31st Annual Meeting of
The Eastern Neuroradiological Society

August 22 - 25, 2019
New York Marriott at the Brooklyn Bridge • Brooklyn, New York

SAM Credit Available
24.75 AMA PRA Category 1 Credit(s)™

For more information, visit www.enrs.org
On behalf of the Eastern Neuroradiological Society, I would like to invite you to join us for the 31st Annual Meeting of the Society held on August 22 – 25, 2019. This year’s meeting will be held at the New York Marriott at the Brooklyn Bridge, in Brooklyn, New York.

The Annual Meeting program represents a comprehensive, in-depth review of neuroradiology and head and neck imaging. The topics covered range from practical reviews of common topics to those of advanced imaging techniques and emerging technologies. Topics covered will include adult brain imaging and stroke imaging, head and neck imaging, imaging of the spine, pediatric neuroimaging, and interventional neuroradiology. This year, the advanced imaging session will also include lectures on artificial intelligence. The purpose is to make the audience familiar with this important technology that is likely to have increasing impact on the practice of radiology and medicine in general. Like previous years, multiple SAM sessions are embedded in the program, further enriching the experience and helping with MOC cycle certification and recertification.

The meeting location, Brooklyn, New York, hardly needs an introduction. The New York Marriott at the Brooklyn Bridge is near the vibrant neighborhoods of Brooklyn Heights and DUMBO, as well as the waterfront Brooklyn Bridge Park and Brooklyn Heights Promenade with spectacular views of the Manhattan skyline. The subway station and ferry landing are minutes away, as are the iconic Brooklyn Bridge and Manhattan Bridge, providing easy access around Brooklyn and Manhattan. Whether you enjoy dining, Broadway shows, opera, museums, parks, nightclubs or world-class shopping, New York has it all. For those not familiar with the city, we have taken advantage of the "insider" knowledge of our New York colleagues in order to provide up-to-date information on the best dining, shopping and sightseeing locales. Brooklyn is truly the new Manhattan, one of New York City’s most exciting boroughs with a “cool” and vibrant community.

ENRS is one of my favorite meetings because it provides a rich, state-of-the-art program in an intimate and friendly atmosphere. It allows us to meet the experts and the up and comings, learn from one another, and socialize in an informal atmosphere. Please join us for this exciting educational and social experience in one of the greatest cities in the world, put together through the hard work of our New York colleagues in order to provide up-to-date information on the best dining, shopping and sightseeing locales. Brooklyn is truly the new Manhattan, one of New York City’s most exciting boroughs with a “cool” and vibrant community.

To the participants, the meeting organizers, and colleagues, I would like to thank you for your diligent efforts to provide us with the highest level of education. As always, the program has been designed to offer learning opportunities for all levels of experience. We look forward to your participation and hope that you will find the meeting informative, enjoyable, and a memorable experience.

I look forward to seeing you all in August.

Reza Forghani, MD, PhD, FRCPC
ENRS Vice President / President-Elect and Program Committee Chair

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**SPECIAL NOTE FOR THE DISABLED:** Educational Symposia (ESI) and the Eastern Neuroradiological Society (ENRS) wish to ensure that no individual with a disability is excluded, denied services, segregated or otherwise treated differently from other individuals because of the absence of auxiliary aids and services. If you need any auxiliary aids or services identified in the Americans with Disabilities Act, please contact ESI at (813) 806-1000.

**DISCLAIMER:** Educational Symposia (ESI) and the Eastern Neuroradiological Society (ENRS) as planners and presenters of this meeting, and Professional Travel as the official travel agency for this meeting, claim no liability for the acts of any suppliers or the safety of any attendees while in transit to, from, or during, this event or any optional activities. The total amount of liability, if any, for the meeting organizers is limited to a refund of the registration fee, and Professional Travel’s responsibility is limited to that of an agent.

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**Target Audience**
The ENRS 31st Annual Meeting is targeted to academic and private practice neuroradiologists, general radiologists, and other health professionals with an interest in neuroimaging and head and neck imaging in the Northeastern United States and Canada. The meeting is also targeted to trainees and is an excellent venue for physicians-in-training, including residents and fellows, to enhance their knowledge. The meeting covers imaging of diseases of the brain, spine, otorhinolaryngology, as well as neurointervention in adults and children. The imaging techniques covered range from routine, commonly used ones to the most recent, cutting-edge techniques.

**Accreditation**
Physicians: This activity has been planned and implemented in accordance with the Essential Areas and policies of the Accreditation Council for Continuing Medical Education through the joint providership of Educational Symposia and the Eastern Neuroradiological Society. Educational Symposia is accredited by the ACCME to provide continuing medical education for physicians.

Educational Symposia designates this live activity for a maximum of 24.75 AMA PRA Category 1 Credit(s)™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

**Self-Assessment Modules (SAMs):** Educational Symposia has been granted Deemed Status by the American Board of Radiology (ABR). This allows Educational Symposia to develop and implement SAMs that satisfy ABR Part II MOC requirements.

**Educational Objectives**
At the conclusion of the meeting, the participant should be able to:

- Describe and characterize various brain neoplasms and their mimics and evaluate emergent conditions of the brain.
- Use advanced imaging techniques including perfusion, spectroscopy, and functional imaging for pre-operative evaluation of brain tumors and tumor response to treatment.
- Evaluate and differentiate demyelinating, inflammatory, and infectious disorders and their mimics in the brain as well as neurodegenerative diseases using conventional and newer imaging techniques. Identify common treatment-related complications in the brain.
- Describe and effectively evaluate, using conventional and advanced imaging techniques, different stroke etiologies and neurovascular diseases of the CNS.
- Effectively evaluate and derive a differential diagnosis for various diseases in the neck, sinonasal cavity, orbit, and temporal bone.
- Develop an approach for pre-operative evaluation and staging of head and neck cancer and post-treatment surveillance.
- Develop an approach for the evaluation of common ENT disorders including tinnitus, otalgia, facial weakness, and acquired sensorineural hearing loss.
- Identify the radiologic anatomy of the skull base, temporal bone and pituitary fossa and characterize various pathologies affecting the skull base and temporal bone.
- Develop an approach for the evaluation of the post-operative temporal bone.
- Evaluate emergent conditions of the extracranial head and neck.
- Evaluate various neoplastic and non-neoplastic demyelinating, inflammatory, infectious, and vascular disorders in the spine. Develop an approach for the evaluation and reporting of the degenerative conditions of the spine.
- Discuss advanced imaging techniques and their applications in the spine. Develop approaches for optimizing technique in spine imaging.
- Describe and characterize various pediatric brain and spine neoplasms and their mimics.
- Develop an approach for the evaluation of pediatric disorders affecting the brain, including metabolic disorders and developmental malformations of the CNS.
- Develop an approach for evaluating fetal MRIs.
- Become familiar with advanced pediatric imaging techniques and develop strategies for decreasing sedation in pediatric neuroimaging.
- Discuss cutting-edge advanced imaging and image post-processing techniques and their applications including dual-energy CT, 7 Tesla MRI, 3D printing and advanced visualization, radiomics & radiogenomics, and artificial intelligence.
- Review and apply health policy recommendations and clinical practice tips including establishing a clinic-based reading service.
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TREASURER
Tanya J. Rath, MD
Senior Associate Consultant
Neuroradiology Division
Mayo Clinic
Phoenix, AZ

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Head and Neck Surgery
Princess Margaret Cancer Centre University of Toronto
Toronto, Ontario, Canada

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Christopher G. Filippi, MD
Vice Chair of Biomedical Imaging and Translational Science
Professor of Radiology
Lenox Hill Hospital and Lenox Hill Greenwich Village
New York, NY

ADULT BRAIN:

Laurie A. Loevner, MD
Chief, Division of Neuroradiology
Professor of Radiology, Otorhinolaryngology - Head & Neck Surgery,
and Ophthalmology
University of Pennsylvania Health System
Philadelphia, PA

Suyash Mohan, MD
Associate Professor, Radiology and Neuroradiology
Director, Neuroradiology Clinical Research Division
Perelman School of Medicine at the University of Pennsylvania
Philadelphia, PA

C. Douglas Phillips, MD, FACR
Professor of Radiology
Director of Head and Neck Imaging
Weill Cornell Medical College
New York-Presbyterian Hospital
New York, NY

HEAD AND NECK:

Tanya J. Rath, MD
Senior Associate Consultant
Neuroradiology Division
Mayo Clinic
Phoenix, AZ

Deborah R. Shatzkes, MD
Professor of Radiology and Otolaryngology
Donald and Barbara Zucker School of Medicine at Hofstra/Northwell
Chief, Head & Neck Radiology
Lenox Hill Hospital and The New York Head & Neck Institute
Northwell Health
New York, NY

STROKE AND VESSELS:

Pina C. Sanelli, MD, MPH, FACR
Professor of Radiology
Vice Chairman of Research
Department of Radiology
Northwell Health
Manhattan, NY

Pamela W. Schaefer, MD
Associate Professor in Radiology
Harvard Medical School
Vice Chair, Post-Graduate Education and Fellowship Training
Associate Director of Neuroradiology
Clinical Director of MRI
Massachusetts General Hospital
Boston, MA

SPINE:

Harprit S. Bedi, MD
Associate Professor in Radiology
Division Chief, Neuroradiology
Boston University School of Medicine
Boston, MA

Amish H. Doshi, MD
Associate Professor of Radiology and Neuroradiology
Chief, Division of Neuroradiology
Program Director, Neuroradiology
Associate Program Director, Radiology Residency
Icahn School of Medicine at Mount Sinai
New York, NY

PEDIATRIC:

Caroline D. Robson, MBChB
Operations Vice Chair, Radiology
Division Chief, Neuroradiology
Director of Head and Neck Imaging
Boston Children’s Hospital
Associate Professor of Radiology, HMS
Boston, MA

Manohar M. Shroff, MD, FRCPc
Professor of Radiology
Department of Medical Imaging
University of Toronto
Chief of Radiology, Ontario's Children's Hospital
Pediatric Radiology Hospital for Sick Children ( SickKids)
Toronto, Ontario, CANADA

ADVANCED TECHNIQUES, ARTIFICIAL INTELLIGENCE, & POLICY:

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McGill University
FRQS Clinical Research Scholar and Clinical Investigator,
McGill University Health Center Research Institute,
Segal Cancer Centre, & Lady Davis Research Institute
Montreal, Quebec, CANADA

NEUROINTERVENTIONAL:

Michele H. Johnson, MD, FACR, FASER
Professor of Radiology and Biomedical Imaging and Neuroradiology
Director, Interventional Neuroradiology
Yale University School of Medicine
New Haven, CT

2018-2019 ENRS Program Committee

PROGRAM CHAIR:
Reza Forghani, MD, PhD, FRCPc
Associate Professor, Departments of Radiology, Oncology, and Otolaryngology - Head and Neck Surgery
McGill University
FRQS Clinical Research Scholar and Clinical Investigator,
McGill University Health Center Research Institute,
Segal Cancer Centre, & Lady Davis Research Institute
Montreal, Quebec, CANADA

SCIENTIFIC PRESENTATIONS:

Laurent Letourneau-Guillon, MD
Clinical Assistant Professor
Centre Hospitalier de l’Universite de Montreal (CHUM)
Montreal, Quebec, CANADA

Doris D.M. Lin, MD, PhD
Associate Professor of Radiology and Radiological Science
Johns Hopkins University School of Medicine
The Johns Hopkins Hospital
Baltimore, MD

Carlos H. Torres, MD, FRCPc
Associate Professor of Radiology
Program Director, Neuroradiology
University of Ottawa
Ottawa, Ontario, CANADA

SOCIAL AND MEMBER RELATIONS:

Maria J. Borja, MD
Assistant Professor of Neuroradiology
Chief of Radiology
New York University Langone Medical Center
New York, NY

Mari Hagiwara, MD
Associate Professor
Department of Radiology
New York University Langone Medical Center
New York, NY

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New York-Presbyterian Hospital
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Chief, Head & Neck Radiology
Lenox Hill Hospital and The New York Head & Neck Institute
Northwell Health
New York, NY

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Thursday, August 22, 2019

8:00 AM  Meeting Registration
8:50 – 9:00  Introduction and Welcome

ADULT BRAIN: NEOPLASM
Moderators: Laurie A. Lionnet, MD and Rohini Nadgir, MD

9:00 – 9:20  Imaging of Brain Tumors
Joseph M. Mettenburg, MD, PhD

9:20 – 9:40  The Role of Proton MR Spectroscopy and Perfusion Imaging for Pretreatment Evaluation of Brain Tumors
Otto Rapalino, MD

9:40 – 10:00  WHO Brain Tumor Classification - What a Neuroradiologist Needs to Know
Reza Hakimelahi, MD

10:00 – 10:20  Refreshment Break and Visit Technical Exhibits

ADULT BRAIN: NEOPLASM, COMPLICATIONS & MIMICS
Moderators: Gloria Chiang, MD and Rohini Nadgir, MD

10:20 – 10:40  Multi-Parametric Assessment of Treatment Response
Ronald L. Wolf, MD, PhD

10:40 – 11:00  Neoplasm or Not?
Jacqueline A. Bello, MD, FACR

11:00 – 11:15  Infratentorial Brain Tumors
Krisvani Shifteh, FACR, FRCPC

11:15 – 11:30  fMRI and Tractography for Neurosurgical Planning
Karen Ghazarzadzhian, MD

11:30 – 11:45  Treatment Related Complications and Their Mimics in the CNS
Sachin Gujar, MBBS, MBBS

11:45 – 12:15 PM  Scientific Paper Session #1
Moderators: Doris Liu, MD, Carlos H. Torres, MD, FRCP and Laurent LéTourneau-Guillon, MD

12:00 – 1:20  Lunch On Your Own

PEDIATRIC I
Moderators: Diana P. Rodriguez, MD and Karuna V. Shekdar, MD

1:20 – 1:40  Congenital Pediatric Spine
Erik Simom Schwartz, MD, FACR

1:40 – 2:00  Pediatric Spine Tumors
Karuna V. Shekdar, MD

2:00 – 2:20  Inborn Errors Of Metabolism, Myelin Disorders, And Childhood Ataxia - Diagnostic Clues From Down Under
Paul A. Caruso, MD

2:20 – 2:40  Fetal MRI
Elka Miller, MD, FRCP

2:40 – 3:00  Advances in Pediatric MRI
Mari-Lan Ho, MD

3:00 – 3:20  Refreshment Break and Visit Technical Exhibits

ADULT BRAIN: NON-TUMOR
Moderators: C. Douglas Phillips, MD, FACR and Amar Vora, MD

3:20 – 3:40  Imaging of MS: What the Clinician Needs to Know
Suei Y. Huang, MD

3:40 – 4:00  It’s Not MS – Other White Matter Disease
Sam Papadopoulos, MD

4:00 – 4:20  CNS Infections – New Thoughts
A. John Tsiouris, MD

4:20 – 4:40  PET-MRI in Dementia Evaluations
Gloria Chiang, MD

4:40 – 4:50  Low Dose and No-Dose Gadolinium Protocols
Bidyut K. Pramanik, MD

4:50 – 5:00  Creating a Successful Clinic-Based Reading Service
C. Douglas Phillips, MD, FACR

5:00  End of Session

5:00 – 6:30  Scientific Paper Session #2
Moderators: Doris Liu, MD, Carlos H. Torres, MD, FRCP and Laurent LéTourneau-Guillon, MD

6:30  Welcome Reception

Friday, August 23, 2019

7:00 – 7:30 AM  Breakfast & Learn
Sponsored by Icometrix

STROKE I
Moderators: Pamela W. Schaefer, MD and Sean Symons, MD

8:00 – 8:20  Acute Stroke Triage and Treatment – Early Window
(0 - 6 hours)
Kambiz Nael, MD

8:20 – 8:40  Acute Stroke Triage and Treatment – Late Window
(6 – 24 hours)
Philip M. Meyers, MD, FACR, FSIR, FAHA

8:40 – 9:00  Treatment of Large Core Strokes
Scott B. Raymond, MD

9:00 – 9:20  Pediatric Stroke Update
Richard L. Robertson, MD

9:20 – 9:40  Stroke Mimics
Jana Ivanidze, MD, PhD

9:40 – 10:00  Advanced Imaging in the Evaluation of Hemorrhagic Stroke
Panlona W. Schaefer, MD

10:00 – 10:20  Refreshment Break and Visit Technical Exhibits

PEDIATRIC II
Moderators: Mohan S. Shroff, MD, FRCP and Bruno P. Soares, MD

10:20 – 10:40  Strategies to Decrease Sedation in Pediatric Neuroimaging
Caroline Jones, MD, FRCR

10:40 – 11:00  Updated WHO Classification for Pediatric Brain Tumors
Tina Young Poussaint, MD, FACR

11:00 – 11:20  Neurometabolic Emergencies
Birgit Ernl-Wagner, MD

11:20 – 11:40  Autoimmune Encephalitis
Manohar M. Shroff, MD, FRCP

11:40 – 12:00 PM  Cobblestone Cortical Malformations: From Molecular Basis to Imaging Phenotypes
Ali Reza Radmanesh, MD

12:00 – 1:00  Lunch & Learn
Sponsored by GE Healthcare

SPINE I
Moderators: Anna Derman, MD and Anish H. Dubhi, MD

1:20 – 1:40  Optimizing Your Spine Imaging Protocols: Tips and Tricks
Lawrence N. Tenenbaum, MD, FACR

1:40 – 2:00  AO Classification and TLICS - What the Surgeon Wants to Know
Charles H. Cho, MD, MRA

2:00 – 2:20  Imaging of the Post-Operative Spine
William A. Mehan, Jr., MD, MBA

2:20 – 2:40  Lines and Spines: Imaging Evaluation of Spinal Deformities
Maad Khan, MD

2:40 – 2:50  Spinal Imaging of Spondyloarthropathies
Puneet B. Belani, MD

2:50 – 3:00  MRA of Spinal Vascular Disease: Protocols and Pathology
Michele H. Johnson, MD, FACR, FASER

3:00 – 3:20  Refreshment Break and Visit Technical Exhibits

ADVANCED TECHNIQUES, ARTIFICIAL INTELLIGENCE & POLICY
Moderators: Rajiv Gupta, MD and Timothy M. Shepherd, MD, PhD

3:20 – 3:40  Radiomics and Radiogenomics for Tumor Characterization
Christopher G. Filippi, MD

3:40 – 4:00  A Primer on Artificial Intelligence: From Basics to Future Horizons
Reza Forghani, MD, PhD

4:00 – 4:20  Advanced Image Visualization & 3D Printing
Edward P. Quigley, III, MD, PhD

4:20 – 4:40  Dual Energy CT Applications in Neuroimaging & Head and Neck Imaging
Majid Khan, MD

4:40 – 4:50  Overview of 7T MR Imaging
Bradley N. Delman, MD

4:50 – 5:10  D.C. Update From a Senior Fellow of the Neiman Policy Institute
Joanna A. Hirsh, MD, FACR, FSIR, FASIR

5:10  End of Session
Friday, August 23, 2019 (Continued)

5:10 – 5:35 **Scientific Paper Session #3 ♦**
- Moderators: Doris Lin, MD, Carlos H. Torres, MD, FRCP and Laurent Letourneau-Guillon, MD

5:40 – 6:00 **ASNR President’s Address & Lecture ♦**

6:00 – 6:30 **ENRS Annual Business Meeting (ENRS Members Only) ♦**

Saturday, August 24, 2019

7:00 – 8:00 AM **Continental Breakfast for Registrants and Visit Technical Exhibits**

7:15 - 7:45 **Visit Technical Exhibits**

7:15 - 7:45 **Scientific Paper Session #4 ♦**
- Moderators: Doris Lin, MD, Carlos H. Torres, MD, FRCP and Laurent Letourneau-Guillon, MD

**HEAD AND NECK IMAGING I**
- Moderators: Marion Billett, MD and David Landry, MD

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<th>Session</th>
<th>Time</th>
<th>Topic</th>
<th>Presenter(s)</th>
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<tr>
<td>10:00 – 10:20 Refreshment Break and Visit Technical Exhibits</td>
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<tr>
<td>10:20 – 10:40 STROKE &amp; VESSELS II</td>
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<tr>
<td>11:00 – 11:20 HEAD AND NECK IMAGING III</td>
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**SAM SESSION**

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<tr>
<td>8:00 – 8:20</td>
<td>Tinnitus</td>
<td>Abok Srinivasaan, MD</td>
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<td>8:20 – 8:40</td>
<td>Otalgia</td>
<td>Matt Hagisora, MD</td>
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<td>8:40 – 9:00</td>
<td>Facial Weakness</td>
<td>Amy Fan-Yee Juliano, MD</td>
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<tr>
<td>9:00 – 9:20</td>
<td>Nodal Staging in Head and Neck Cancer: Evidence Based Best Practices</td>
<td>Peter M. Som, MD, FACR, FRSM</td>
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<td>9:20 – 9:30</td>
<td>You’ve Got to See This Case!</td>
<td>Karen Buch, MD</td>
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<td>9:30 – 9:40</td>
<td>Acquired Sensorineural Hearing Loss</td>
<td>Marie-Constance Lacoste, MD, FRCP</td>
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<td>9:40 – 10:00</td>
<td>Surveillance Imaging in H/N Ca: Evidence Based Best Practices</td>
<td>Eugene Yu, MD, FRCP</td>
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<td>10:20 – 10:40</td>
<td>Large Vessel Vasculopathies</td>
<td>Pamela W. Schaefer, MD</td>
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<td>10:40 – 11:00</td>
<td>Intracranial Vessel Wall Imaging for Distinguishing Neurovascular Diseases</td>
<td>Bruce A. Wasserman, MD</td>
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<td>11:00 – 11:20</td>
<td>Small Vessel Vasculopathies</td>
<td>Pina C. Sanelli, MD, MPH, FACR</td>
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<td>11:20 – 11:40</td>
<td>Carotid Plaque Imaging</td>
<td>Jae W. Song, MD, MS</td>
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<td>11:40 – 12:00 PM</td>
<td>Molecular Imaging of Vascular Inflammation</td>
<td>John W. Chen, MD, PhD</td>
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<td>12:00 – 1:20</td>
<td>Lunch On Your Own</td>
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<td>1:20 – 1:40</td>
<td>Infections of the Spine and Spinal Cord</td>
<td>Anson Z. Mian, MD</td>
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<td>1:40 – 2:00</td>
<td>Imaging of Myelopathy: A Practical Approach</td>
<td>Maria J. Borja, MD</td>
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<td>2:00 – 2:20</td>
<td>Non-Traumatic Spine Emergencies</td>
<td>Carlos H. Torres, MD, FRCP</td>
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<td>2:20 – 2:45</td>
<td>Advanced Imaging of Vertebral Body Lesions</td>
<td>Prueet S. Pawha, MD</td>
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<td>2:45 – 3:00</td>
<td>AI and Machine Learning in Spine Imaging: Review of Current Trends</td>
<td>Javin Schefflein, MD</td>
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<td>3:00 – 3:20</td>
<td>Refreshment Break and Visit Technical Exhibits</td>
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**Saturday, August 24, 2019 (Continued)**

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<tr>
<td>3:20 – 3:40</td>
<td>DDx: Parotid Mass</td>
<td>Claudia F.E. Kirch, MD</td>
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<td>3:40 – 4:00</td>
<td>DDx: Sinonasal Mass</td>
<td>Deborah R. Shatzkes, MD</td>
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<td>4:00 – 4:20</td>
<td>DDx: Orbital Mass</td>
<td>Stephanie Lam, MD</td>
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<td>4:20 – 4:40</td>
<td>DDx: Adult Neck Mass</td>
<td>Carlos I. Torres, MD</td>
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<td>4:40 – 4:55</td>
<td>DDx: Pediatric Neck Mass</td>
<td>Karen K. Mueller, MD</td>
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<td>4:55 – 5:10</td>
<td>DDx: Middle Ear Mass</td>
<td>Hillary R. Kelly, MD</td>
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<td>5:10 – 6:00</td>
<td>Stump the Stars</td>
<td>Laurent Letourneau-Guillon, MD</td>
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**Sunday, August 25, 2019**

7:00 – 8:00 AM **Continental Breakfast for Registrants and Visit Technical Exhibits**

7:15 - 7:45 **Visit Technical Exhibits**

7:15 - 7:45 **Scientific Paper Session #5 ♦**
- Moderators: Doris Lin, MD, Carlos H. Torres, MD, FRCP and Laurent Letourneau-Guillon, MD

**HEAD AND NECK IMAGING III**
- Moderators: Amit Mahajan, MD and Osamu Sakai, MD, PhD, FACR

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<tr>
<td>8:00 – 8:20</td>
<td>Sellar &amp; Parasellar Anatomy &amp; Pathology</td>
<td>Girish M. Fatterpekar, MBBS, DNB, MD</td>
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<td>8:20 – 8:40</td>
<td>Central Skull Base Variants &amp; Pathology</td>
<td>Sayab Mohan, MD</td>
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<td>8:40 – 9:00</td>
<td>Temporal Bone Trauma</td>
<td>Vihan Jain, MBBS</td>
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<td>9:00 – 9:20</td>
<td>Post-Operative Temporal Bone</td>
<td>Gul Moonis, MBBS</td>
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<td>9:20 – 9:30</td>
<td>Head and Neck Case Review: 5 Key Pearls to Avoid Pitfalls</td>
<td>Eric S. Bardett, MD, MPH</td>
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<td>9:30 – 9:50</td>
<td>Acute Non-Traumatic ENT Emergencies</td>
<td>Tony J. Roth, MD</td>
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</tbody>
</table>

9:50 – 10:10 **Refreshment Break and Visit Technical Exhibits**

**NEURO INTERVENTIONAL**
- Moderators: Allen L. Brook, MD, FSIR and Michele H. Johnson, MD, FACR, FASER

<table>
<thead>
<tr>
<th>Time</th>
<th>Topic</th>
<th>Presenter(s)</th>
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</thead>
<tbody>
<tr>
<td>10:10 – 10:30</td>
<td>Carotid Stenosis: CEA, CAS, TCAR or Medicine, What is the Evidence</td>
<td>Roade DeLeacy, MD, MBBS (Hon) FRANZCR</td>
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<td>10:30 – 10:50</td>
<td>Thrombectomy for Large Vessel Occlusion Strokes: How Does Imaging Influence Triage?</td>
<td>Donatella Tampieri, MD, FRCP</td>
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<tr>
<td>10:50 – 11:10</td>
<td>The Unruptured Aneurysm: Optimal Imaging and Treatment Strategies for Management</td>
<td>Clifford J. Eskey MD, PhD</td>
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<tr>
<td>11:10 – 11:30</td>
<td>The ABCs of Endovascular Aneurysm Treatment</td>
<td>Peter K. Nelson, MD</td>
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<tr>
<td>11:30 – 11:45</td>
<td>New Frontiers in Neurointervention: Beyond Glue and Coils</td>
<td>Dheeraj Gandhi, MD</td>
</tr>
</tbody>
</table>

11:45 – 12:00 **Closing Comments**

12:00 **End of Meeting**

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**ENRS Abstract Submission:**

**Deadline for abstract submissions:**

**June 5, 2019**

Abstracts will be accepted for oral presentation in 2 categories: (1) Scientific Oral Presentation or (2) Excerpt Extraordinaire (brief presentation of interesting, educational case reports). Submissions are welcome in all major categories in neuroradiology. Authors will be notified by mid-June. Authors of accepted abstracts will be required to register for the meeting and pay the meeting registration fee.

Interested candidates should submit abstract(s) accompanied by a completed abstract submission form electronically to: Laurent Letourneau-Guillon MD, MSc at laurent.letourneau-guillon.1@umontreal.ca.

INTERNET  ENRS.Edusymp.com
MAIL  Check payable to:  
ENRS  c/o Educational Symposia  
5620 West Sligh Avenue  
Tampa, Florida USA  
33634-4490
FAX  (813) 806-1001  
PHONE  (813) 806-1000

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