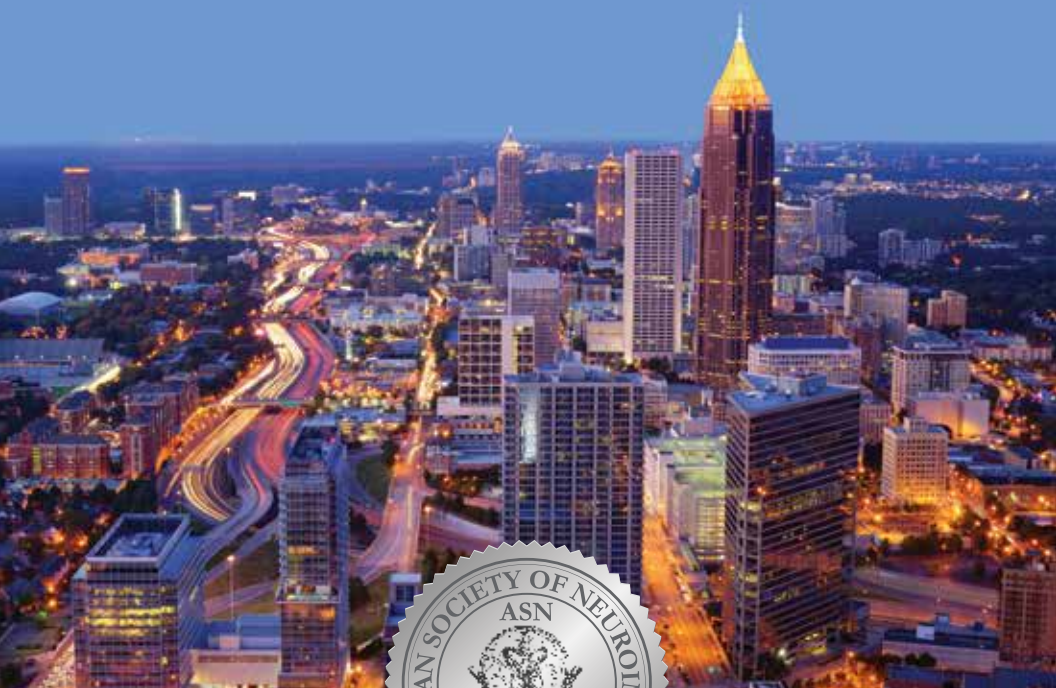


ASN 43RD ANNUAL MEETING

ATLANTA



MARCH 5-7, 2020 • THE WHITLEY ATLANTA BUCKHEAD



43RD ANNUAL MEETING OF THE AMERICAN SOCIETY OF NEUROIMAGING

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ASN Social Media Ambassadors:

*Jerome Graber, MD, MPH
@neuroimagingdoc*

*Belinda Oyinkan Marquis, MD
@mizyinks*

*Richard Genova, BA, RVT, NVS, RPhS
@neurosonologist*

Breaks

THURSDAY, MARCH 5
Coffee: 10:30 - 10:45 am
Lunch: 12:30 - 1:30 pm
Coffee: 3:00 - 3:30 pm
Stretch: 5:00 - 5:15 pm

FRIDAY, MARCH 6
Coffee with Exhibitors:
8:00 - 9:00 am
Coffee: 10:30 - 10:45 am
Lunch: 12:30 - 1:30 pm
Coffee: 3:15 - 3:45 pm

SATURDAY, MARCH 7
Coffee with Exhibitors:
8:00 - 9:00 am
Coffee: 10:30 - 10:45 am
Lunch: 12:30 - 1:30 pm
Coffee: 3:15 - 3:45 pm

CME INFORMATION

Target Audience. This activity is designed to meet the needs of neurologists, neurosurgeons, neuroradiologists, vascular sonographers, and other neuroscientists.

Method Of Participation.

Statements of credit will be awarded based on the participant's attendance. A statement of credit will be available upon completion of an online evaluation/claimed credit form available at: akhcme.com/akhcme/pages/asn

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- Dorothy Caputo, MA, BSN, RN
- Director of Accreditations
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Commercial Support. This activity is supported by an educational grant from Phillips Healthcare.

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ANNUAL MEETING OBJECTIVES

- Discuss the use of emergency teleneurology
- Discuss the use of advanced neuroimaging in selecting appropriate patients
- Recognize teleneurology in decision making and use of neuroimaging
- Recognize the role that anatomic and physiologic neuroimaging techniques play in patient selection for treatment of acute ischemic stroke
- Make informed decisions about which imaging modality is likely to provide the most relevant information needed at each point of care
- Integrate data from different imaging results into a decision model paradigm that would encompass the treatment continuum
- Explain physics of carotid duplex and transcranial Doppler ultrasonography
- Recognize characteristic patterns of blood flow in the cerebrovascular vessels and relate normal and abnormal cerebrovascular blood flow to clinical presentations
- Review the clinical indications and usefulness of the carotid duplex and TCD evaluation for patients with cerebrovascular diseases, including stroke/TIA, traumatic brain injury, subarachnoid hemorrhage, etc. will be accomplished.
- Identify and apply contemporary Neurosonology (carotid duplex and TCD) protocols and practices in common neurovascular disorders, i.e., stroke, extra- and intracranial stenosis, subarachnoid hemorrhage, traumatic brain injury, etc.
- Discuss improved patient outcome due to utilization of Neurosonology testing during different clinical pathways
- Acquire the most current information about the latest developments in Neurosonology.
- Review current practices of utilizing transcranial Doppler ultrasound in pediatric neurocritical care.
- Discuss arguments regarding the validity of existing normative values of transcranial Doppler ultrasound in children, and their application to pediatric neurocritical care.
- Discuss the applicability of transcranial Doppler ultrasound to guide clinical management in critically ill children.

- Describe the principles of cortical reconstruction and segmentation
- Discuss of diffusion tensor imaging
- Explain in the use of software to reconstruct DTI
- Review the most up to date literature on TBI and neuroimaging findings.
- Discuss neuroimaging of post-traumatic headache.
- Debate and review challenges with current imaging protocols (DTI, SWI) that could affect litigation outcomes.
- Discuss the clinical utility of different CT modalities in diagnosis, treatment decision making, and prognostication in patients with acute stroke.
- Differentiate clinical and CT findings suggestive of stroke mimic diagnoses from patients with acute ischemic stroke.
- Interpret multi-modal CT imaging to support clinical decision making and patient management.
- Explain the impact of a variety of systemic diseases on the nervous system, from a neuroimaging perspective.
- Interpret neuroimaging studies of your patients.
- Recognize the varied effects of systemic diseases on the nervous system.
- Evaluate key neuroimaging features of MS
- Review the role of conventional MRI in MS diagnosis
- Discuss neuroimaging of NMOSD, ADEM and other common MS mimics.
- Summarize the most recent retinal vascular and amyloid examination tools and their utility in neurovascular and neurodegenerative pathology
- Describe optical coherence tomography applications in a neurology clinic
- Appraise the technique and potential applications of measuring optic nerve sheath diameter in critical care
- Introduce the necessary skills required of a modern physician leader
- Facilitate comfort interpreting, discussing and testifying in nonaccidental trauma cases
- Identify certain pediatric disorders by neuroimaging findings (Alexanders Disease, Chiari Malformation, Craniosynostosis, etc.)
- Develop a differential diagnoses for certain pediatric disorders by neuroimaging.

PROGRAM AT-A-GLANCE

THURSDAY, MARCH 5, 2020

8:00 – 9:00 am	Coffee
9:00 – 10:30 am (Parallel Sessions)	Applied Principles of Ultrasound Physics and Fluid Dynamics – Andrei Alexandrov
	Imaging in Systemic Disease in Neurology – Joshua Klein
10:30 – 10:45 am	Coffee Break
10:45 am – 12:30 pm (Parallel Sessions)	Basics of Ultrasound – Alexander Razumovsky
	Neuroimaging of Trauma – Jennifer McVige
12:30 - 1:30 pm	Lunch
1:30 - 3:00 pm (Parallel Sessions)	Basics of Ultrasound – Alexander Razumovsky
	Interpreting Advanced MRI – Eduardo Gonzalez-Toledo
3:00 – 3:30 pm	Coffee Break
3:30 - 5:00 pm (Parallel Sessions)	Basics of Ultrasound – Alexander Razumovsky
	Imaging of Brain Tumors – Laszlo Mechtler
5:00 - 5:15 pm	Stretch Break
5:15 - 7:00 pm	Debate: Imaging in Acute Stroke Moderators: Ryan Hakimi and Marc Malkoff Featuring: Andrei Alexandrov, Diogo Haussen, and David Liebeskind
7:00 - 9:00 pm	Welcome Reception – Exhibits & Poster Session

FRIDAY, MARCH 6, 2020

8:00 - 9:00 am	Coffee with Exhibitors
9:00 - 10:30 am (Parallel Sessions)	Advanced Ultrasound – Alexander Razumovsky
	2020 Updates on Optic Nerve and Retinal Imaging – Jorge Carrizosa and Oana Dumitrascu
10:30 – 10:45 am	Coffee Break
10:45 am - 12:30 pm (Parallel Sessions)	Advanced Ultrasound – Alexander Razumovsky
	Imaging in MS – Konstantin Balashov
12:30 - 1:30 pm	ASN Annual Business Meeting & Lunch

1:30 - 2:00 pm	ASN History, the Stark Bill, and a Newer Concept of MS – William Stuart
2:00 - 3:15 pm	Keynote Lecture: The Role of Imaging in Teleneurology – Best Practices – Leonard DaSilva
3:15 - 3:45 pm	Refreshment Break
3:45 - 4:45 pm	Physician Leadership in the era of Patient-Centric, Value-based Healthcare – Peter Kalina
5:00 - 8:00 pm	OPTIONAL WORKSHOP: Ultrasound Hands-On – Andrei Alexandrov and Mark Rubin

SATURDAY, MARCH 7, 2020

7:30 am - 5:00 pm (Parallel Sessions)	CT Imaging Workshop: Multi-Modal CT Imaging: From basic to advanced clinical practice – Anne Alexandrov, Emma Fields, and Ryan Hakimi
8:00 - 9:00 am	Coffee with Exhibitors
9:00 am - 4:30 pm (Parallel Sessions)	Transcranial Doppler: Interpretation Skills – Team of expert physicians and sonographers
9:00 – 10:30 am (Parallel Sessions)	Pediatric Neuroimaging – Peter Kalina and Jennifer McVige
10:30 – 10:45 am	Coffee Break
10:45 am - 12:30 pm (Parallel Sessions)	Pro/Con Debate: Emerging Clinical Application for Transcranial Doppler Ultrasound in Pediatric Critical Care – Brian Appavu and Kerri LaRovere
12:30 - 1:30 pm	Lunch
1:30 - 3:15 pm (Parallel Sessions)	Multimodal Imaging Algorithms in Acute Stroke Management – Camilo Gomez
3:15 - 3:45 pm	Refreshment Break
3:45 - 5:00 pm (Parallel Sessions)	Interesting/Challenging Cases in Neuroimaging Moderator: Marc Malkoff

For a complete listing of faculty degrees, please see pages 8 and 9.

ASN 2020 ANNUAL MEETING FACULTY

Thomas Alexander, BS, RVT, NVS

Southwestern Cerebral Circulatory Dynamics
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Andrei Alexandrov, MD, RVT, NVS

The University of Tennessee
Health Science Center
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ANVP-BC, NVRN-BC, FAAN**

Department of Neurology, University
of Tennessee Health Science Center
Memphis, Tennessee

Brian Appavu, MD

Barrow Neurological Institute at Phoenix
Children's Hospital, University of Arizona
College of Medicine
Phoenix, Arizona

Konstantin Balashov, MD, PhD, FAAN

Rutgers-Robert Wood Johnson
Medical School
New Brunswick, New Jersey

John Bennett, PhD, RVT, FICA, NVS

Neurology & Stroke Associates
Lititz, Pennsylvania

Jorge Carrizosa MD, MSc, BC

University Hospital Fundacion Santa Fe de
Bogotá
Bogotá, Colombia

Christy Cornwall, BS, RVT, NVS

Ohio State University College of Medicine
Radiographic Sciences and Therapy
Columbus, Ohio

Leonard DaSilva, MD, MBA

Patronus Medical
Tallahassee, Florida

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ANVP-BC, SCRNP, CVRN**

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Emmaculate Fields, APRN-CNP

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Health Sciences Center
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Columbia, Missouri

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Brigham and Women's Hospital
Harvard Medical School
Boston, Massachusetts

Gyanendra Kumar, MD

Mayo Clinic
Phoenix, Arizona

Kerri LaRovere, MD

Boston Children's Hospital
Boston, Massachusetts

Karen Lidsky, MD

Wolfson Children's Hospital
University of Florida
Gainesville, Florida

David Liebeskind, MD, FAHA, FAAN

UCLA Department of Neurology
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Marlina Lovett, MD

Nationwide Children's Hospital
The Ohio State University
Columbus, Ohio

Marc Malkoff, MD

University of Tennessee
Knoxville, Tennessee

Jennifer McVige, MD

Dent Neurological Institute
Amherst, New York

Laszlo Mechtler, MD, FAAN, FASN, FEAN, FAHS

Dent Neurologic Institute
Buffalo, New York

Darryl Miles, MD

UT Southwestern Medical Center
Dallas, Texas

Thomas Pfiffner, MD

Dent Spine Center, Dent Neurologic Institute
Buffalo, New York

Aine Phelan, NE, RVT, RDMS

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Santa Barbara, California

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University of Missouri Columbia
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Hunt Valley, Maryland

Karin Reuter-Rice, PhD, NP, FCCM, FAAN

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Durham, North Carolina

Brenda Rinsky, RDMS, RVT, NVS

Cedars Sinai
Los Angeles, California

Mark Rubin, MD, NVS

University of Tennessee
Health Science Center
Memphis, Tennessee

Aarti Sarwal, MD, FNCS, FAAN

Wake Forest School of Medicine,
Wake Forest Baptist Health Center
Winston-Salem, North Carolina

Konrad Schlick, MD

Cedars Sinai
Los Angeles, California

Aaron Stayman, MD

Swedish Neuroscience Institute
Seattle, Washington

William Stuart, MD

The Multiple Sclerosis Center of Atlanta
Atlanta, Georgia

Gabriella Szatmáry, MD, PhD

Hattiesburg Clinic
Hattiesburg, Mississippi

Charles Tegeler, IV, MD

Wake Forest School of Medicine, Wake
Forest Baptist Health Center
Winston-Salem, North Carolina

Dawn Whyte, MRT (R), RDMS, RVT, NVS

Hamilton Health Sciences Corporation
Hamilton, Canada

Jana Wold, MD

University of Utah
Salt Lake City, Utah

ASN 2020 ANNUAL MEETING PROGRAM

Thursday, March 5

Applied Principles of Ultrasound Physics and Fluid Dynamics

CME: 1.5

9:00 - 10:30 am, Whitley Ballroom VI - VIII

Course Director: Andrei Alexandrov, MD, RVT, NVS

Course Description: This seminar is being offered to review ultrasound physics and fluid dynamics, demonstrate typical imaging artifacts and waveforms that interpreting physicians and sonographers need to identify and correct and to interact with the audience and answer questions about these typical findings. Course faculty will discuss applied principles of ultrasound physics and fluid dynamics using a set of approximately 50 typical images/waveforms. Discussion format includes brief case/symptom presentation and an ultrasound image. Faculty will ask the audience to interpret the image and engage in discussion of differential diagnosis and common pitfalls that are linked to ultrasound physics and fluid dynamics.

Modality: Ultrasound

Imaging in Systemic Disease in Neurology

CME: 1.5

9:00 - 10:30 am, Whitley Ballroom I - II

Course Director: Joshua Klein, MD, PhD, FANA, FASN, FAAN

Course Description: This course will focus on imaging of nervous system lesions caused by systemic disease. Diseases presented will include vascular diseases and vasculitides as well as the effects of chronic conditions such as hypertension and diabetes. A survey of the effects of systemic cancer and its treatment on the nervous system will be presented as well.

Individual Speaker Schedule:

9:00 - 9:40 am	Imaging of Cancer-Treatment Related Toxicities - Joshua Klein, MD, PhD, FANA, FASN, FAAN
9:45 - 10:25 am	CNS Manifestations of Systemic Vasculitides - Jana Wold, MD

Modalities: CT, MRI, PET

Basics of Ultrasound

CME: 1.75

10:45 am - 12:30 pm, Whitley Ballroom VI - VIII

Course Director: Alexander Razumovsky, PhD, FAHA, NVS

Course Description: The course is designed for physicians, sonographers, technologists and other health care professionals seeking to acquire the skill sets and knowledge base required to apply, perform and interpret Neurosonology (carotid duplex and transcranial Doppler (TCD) studies. this course will cover the anatomy and hemodynamics regarding the extracranial and intracranial cerebral circulation. The program will include discussion of physics, examination techniques and interpretation of carotid duplex and TCD tests results for patients with CVD, including sickle cell disease, acute stroke, vasospasm after SAH and TBI. Importance of Intersocietal Accreditation Commission for Neurosonology testing accreditation will be discussed. This will be accomplished via didactic lectures but will be enhanced by ample time for faculty panel discussions to provide interaction with the audience.

Session Presenter: Charles Tegeler, IV, MD

Individual Presentation Schedule:

10:45- 11:15 am	Carotid Duplex Physics
11:15 - 11:45 pm	Carotid Duplex Examination
11:45 - 12:30 pm	Carotid Duplex Interpretation

Modality: Neurosonology (carotid duplex and transcranial Doppler ultrasonography)

Neuroimaging of Trauma

CME: 1.75

10:45 am - 12:30 pm, Whitley Ballroom I - II

Course Director: Jennifer McVige, MD

Course Description: This course will review of the current literature regarding the neuroimaging of traumatic brain injury (TBI) and concussion. This will include a discussion of neuroimaging for post-traumatic headache and mild cognitive impairment.

Individual Speaker Schedule:

10:45 - 11:30 am	Neuroimaging of Trauma - Laszlo Mechtler, MD, FAAN, FASN, FEAN, FAHS
11:30 am - 12:15 pm	The Pitfalls of Neuroimaging Post Traumatic Headache - Jennifer McVige, MD

Modalities: CT, MRI, PET

Basics of Ultrasound - Continued

CME: 1.5

1:30 - 3:00 pm, Whitley Ballroom VI - VIII

Course Director: Alexander Razumovsky, PhD, FAHA, NVS

Individual Speaker Schedule:

1:30 - 2:15 pm	Transcranial Doppler Physics - Andrei Alexandrov, MD, RVT, NVS
2:15 - 3:00 pm	Transcranial Doppler Examination - Brenda Rinsky, RVT, NVS

Modalities: Neurosonology (carotid duplex and transcranial Doppler ultrasonography)

Interpreting Advanced MRI

CME: 1.5

1:30 - 3:00 pm, Whitley Ballroom I - II

Course Director and Presenter: Eduardo Gonzalez-Toledo, MD, PhD

Course Description: This workshop allows the participants not only understanding diffusion tensor imaging and cortical reconstruction and segmentation but process the images in their own computers.

Individual Presentation Schedule:

1:30-1:45 pm	General Management of DICOM Images
1:45-2:15 pm	Cortical Reconstruction and Segmentation
2:15-2:30 pm	DTI: Fractional anisotropy, parallel diffusivity, and perpendicular diffusivity
2:30-3:00 pm	Calculation: Tractography

Modality: Magnetic resonance

Basics of Ultrasound - Continued

CME: 1.5

3:30 - 5:00 pm, Whitley Ballroom VI - VIII

Course Director: Alexander Razumovsky, PhD, FAHA, NVS

Individual Speaker Schedule:

3:30 - 4:15 pm	Transcranial Doppler Interpretation - Alexander Razumovsky, PhD, FAHA, NVS
4:15 - 4:45 pm	The Impact of IAC Accreditation on Quality Patient Care - Laura Humphries, BS, RVT, RPhS
4:45 - 5:00 pm	Q & A Session

Modalities: Neurosonology (carotid duplex and transcranial Doppler ultrasonography)

Imaging of Brain Tumors

CME: 1.5

3:30 - 5:00 pm, Whitley Ballroom I - II

Course Director: Laszlo Mechtler, MD, FAAN, FASN, FEAN, FAHS

Course Description: Modern imaging in the evaluation of the central nervous system tumors is essential in the differential diagnosis of neurological disorders. Imaging has changed over the years by incorporating susceptibly weighted imaging, fusion weighted imaging, magnetic resonance spectroscopy, and perfusion weighted imaging as well as DTI. Functional MRI has helped neurosurgeons evaluate patients prior to neurosurgical intervention. This course will help in the evaluation of adult and pediatric tumors utilizing standards and newer sequences that help in the differential diagnoses.

Individual Speaker Schedule:

3:30 - 4:05 pm	Imaging of Adult Brain Tumors - Laszlo Mechtler, MD, FAAN, FASN, FEAN, FAHS
4:05-4:25 pm	Imaging of Spine Tumors - Thomas Pfiffner, MD
4:25 - 5:00 pm	Imaging of Pediatric Brain Tumors - Jennifer McVige, MD

Modalities: MR / CT / PET

Debate: Imaging in Acute Stroke

CME: 1.75

5:15 - 7:00 pm, Whitley Ballroom I - II

Debate Moderators: Ryan Hakimi, DO, MS, FNCS, NVS and Marc Malkoff, MD

Debate Participants: Andrei Alexandrov, MD, RVT, NVS; Diogo Haussen, MD; and David Liebeskind, MD, FAHA, FAAN

Debate Description: We will discuss imaging and treatment approaches to acute stroke and possible LVO in 2 scenarios. The first will be a patient in a rural hospital and the second will be a patient in a stroke center.

Individual Speaker Schedule:

5:15 - 5:20 pm	Introduction to Scenario with a Patient in a Rural Hospital - Ryan Hakimi, DO, MS, FNCS, NVS and Marc Malkoff, MD
5:20 - 5:30 pm	Multimodality Approach - David Liebeskind, MD, FAHA, FAAN
5:30 - 5:40 pm	Moderate Imaging - Andrei Alexandrov, MD, RVT, NVS
5:40 - 5:50 pm	Cath Lab Workup and Treatment - Diogo Haussen, MD
5:50 - 5:55 pm	Introduction to Scenario with a Patient in a Stroke Center - Ryan Hakimi, DO, MS, FNCS, NVS and Marc Malkoff, MD
5:55 - 6:05 pm	Multimodality Approach - David Liebeskind, MD, FAHA, FAAN
6:05 - 6:15 pm	Moderate Imaging - Andrei Alexandrov, MD, RVT, NVS
6:15 - 6:25 pm	Cath Lab Workup and Treatment - Diogo Haussen, MD
6:25 - 7:00 pm	Discussion and Questions

Modalities: MRI, MRA, CT, CTA, CTP, Angiography, and Ultrasound

Friday, March 6

Advanced Ultrasound

CME: 1.5

9:00 - 10:30 am, Whitley Ballroom VI - VIII

Course Director: Alexander Razumovsky, PhD, FAHA, NVS

Course Description: This advanced Neurosonology Course will provide a comprehensive update on Neurosonology (carotid duplex and TCD) indications and clinical applications and interpretation in pediatric and adult critical care setting, including acute ischemic stroke, subarachnoid hemorrhage and traumatic brain injury. Nationally and internationally renowned faculty of leaders in the field of Neurosonology will be assembled to provide the latest in retrospective areas of expertise. This will be accomplished via didactic lectures but will be enhanced by ample time for faculty panel discussions to provide interaction with the audience.

Individual Speaker Schedule:

9:00 - 9:30 am	Neurosonology Role for Patients with Acute Stroke - Andrei Alexandrov, MD, RVT, NVS
9:30 - 10:00 am	Transcranial Doppler in Systemic Disease in Adult and Pediatric Populations - Shivani Ghoshal, MD
10:00 - 10:30 am	Is there TCD role for ICP management? - Aarti Sarwal, MD, FNCS, FAAN

Modality: Neurosonology (carotid duplex and transcranial Doppler ultrasonography)

2020 Updates on Optic Nerve and Retinal Imaging

CME: 1.5

9:00 - 10:30 am, Whitley Ballroom I - II

Course Directors: Jorge Carrizosa MD, MSc, NVS and Oana Dumitrascu MD, MSc

Course Description: Increasing body of evidence emphasize the utility of retinal imaging as a surrogate marker of neurological disorders. The retina and optic nerve offer a unique window for fast, direct, non-invasive and non-ionizing imaging of the central nervous system (CNS). Retinal vascular abnormalities are traditionally analyzed using retinal fundus photography, and automated algorithms were recently developed to enhance its clinical applicability. Modern retinal vascular imaging techniques, including optical coherence tomography angiography and dynamic vessel analyzer, have several advantages as compared to contemporary imaging modalities. The utility of retinal and optic nerve imaging using optical coherence tomography was explored over the years in neurological inflammatory and degenerative disorders. Retinal amyloid imaging is a novel tool that creates the promise of early detection and monitoring of CNS amyloidosis.

Focused ultrasound in critical care has become a necessary skill to learn to address a non-invasive efficient diagnosis of the clinical situation of a critically ill patient. Optic Nerve Sheath Diameter (ONSD) assessment is an easy and safe way to evaluate patients with elevated intracranial pressure. Mastering skills related to the appropriate evaluation of ONSD should be part of the neuroimaging expert curriculum.

Individual Speaker Schedule:

9:00 - 9:20 am	Update on Retinal Vascular Imaging Modalities - Oana Dumitrascu MD, MSc
9:20 - 9:40 am	Optical Coherence Tomography Applications in a Neurology Clinic - Gabriella Szatmáry, MD, PhD
9:40 -9:55 am	Retinal Amyloid Imaging- is early screening for Alzheimer's pathology ready for prime use? - Oana Dumitrascu MD, MSc
9:55 -10:15 am	Evaluation of the Optic Nerve Sheath Diameter - Jorge Carrizosa MD, MSc, NVS
10:15 -10:30 am	Non-invasive Intracranial Pressure Approximation: What's the Evidence? - Jorge Carrizosa MD, MSc, NVS

Modalities: Retinal Fundus Photography, Optical Coherence Tomography, Optical Coherence Tomography Angiography, Dynamic Vessel Analyzer, Retinal amyloid imaging, Hyperspectral Retinal Fundus Photography, Orbital Ultrasound

Advanced Ultrasound - Continued

CME: 1.75

10:45 am - 12:30 pm, Whitley Ballroom VI - VIII

Course Director: Alexander Razumovsky, PhD, FAHA, NVS

Individual Speaker Schedule:

10:45 -11:15 am	Transcranial Doppler in Pediatric Neuro-ICU - Kerri LaRovere, MD
11:15 -12:15 pm	Transcranial Doppler in Adult Neuro-ICU - Alexander Razumovsky, PhD, FAHA, NVS
12:15 -12:30 pm	Q & A Session

Modalities: Neurosonology (carotid duplex and transcranial Doppler ultrasonography)

Imaging in MS

CME: 1.75

10:45 am - 12:30 pm, Whitley Ballroom I - II

Course Director: Konstantin Balashov, MD, PhD, FAAN

Course Description: This course is designated for neurologists and other physicians interested to improve their knowledge and skills in neuroimaging of patients with MS and major MS mimics. In the first part of this course, we are going to review the role of MRI in disease diagnosis and monitoring disease activity. In the second part, we will discuss neuroimaging of common demyelinating disorders of the CNS other than MS. The list of common MS mimics includes but is not limited to NMOSD, ADEM, Neurosarcoidosis, and Neuroborreliosis.

Individual Speaker Schedule:

10:45 - 11:15 am	Neuroimaging in MS - William Stuart, MD, FAAN
11:25 - 11:55 am	Neuroimaging in NMOSD and other MS mimics - Konstantin Balashov, MD, PhD, FAAN
12:05 -12:30 pm	Interesting Clinical Cases and General Discussion - Konstantin Balashov, MD, PhD, FAAN and William Stuart, MD, FAAN

Modality: MRI

ASN History, the Stark Bill, and a Newer Concept of MS

1:30 - 2:00 pm, Whitley Ballroom I - II

Featured Speaker: William Stuart, MD, FAAN

Keynote Lecture: The Role of Imaging in Teleneurology – Best Practices

CME: 1.25

2:00 - 3:15 pm, Whitley Ballroom I - II

Keynote Speaker: Leonard DaSilva, MD, MBA*Lecture Description:* Discussion about the current use of neuroimaging in teleneurology, with emphasis is hyperacute stroke treatment.*Modalities:* CT Brain, CTA Head and Neck and CT Perfusion, MRI Brain, MRA Head and Neck and MR Perfusion

*We would like to extend our sincere gratitude to Dr. Leonard DaSilva, our 2020 Keynote speaker, for gifting his honorarium back to ASN to assist trainees in attending the Annual Meeting.

Physician Leadership in the Era of Patient-Centric, Value-based Healthcare

CME: 1.0

3:45 - 4:45 pm, Whitley Ballroom I - II

Course Director: Peter Kalina, MD, MBA, FACR*Course Description:* We will discuss what it takes to lead your team to provide empathetic and compassionate care while maximizing value.*Individual Speaker Schedule:*

3:45 - 4:15 pm	The Physician Leader - Peter Kalina, MD, MBA, FACR
4:15 - 4:45 pm	The Neurologists Perspective on Neuroimaging - Laszlo Mechtler, MD, FAAN, FASN, FEAN, FAHS

OPTIONAL WORKSHOP (Registration Required):

Ultrasound Hands-On

CME: 3.0

5:00 – 8:00 pm, Whitley Ballroom III - V

Workshop Directors: Andrei Alexandrov, MD, RVT, NVS and Mark Rubin, MD, NVS*Workshop Faculty:* Andrei Alexandrov, MD, RVT, NVS; Colleen Douville BA, RVT, NVS; John Bennett, PhD, RVT, NVS, FICA; Ryan Hakimi, DO, MS, FNCS, NVS; Alexander Razumovsky, PhD, FAHA, NVS; Brenda Rinsky, RDMS, RVT, NVS; Mark Rubin, MD, NVS; Aarti Sarwal, MD, FNCS, FAAN; Charles Tegeler, IV, MD*Workshop Description:* This workshop provides hands-on and real-time question & answer small-group sessions with experienced clinicians and sonographers. There will be multiple learning stations for the gamut of transcranial Doppler techniques including complete, microemboli & right-to-left shunt detection, and vasomotor reactivity studies as well as carotid/vertebral duplex. Both new and experienced learners are encouraged to attend with educational elements for all levels. In addition to practical neurosonology we will have a dedicated section to new technology in the field, including the latest in TCD simulation for education and robot-assisted TCD monitoring. Join us for basic and advanced knowledge of insonation techniques, practical aspects of cerebrovascular testing and the latest technological advances in the field of neurosonology.*Modality:* Ultrasound

Saturday, March 7

CT Imaging Workshop

Multi-Modal CT Imaging: From basic to advanced clinical practice

CME: 6.5

7:30 am – 5:00 pm, Whitley Ballroom VI - VIII

Faculty: Andrei Alexandrov, MD, RVT, NVS; Anne Alexandrov, PhD, AGACNP-BC, ANVP-BC, FAAN; Abby Doerr, DNP, APRN, FNP-BC, ANVP-BC, SCRn, CVRN; Emma Fields, APRN-CNP; Ryan Hakimi, DO, MS, FNCS, NVS; Marc Malkoff, MD

Course Description: Multi-modal CT imaging plays an important role in diagnosis, treatment decision making, and prognostication. This all-day course explores different CT modalities, including their utility and evolving clinical applications. From ASPECTS scoring, to navigating CTA source images and critically examining the utility of perfusion imaging, both practitioners in training as well as those already working in clinical practice will expand their CT knowledge and interpretation competencies.

Individual Speaker Schedule:

7:30 - 7:40 am	Welcome and Program Overview - Anne Alexandrov, PhD, AGACNP-BC, ANVP-BC, FAAN and Ryan Hakimi, DO, MS, FNCS, NVS
7:40 - 8:30 am	Introduction to Neuroimaging Techniques -CT Basics - Ryan Hakimi, DO, MS, FNCS, NVS
8:30 - 9:00 am	Morning Break
9:00 - 9:45 am	Neuroanatomy Basics: Localizing Lesions Part 1: Tracts and Brainstem - Marc Malkoff, MD
9:45 -10:30 am	Neuroanatomy Basics: Localizing Lesions Part 2: Neurovascular Territories - Anne Alexandrov, PhD, AGACNP-BC, ANVP-BC, FAAN
10:30 – 10:45 am	Stretch Break
10:45 am - 12:30 pm	Multi-Modal CT Imaging in Acute Stroke (noncontrast CT, source image CTA, CTP) - Andrei Alexandrov, MD, RVT, NVS and Abby Doerr, DNP, APRN, FNPBC, ANVP-BC, SCRn, CVRN
12:30 - 1:30 pm	Lunch (on your own)
1:30 - 2:20 pm	Differentiating Stroke Mimics on CT Imaging - Marc Malkoff, MD
2:20 - 3:15 pm	MRI vs. CT Imaging - Emma Fields, APRN-CNP
3:15 - 3:30 pm	Stretch Break
3:30 - 5:00 pm	Neuroimaging Interactive Cases. Moderator: Emma Fields, APRN-CNP Case Presenters: Andrei Alexandrov, MD, RVT, NVS; Anne Alexandrov, PhD, AGACNP-BC, ANVP-BC, FAAN; Abby Doerr, DNP, APRN, FNPBC, ANVP-BC, SCRn, CVRN; Ryan Hakimi, DO, MS, FNCS, NVS; and Marc Malkoff, MD

Transcranial Doppler: Interpretation Skills

CME: 6.25

9:00 am – 4:30 pm, Whitley Ballroom, III - V

Course Directors: Colleen Douville BA, RVT, NVS; John Bennett PhD, RVT, NVS, FICA; Brenda Rinsky RDMS, RVT, NVS

Course Description: This one day intensive course is designed to provide attendees with the skills and knowledge required to interpret Transcranial Doppler studies in a variety of clinical scenarios. Learning will be achieved using interactive case study presentations and review of diagnostic criteria. It is intended for those engaged in performing and/or interpreting TCD studies in a variety of specialized clinical settings.

Individual Speaker Schedule:

9:00 – 9:30 am	Welcome and Overview of Transcranial Doppler Applications - Charles Tegeler, IV, MD
9:30 – 10:00 am	Principles of Waveform Interpretation - Aarti Sarwal, MD, FNCS, FAAN
10:00 – 10:45 am	Intracranial Stenosis and Thrombosis - Aaron Stayman, MD
10:45 – 11:00 am	BREAK
11:00 – 11:45 am	Emboli Monitoring in Stroke and TIA - Konrad Schlick, MD
11:45 am – 12:30 pm	Circle of Willis Collateral Flow - Jongyeol Kim, MD
12:30 – 1:15 pm	LUNCH
1:15 – 2:00 pm	Vasomotor Reactivity - Aaron Stayman, MD
2:00 – 2:45 pm	Patent Foramen Ovale Grading - Mark Rubin, MD
2:45 – 3:30 pm	Vasospasm Following Subarachnoid Hemorrhage - Gyanendra Kumar, MD
3:30 – 3:45 pm	BREAK
3:45 – 4:30 pm	Head Trauma, Increased Intracranial Pressure and Cerebral Circulatory Arrest - Aarti Sarwal MD, FNCS, FAAN

Participating Sonographers: Thomas Alexander, BS, RVT, NVS; John Bennett, PhD, RVT, FICA, NVS; Christy Cornwall, BS, RVT, NVS; Colleen Douville, BA, RVT, NVS; Aine Phelan, NE, RVT, RDMS; Brenda Rinsky, RDMS, RVT, NVS; and Dawn Whyte, MRT (R), RDMS, RVT, NVS

Modality: Neurovascular ultrasound

Pediatric Neuroimaging

CME: 1.5

9:00 - 10:30 am, Whitley Ballroom I - II

Course Directors: Peter Kalina, MD, MBA, FACR and Jennifer McVige, MD

Course Description: We will discuss the imaging findings, mimics and courtroom controversies regarding pediatric abusive head trauma. In addition there will be a case series presentation of interesting pediatric disorders diagnosed by imaging findings, including differential diagnoses.

Individual Speaker Schedule:

9:00 - 9:45 am	Pediatric Abusive Head Trauma - Peter Kalina, MD, MBA, FACR
9:45 - 10:30 am	Case series presentation of pediatric disorders diagnosed by neuroimaging - Jennifer McVige, MD

Modalities: CT and MRI

Pro/Con Debate: Emerging Clinical Application for Transcranial Doppler Ultrasound in Pediatric Critical Care

CME: 1.75

10:45 am - 12:30 pm, Whitley Ballroom I - II

Course Directors: Brian Appavu, MD and Kerri LaRovere, MD

Course Description: Transcranial Doppler (TCD) ultrasonography is a non-invasive, bedside monitor that allows for real-time measurements of cerebral blood flow, and is gaining popularity in the pediatric neurocritical care population. In this session, we will review a recent international survey about some emerging clinical applications of TCD in 27 pediatric neurocritical care centers. The pediatric literature on suggested normal TCD values for this population will be reviewed. Then the speakers will engage in an evidence-based pro/con debate about the role of TCD in: cerebral perfusion pressure vs. intracranial pressure estimation; determination of autoregulatory capacity; and detection of cerebral vasospasm. For each topic, the speaker will have time to make/his point and counterpoint arguments. Following this debate, 10 minutes will be available for questions and answers.

Individual Speaker Schedule:

10:45 - 10:51 am	Introduction - Brian Appavu, MD
10:52 - 11:01 am	Survey of Utilization of Transcranial Doppler Ultrasound In Pediatric Neurocritical Care Centers - Kerri LaRovere, MD
11:02 -11:17 am	Normative TCD values in children – Are they applicable? – Karen Lidsky, MD and Darryl Miles, MD
11:18 -11:34 am	Does TCD-Based Management Against Cerebrovascular Vasospasms Improve Outcomes In Children? – Marlina Lovett, MD and Darryl Miles, MD
11:52 - 12:08 pm	Can TCD Be Used to Assess Cerebral Autoregulation In Children – Karen Lidsky, MD, Marlina Lovett, MD, and Karin Reuter-Rice, PhD, NP, FCCM, FAAN
12:09 - 12:30 pm	Question and Answer

Modality: Transcranial Doppler Ultrasound

Multimodal Imaging Algorithms in Acute Stroke Management

CME: 1.75

1:30 - 3:15 pm, Whitley Ballroom I - II

Course Director: Camilo Gomez, MD, MBA

Course Description: This course reviews the tactical utilization of different imaging modalities to acquire the most relevant information necessary for optimal stroke care. It emphasizes the role of imaging in patient selection, treatment application, and decision making along the time continuum.

Individual Speaker Schedule:

1:30 - 1:45 pm	Imaging Strategies in the ED: Patient Selection for Intravenous Thrombolysis - Marc Malkoff, MD
1:45 - 1:55 pm	Moderated Topic Discussion - Moderator & Speakers Panel
1:55 - 2:10 pm	Imaging Strategies in the ED: Patient Selection for Thrombectomy - Camilo Gomez, MD
2:10 - 2:20 pm	Moderated Topic Discussion - Moderator & Speakers Panel
2:20 - 2:35 pm	Endovascular Imaging: Diagnostic & Therapeutic Applications - Adnan Qureshi, MD
2:35 - 2:45 pm	Moderated Topic Discussion - Moderator & Speakers Panel
2:45 - 3:15 pm	Imaging Priorities in the Aftermath of Intervention: Case Examples - Moderator & Speakers Panel

Modalities:

- Computed tomography (CT) technique (Non-Contrast CT, CT Angiography, and CT Perfusion)
- Magnetic resonance imaging (MRI) techniques (Diffusion weighted (DWI) and Fast Low Attenuation Inversion Recovery (FLAIR) MRI)
- Ultrasound techniques (Transcranial Doppler Ultrasound)
- Neuroendovascular techniques (Diagnostic catheterization & angiography, Thrombectomy, and Balloon angioplasty & stenting)

Interesting/Challenging Cases in Neuroimaging

CME: 2.0

3:45 - 5:45 pm, Whitley Ballroom I - II

Moderator: Marc Malkoff, MD

ABSTRACT INDEX

Poster Session

THURSDAY, MARCH 5, 2020

7:00 - 9:00 pm

Plaza Ballroom

* The posters will be on display for the duration of the Annual Meeting

Po1: Comparison of Pseudoproggression in Glioma Patients Following Proton Versus Photon Therapy

*2020 Oldendorf Award Recipient
Excellence in CT, MRI, SPECT, or PET
[Reed Ritterbusch](#)¹, Jerome Graber²
¹University of Washington School of Medicine, Seattle, USA. ²Dept. of Neurology, University of Washington, Seattle, USA

Po2: CT Rapid Implementation in a 600+ Bed Hospital Serving 35 Counties in the Southeast

*2020 Resident Award Recipient
[Christopher Burns](#)¹, Adam Kassari¹, Jacob Beltz¹, Klie Hoffa², Peter Britt¹
¹Memorial Health University Medical Center, Savannah, USA. ²Mercer Medical University, Savannah, USA

Po3: Reliability of a Hematoma Volumetric Analysis Protocol in Patients with Subdural Hemorrhage

Navpreet Bains, Iqra Akhtar, Farhan Siddiq, Brandi French, Camilo Gomez, Adnan Qureshi
University of Missouri, Columbia, USA
Poster Presenter: [Vamshi Balasetti](#)

Po4: Effect of Tortuosity of Cervical Internal Carotid Artery on Procedural Outcomes of Carotid Stent Placement

*2020 Qureshi Award Recipient
Excellence in Diagnostic Angiography
[Vamshi Balasetti](#), Nitish Kumar, Iqra Akhtar, Camilo Gomez, Farhan Siddiq, Adnan Qureshi
University of Missouri, Columbia, USA

Po5: Transcranial Doppler Vasomotor Range: Threshold for clinical significance in patients with vascular risk factors

*2020 McKinney Award Recipient
Excellence in Neurosonology
[Robert Regenhardt](#)^{1,2}, Neal Nolan^{1,2}, Alvin Das^{1,2}, Andrew Monk², Sarah Michaud², Henrikas Vaitkevicius²
¹Massachusetts General Hospital, Boston, USA. ²Brigham and Women's Hospital, Boston, USA

Po6: Microembolic Signals Detected by Transcranial Doppler Predict Future Stroke and Poor Outcomes

Alvin Das^{1,2}, [Robert Regenhardt](#)², Sarah LaRose¹, Andrew Monk¹, Pedro Castro³, Faheem Sheriff⁴, Henrikas Vaitkevicius¹
¹Department of Neurology, Brigham and Women's Hospital, Harvard Medical School, Boston, USA. ²Department of Neurology, Massachusetts General Hospital, Harvard Medical School, Boston, USA. ³Department of Clinical Neurosciences and Mental Health, Faculty of Medicine, University of Porto, Porto, Portugal. ⁴Department of Neurosurgery, The University of Texas Health Science Center at Houston, McGovern Medical School, Houston, USA

Po7: Multiple Spinal Intramedullary Tuberculomas

Gunjanpreet Kaur, Karanbir Singh, [Ashmit Mittal](#)
Apex Hospital, Jalandhar, India

Po8: Granulomatosis with Polyangiitis Masquerading as Glioblastoma

Gunjanpreet Kaur, Karanbir Singh, [Ashmit Mittal](#)
Apex Hospital, Jalandhar, India

P10: Sex Differences in Cerebral Blood Flow Declining with Age: Transcranial Doppler Study

*2020 Resident Award Recipient
Mohammed Alwatban, Jaimie Ward,
 Sandra Billinger
 University of Kansas Medical Center,
 Kansas, USA

P11: Retinal Amyloid Imaging Findings in a Continuum of Cognitive Disorders

Oana Dumitrascu¹, Tania Torbati², Julia Sheyn¹, Patrick Lyden¹, Keith Black¹, Steven Verdooner³, Yosef Koronyo¹, Maya Koronyo-Hamaoui¹
¹Cedars-Sinai Medical Center, Los Angeles, USA. ²Western University of Health Sciences, Pomona, USA. ³Neurovision Inc, Sacramento, USA

P12: Monitoring Tumor Microenvironmental Response after Anti-PFKFB3 and VEGF Therapy by Multiparametric MRI in Glioblastoma

Junfeng Zhang, Weiguo Zhang
 Department of Radiology, Daping Hospital, Army Medical University, Chongqing, China

P13: Neurocystercosis: Multiple intraventricular cysts presenting with headache, seizures, and hydrocephalus

Eric Tamrazian, Bijal Mehta
 Harbor-UCLA, Torrance, USA

P15: Assessing Cervical Spinal Cord Atrophy in T1-Weighted Brain Scans Using Icobrain

Nuno Pedrosa de Barros¹, Thibo Billiet¹, Stijn Denissen^{1,2}, Diana Sima¹, Carolina Machado¹, Françoise Durand-Dubief³, Johan De Mey⁴, Melissa Cambron², Eline Van Vlierberghe⁵, Dirk Smeets¹, Wim Van Hecke¹, Guy Nagels^{1,2}, Annemie Ribbens¹
¹icometrix, Leuven, Belgium. ²Center for Neurosciences, UZ Brussel/VUB, Brussels, Belgium. ³CREATIS UMR 5220 CNRS & U1206 INSERM, Univ. Lyon, Lyon, France. ⁴Radiology, UZ Brussel, Brussels, Belgium. ⁵icometrix, Chicago, USA

P16: Cerebral Hypoperfusion in Postural Orthostatic Tachycardia Syndrome (Pots) Patients with Hyperventilation During Tilt Table Test

Haindavi Vtukuri¹, Nora Harmouch², Nicholas Lima Galúcio³, Esha Mahmood⁴, Somia Shaheen⁴, Adnan Sheikh⁴, Hemanshi Mistry⁴, Amer Suleman⁴, Lan Yang⁴
¹Sri Devaraj Urs Medical College, SDUAHER, Kolar, India. ²University of Texas, Dallas, USA. ³Universidade Federal do Para, Belem, Brazil. ⁴Department of Cardiology, The Heartbeat clinic, Texas, USA

P17: A Reassessment of Transthoracic Echocardiogram in Ischemic Stroke

Krishna Nalleballe, Sen Sheng, Laney Sideroff, John Shumate, Rohan Sharma, Nidhi Kapoor, Syed Ali, Kelly-Ann Patrice, Mudassar Kamran, Sanjeeva Onteddu
 University of Arkansas for Medical Sciences, Little Rock, USA

P18: Fluorescence Navigation in The Surgery of Glial Brain Tumors and Preoperative MRI and PET

Artemii Rynda, Dmitrii Rostovtsev, Victor Olyushin
Russian Neurosurgical Institute name after A.L. Polenov, Saint-Petersburg, Russian Federation

P20: Middle Cerebral Artery Pulsatility is Associated with Systemic Blood Viscosity in Acute Ischemic Stroke

Sang Won Han¹, Jong Yun Lee², Kyung-Yul Lee³, Sung Ik Lee⁴

¹*Department of Neurology, Sanggye Paik Hospital, Inje University College of Medicine, Seoul, Republic of Korea.*
²*Department of Neurology, National Medical Center, Seoul, Republic of Korea.*
³*Department of Neurology, Yonsei University College of Medicine, Seoul, Republic of Korea.*
⁴*Department of Neurology, Sanbon Hospital, Wonkwang University College of Medicine, Seoul, Republic of Korea*

P21: Validation of Transcranial Sonographic Measurement of the Brainstem Raphe in Parkinson's Disease

Sang Won Han¹, Jong Yun Lee², Kyung-Yul Lee³, Sung Ik Lee⁴

¹*Department of Neurology, Sanggye Paik Hospital, Inje University College of Medicine, Seoul, Republic of Korea.*
²*Department of Neurology, National Medical Center, Seoul, Republic of Korea.*
³*Department of Neurology, Yonsei University College of Medicine, Seoul, Republic of Korea.*
⁴*Department of Neurology, Sanbon Hospital, Wonkwang University College of Medicine, Seoul, Republic of Korea*

P22: An Unusual Case of Sjogren's Syndrome with Polyradiculoneuritis and Cranial Neuropathies

Jon Poling¹, Tristan Amouroux²
¹*Athens Neurological Associates, Athens, USA.* ²*University of Georgia, Athens, USA*

P23: Acanthamoeba spp. and Balamuthia Mandrillaris Leading to Fatal Granulomatous Amebic Encephalitis

Daniel Lee¹ Steven Fiester^{1,2}, Lee Madeline³, James Fulcher^{1,2,4,5}, Michael Ward^{1,2,4,5}, Christine Schammel^{2,5}, Ryan Hakimi^{1,6}

¹*Department of Biomedical Sciences, University of South Carolina School of Medicine, Greenville USA.* ²*Department of Pathology, Prisma Health – Upstate, Greenville, USA.* ³*Department of Radiology, Prisma Health – Upstate, Greenville, USA.* ⁴*Office of the Medical Examiner, Greenville, USA.* ⁵*Pathology Associates of Greenville, Greenville, USA.* ⁶*Department of Medicine, Neurology Division, Prisma Health – Upstate, Greenville, USA.*

P24: Cerebral Amyloid Angiopathy-Inflammation Type, a Very Rare Presentation

Tetyana Osadchuk, Andrew Jacobson, Sunil Mutgi
Gundersen Health System, La Crosse, USA

P25: Primary Central Nervous System B-cell Lymphoma: Neuroimaging and Clinical Course of Two Curious Cases

Joanne Lau¹, Sairah Bashir², Jose Castillo¹
¹*VCU, Richmond, USA.* ²*Inova, Fairfax, USA*

P26: Memory Loss and Ischemic Stroke as Initial Presentation of Ovarian Cancer

Jose Castillo¹, Sairah Bashir², Joann Lau¹
¹VCU, Richmond, USA. ²Inova, Fairfax, USA

P28: Laser Photobiomodulation on the Acute Stroke Setting

Juan Moreira
 CNC-Hospital del Maestro, San Juan, Puerto Rico

P29: Neonatal Bare Orbit Sign: Unilateral neurocristopathy with microphthalmia, arhinencephaly, diencephalic-mesencephalic-junction dysplasia, and siphon dysplasia

Peter Soh, Paul Maertens, Om Prakash Jha, Kanya Singhapakdi
 University of South Alabama, Mobile, USA

P30: Association Between Retinal Vascular and Brain Imaging Abnormalities in Patients with Cognitive Decline

Diana Cristea^{1,2}, Maziyar Khansari³, Yonggang Shi³, Maya Koronyo², Miller Fawaz⁴, Mark Haacke⁴, Patrick Lyden², Oana Dumitrascu²
¹University of California Berkeley, Berkeley, USA. ²Cedars-Sinai Medical Center, Los Angeles, USA. ³University of Southern California, Los Angeles, USA. ⁴The MRI Institute for Biomedical Research, Bingham Farms, USA

P31: Cerebral Emboli as a Biomarker of Early Stroke Recurrence (CERBERUS): Pilot

Mark Rubin¹, Kevin Barrett²
¹University of Tennessee Health Science Center, Memphis, USA. ²Mayo Clinic, Jacksonville, USA

P32: Neuromuscular Ultrasound: The unsung hero

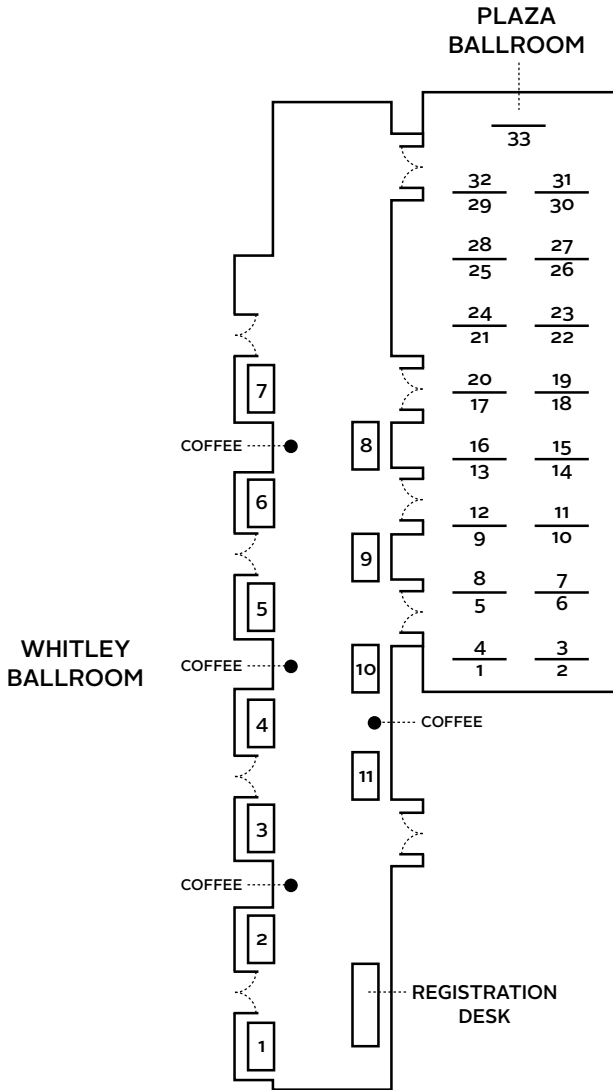
Devesh Dalmia¹, Essam Nagori¹, Daniel DiCapua², Kunal Desai^{2,1}
¹Greenwich Hospital, Greenwich, USA. ²Yale University, New Haven, USA

P33: Type 1 Cutaneous Meningioma with Atretic Meningocele

Bharat Pillai¹, Mikki Sapkota¹, Adam Perez², Laszlo Mechtler¹
¹Dent Neurologic Institute, Buffalo, USA ²University of Buffalo, Buffalo, USA

Full abstracts can be viewed at asnweb.org. Underlined authors indicate poster presenters

POSTERS AND EXHIBITORS MAP





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Many thanks to the 2020 Scientific Program Committee for their work developing this year's program.

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Fellowship in the American Society of Neuroimaging (FASN) is meant to recognize individuals who have made significant contributions to the field of neuroimaging and have impacted the growth and practice of neuroimaging at a regional and national level.

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AWARD WINNERS

Oldendorf Award

The Oldendorf Award is for the best abstract submitted by a student, resident or fellow that is based in basic or clinical research in CT, MRI, SPECT or PET.

Comparison of Pseudoproggression in Glioma Patients Following Proton Versus Photon Therapy

Reed Ritterbusch¹, Jerome Graber²

¹University of Washington School of Medicine, Seattle, USA.

²Department of Neurology, University of Washington, Seattle, USA

McKinney Award

The McKinney Award is for the best abstract submitted by a student, resident or fellow that is based in basic or clinical research in Neurosonology.

Transcranial Doppler Vasomotor Range: Threshold for clinical significance in patients with vascular risk factors

Robert Regenhardt^{1,2}, Neal Nolan^{1,2}, Alvin Das^{1,2}, Andrew Monk², Sarah Michaud², Henrikas Vaitkevicius²

¹Massachusetts General Hospital, Boston, USA.

²Brigham and Women's Hospital, Boston, USA

Qureshi Award

The Qureshi Award is for excellence in diagnostic angiography.

Effect of Tortuosity of Cervical Internal Carotid Artery on Procedural Outcomes of Carotid Stent Placement

Vamshi Balasetti, Nitish Kumar, Iqra Akhtar, Camilo Gomez, Farhan Siddiq, Adnan Qureshi

University of Missouri, Columbia, USA

Resident Awards

The Resident Award is for excellence of abstract presented by a resident in a neurology program.

CT Rapid Implementation in a 600+ Bed Hospital Serving 35 Counties in the Southeast

Christopher Burns¹, Adam Kassar¹, Jacob Beltz¹, Klie Hoffa², Peter Britt¹

¹*Memorial Health University Medical Center, Savannah, USA.*

²*Mercer Medical University, Savannah, USA*

Sex Differences in Cerebral Blood Flow Declining with Age: Transcranial Doppler Study

Mohammed Alwatban, Jaimie Ward, Sandra Billinger

University of Kansas Medical Center, Kansas, USA

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Thomas Alexander, BS, RVT, NVS (F)

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Consultant: Cerebrotech Medical Systems
Speakers Bureau: Genentech, Inc.

Anne Alexandrov, PhD, RN, CCRN, ANVP-BC, NVRN-BC, FAAN (F)

None

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None

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None

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Other: cerenovus

Laura Humphries, BS, RVT, RPhS (F)

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None

Dara Jamieson, MD (P)

None

Peter Kalina, MD (F/P)

None

Jongyeol Kim, MD (F)

None

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Aladdin, Inc.

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P = Scientific Program Committee Member

F = Annual Meeting Faculty

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EXHIBITORS



Combinostics (Booth 4) Combinostics provides tools to help radiologists and neurologists diagnosis and track progression of patients with Dementias and MS by combining brain MRI, in vitro biomarkers and clinical data.



DWL USA Inc. (Booth 11) Currently more than 8,000 DWL Transcranial Doppler Systems are installed in more than 120 countries. They perform Neurosonology reliably every single day of the week for many specialists. If you have a need for TCD stop by and see all we have to offer at DWL USA, Inc.



icometrix (Booth 3) icometrix is the world leader in software solutions to obtain clinically meaningful data from brain MR and CT scans for patients with multiple sclerosis, brain trauma, epilepsy, Alzheimer's disease, dementia, etc. The fully automated icobrain software is FDA cleared and has market clearance in the USA, Europe, Japan, Canada, Brazil, and Australia. Today, icometrix is internationally active, and the icobrain software is used in 100+ hospitals and icometrix works with some of the largest healthcare providers and pharmaceutical companies on the evaluation of trials of novel drugs for neurological diseases.



Image Monitoring USA (Booth 7) Image Monitoring USA is a company dedicated to providing Innovative Ergonomic TCD and Physiologic Peripheral Vascular Diagnostic Testing Systems to clinics and hospitals across the USA. With our headquarters in Buffalo NY and experienced Vascular Consultants, we can support and service your diagnostic vascular testing needs. www.ImageMonitoringUSA.com. We offer several ways to increase your facilities diagnostic testing capabilities and revenue. You owe it to yourself and your Team to consider the many benefits a Dolphin TCD System and a Falcon Physiologic Vascular Testing system will provide you and your team. Call or email us today to discuss your labs current needs with an experienced IM USA Vascular consultant. Email: customerservice@imagemonitoring.com. Phone(716)395-0300



Multigon Industries, Inc. (Booth 10) Multigon presents the nexgen Trans Cranial Doppler ROBOTOCgMD with autonomous robotic monitoring headband -finds the vessels in a practical easily used format, can monitor for hours without attendant intervention, built in Finapres option, Built in ICM+ option.



Neural Analytics, Inc. (Booth 9) Neural Analytics, Inc. is a medical robotics company developing and commercializing technologies to measure and track brain health. The company's Lucid Robotic System (Lucid™ M1 Transcranial Doppler Ultrasound System® and NeuralBot™ System) is a robotically assisted ultrasound system for brain health assessment designed to non-invasively measure and display brain blood flow information under the guidance of a healthcare professional. The company's technology integrates ultrasound, robotics and machine learning to empower neurologists with critical information about brain health to make clinical decisions and improve patient outcomes

PHILIPS

Philips Healthcare (Booth 6) Enabling better health and better care at lower cost Philips is a leading health technology company focused on improving people's lives across the health continuum – from healthy living and prevention, to diagnosis, treatment and home care. Applying advanced technologies and deep clinical and consumer insights, Philips delivers integrated solutions that improve people's health and enable better outcomes. Partnering with its customers, Philips seeks to transform how healthcare is delivered and experienced. The company is a leader in diagnostic imaging, image-guided therapy, patient monitoring and health informatics, as well as in consumer health and home care.



Rimed USA, Inc. (Booth 2) Rimed has been leading the Transcranial Doppler (TCD) system market for over 30 years. TCD is an invaluable examination, allowing real-time monitoring of cerebral blood flow velocities. Our products help clinicians improve patient care in over 100 countries, with over 8,000 installations in Stroke, Neurocritical Care, Neurology and Neurosurgery departments.



Sheehan Medical

Sheehan Medical LLC (Booth 5) Sheehan Medical's simulators teach transcranial Doppler the way you wish you learned it. Imagine scanning a patient's head and watching the ultrasound beam move through the Circle of Willis, insonating artery segments in its path. Our simulator makes this possible. We proudly present the world's first transcranial Doppler simulator with hands on scanning of real patient cases on a mannequin. We optimize the educational experience, so that trainees learn faster. Faculty can save time by delegating basic training to the mannequin. Sheehan Medical – we brighten medical education with novel technology.



SyntheticMR (Booth 1) SyntheticMR's unique technology measures the absolute properties of the brain and delivers synthetic contrast weighted images, tissue segmentations and parametric maps of the patient. Our products support a faster MRI workflow and allows clinicians to diagnose and monitor patients with greater confidence.

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