency Departments, where rapid evaluation and treatment take place. In addition to coordinating care across our multiple sites, we also have strong collaborative working relationships with other hospitals in our region and work closely with EMS to improve transport times from area facilities.