



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)TM

For more information, visit www.enrs.org



From The Program Chair

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 meeting will take place at the heart of one of the most cosmopolitan and culturally diverse cities in the world, easily accessible from anywhere on the east coast. 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, operas, 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 excellent program and executive committees, and the program managers at ESI whom I would like to thank for their hard work.

I look forward to seeing you all in August.

Reza Forghani

Reza Forghani, MD, PhD, FRCPC

ENRS Vice President / President-Elect and Program Committee Chair

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.

Target Audience

The ENRS 31" 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, otolaryngology, 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)TM. 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.

No special educational preparation is required for this CME activity.

2018-2019 ENRS Executive Committee

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The New York Head & Neck Institute
Northwell Health
New York, NY

Program Schedule

Thursday,	August	22,	2019
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8:00 AM Meeting Registration 8:50 - 9:00Introduction and Welcome

ADULT BRAIN: NEOPLASM

Moderators: Laurie A. Loevner, MD and Jared M. Steinklein, MD

SAM SESSION	
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 C	hiang, MD and Carlos I. Torres, 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 Keivan Shifteh, MD, FACR
11:15 – 11:30	fMRI and Tractography for Neurosurgical Planning Robert J. Young, MD
11:30 – 11:45	Treatment Related Complications and Their Mimics in the CNS Sachin Gujar, MBBS, MD
11:45 – 12:00 PM	Scientific Paper Session #1 ◆ Moderators: Doris Lin, MD, Carlos H. Torres, MD, FRCPC

and Laurent Letourneau-Guillon, MD

12:00 - 1:20 **Lunch On Your Own**

PEDIATRIC I

6:30

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

1:20 – 1:40	Congenital Pediatric Spine Erin Simon 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, FRCPC
2:40 – 3:00	Advanced Pediatric MR Imaging Techniques Mai-Lan Ho, MD

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

ADULT BRAIN: NON-TUMOR Moderators: C. Douglas Phillips, MD, FACR and Amar Vora, MD 3:20 - 3:40Imaging of MS: What the Clinician Needs to Know Susie Y. Huang, MD 3:40 - 4:00It's Not MS - Other White Matter Disease Sam Payabvash, MD 4:00 - 4:20CNS Infections – New Thoughts A. John Tsiouris, MD PET-MRI in Dementia Evaluations 4:20 - 4:40Gloria Chiang, MD 4:40 - 4:50Low 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 - 6:00 Scientific Paper Session #2 ◆ Moderators : Doris Lin, MD, Carlos H. Torres, MD, FRCPC and Laurent Létourneau-Guillon, MD

Welcome Reception

Friday, August 23, 2019

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

	Visit Technical Exhibits
STROKE I	V C.L. f., MD J C C MD
	V. Schaefer, MD and Sean Symons, MD
SAM SESSION	
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 <i>Javier M. Romero, MD, FAHA</i>
10:00 - 10:20	Refreshment Break and Visit Technical Exhibits
PEDIATRIC II	
Moderators: Manohar	· M. Shroff, MD, FRCPC and Bruno P. Soares, MD
10:20 – 10:40	Strategies to Decrease Sedation in Pediatric Neuroimaging Camilo Jaimes Cobos, MD
10:40 – 11:00	Updated WHO Classification for Pediatric Brain Tumors Tina Young Poussaint, MD, FACR
11:00 – 11:20	Neurometabolic Emergencies Birgit Ertl-Wagner, MD
11:20 – 11:40	Autoimmune Encephalitis Manohar M. Shroff, MD, FRCPC
11:40 – 12:00 PM	Cobblestone Cortical Malformations: From Molecular Basis to Imaging Phenotypes Alireza Radmanesh, MD
12:00 – 1:20	Lunch On Your Own
SPINE I	
	rman, MD and Amish H. Doshi, MD
1:20 – 1:40	Optimizing Your Spine Imaging Protocols: Tips and Tricks Lawrence N. Tanenbaum, MD, FACR
1:40 – 2:00	AO Classification and TLICS - What the Surgeon Wants to Know Charles H. Cho, MD, MBA
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 Majid 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 TEC	HNIQUES, ARTIFICIAL INTELLIGENCE & POLICY
	pta, 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

4:40 - 4:50

4:50 - 5:10

5:10

Daniel J. Boulter, MD

Neiman Policy Institute

End of Session

Overview of 7T MR Imaging Bradley N. Delman, MD

D.C. Update From a Senior Fellow of the

Joshua A. Hirsch MD, FACR, FSIR, FSNIS

Moderators: Doris Lin, MD, Carlos H. Torres, MD, FRCPC and Moderators: Laila Al Shafai, MD and Deborah R. Shatzkes, MD Laurent Létourneau-Guillon, MD 3:20 - 3:40DDx: Parotid Mass 5:40 - 6:00ASNR President's Address & Lecture ◆ Claudia F.E. Kirsch, MD 6:00 - 6:30ENRS Annual Business Meeting (ENRS Members Only) ◆ 3:40 - 4:00DDx: Sinonasal Mass Rihan Khan, MD Saturday, August 24, 2019 DDx: Orbital Mass 4:00 - 4:207:00 - 8:00 AM Continental Breakfast for Registrants and Stephanie Lam, MD Visit Technical Exhibits 4:20 - 4:40DDx: Adult Neck Mass **HEAD AND NECK IMAGING I** Carlos I. Torres, MD Moderators: Manon Belair, MD and David Landry, MD 4:40 - 4:55DDx: Pediatric Neck Mass **SAM SESSION** Karen K. Moeller, MD 8:00 - 8:20**Tinnitus** 4:55 - 5:10DDx: Middle Ear Mass Ashok Srinivasan, MD Hillary R. Kelly, MD Otalgia 8:20 - 8:40Stump the Stars 5:10 - 6:00Mari Hagiwara, MD Moderator: Laurent Létourneau-Guillon, MD Facial Weakness 8:40 -9:00 6:00 **End of Session** Amy Fan-Yee Juliano, MD 6:30 **Closing Reception and Annual Dinner** Nodal Staging in Head and Neck Cancer: 9:00 - 9:20Evidence Based Best Practices Sunday, August 25, 2019 Peter M. Som, MD, FACR, FRSM 7:00 - 8:00 AM **Continental Breakfast for Registrants and** 9:20 - 9:30You've Got to See This Case! Visit Technical Exhibits Karen Buch, MD **HEAD AND NECK IMAGING III** Acquired Sensorineural Hearing Loss 9:30 - 9:40Moderators: Amit Mahajan, MD and Osamu Sakai, MD, PhD, FACR Marie-Constance Lacasse, MD, FRCPC 8:00 - 8:20 Sellar & Parasellar Anatomy & Pathology 9:40 - 10:00 Surveillance Imaging in H/N Ca: Girish M. Fatterpekar, MBBS, DNB, MD Evidence Based Best Practices 8:20 - 8:40Central Skull Base Variants & Pathology Eugene Yu, MD, FRCPC Suyash Mohan, MD 10:00 - 10:20 **Refreshment Break and Visit Technical Exhibits** 8:40 - 9:00Temporal Bone Trauma STROKE & VESSELS II Vikas Jain, MBBS Moderators: Clifford J. Eskey, MD, PhD and Pina C. Sanelli, MD, MPH, FACR 9:00 - 9:20Post-Operative Temporal Bone Large Vessel Vasculopathies 10:20 - 10:40Gul Moonis, MBBS Pamela W. Schaefer, MD 9:20 - 9:30Head and Neck Case Review: 5 Key Pearls to Avoid Pitfalls 10:40 - 11:00Intracranial Vessel Wall Imaging for Distinguishing Eric S. Bartlett, MD, MPH Neurovascular Diseases 9:30 - 9:50Acute Non-Traumatic ENT Emergencies Bruce A. Wasserman, MD Tanya J. Rath, MD 11:00 - 11:20 Small Vessel Vasculopathies 9:50 - 10:10 Refreshment Break and Visit Technical Exhibits Pina C. Sanelli, MD, MPH, FACR **NEURO INTERVENTIONAL** 11:20 - 11:40 Carotid Plaque Imaging Moderators: Allan L. Brook, MD, FSIR and Michele H. Johnson, MD, FACR, FASER Jae W. Song, MD, MS 10:10 - 10:30 Carotid Stenosis: CEA, CAS, TCAR or Medicine, 11:40 - 12:00 PM Molecular Imaging of Vascular Inflammation What is the Evidence John W. Chen, MD, PhD Reade DeLeacy, MD, MBBS (Hons) FRANZCR 12:00 - 1:20 **Lunch On Your Own** 10:30 - 10:50Thrombectomy for Large Vessel Occlusion Strokes: How Does Imaging Influence Triage? Donatella Tampieri, MD, FRCPC Moderators: Amit Aggarwal, MD and Harpit S. Bedi, MD SAM SESSION 10:50 - 11:10The Unruptured Aneurysm: Optimal Imaging and Treatment Strategies for Management 1:20 - 1:40Infections of the Spine and Spinal Cord Clifford J. Eskey MD, PhD Asim Z. Mian, MD The ABCs of Endovascular Aneurysm Treatment 11:10 - 11:30 1:40 - 2:00Imaging of Myelopathy: A Practical Approach Peter K. Nelson, MD Maria J. Borja, MD New Frontiers in Neurointervention: Beyond Glue and Coils 11:30 - 11:452:00 - 2:20Non-Traumatic Spine Emergencies Dheeraj Gandi, MD Carlos H. Torres, MD, FRCPC 11:45 - 12:00 PM Closing Comments 2:20 - 2:40Advanced Imaging of Vertebral Body Lesions Puneet S. Pawha, MD 12:00 **End of Meeting** 2:40 - 2:50CDE and Structured Reporting in the Spine Adam E. Flanders, MD 2:50 - 3:00Al and Machine Learning in Spine Imaging: Review of Current Trends Javin Schefflein, MD Faculty & topics subject to change.

Saturday, August 24, 2019 (Continued)

HEAD AND NECK IMAGING II

ENRS Abstract Submission:

3:00 - 3:20

Deadline for abstract submissions

Refreshment Break and Visit Technical Exhibits

Friday, August 23, 2019 (Continued)

5:10 - 5:35

Scientific Paper Session #3 ♦

June 5, 2019

Abstracts will be accepted for oral presentation in 2 categories: (1) Scientific Oral Presentation or (2) Excerpta 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.

◆ Session not accredited for AMA PRA Category 1 Credit(s)™

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

Visit https://www.edusymp.com/esi/2019/ENRS19/CallforAbstracts2019.pdf to access the submission form.

Invited Faculty

Amit Aggarwal, MD

Icahn School of Medicine at Mount Sinai

Laila Al Shafai, MD

Princess Margaret Cancer Centre University of Toronto

Eric S. Bartlett, MD, MPH

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Maria J. Borja, MD

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The Ohio State University Wexner Medical Center

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Karen Buch, MD

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Paul A. Caruso, MD

Massachusetts Eye and Ear Infirmary

John W. Chen, MD, PhD

Massachusetts General Hospital

Gloria Chiang, MD

Weill Cornell Medicine, New York Presbyterian Hospital

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Birgit Ertl-Wagner, MD

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Clifford J. Eskey, MD, PhD

Geisel School of Medicine at Dartmouth

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Registration Information

31st Annual Meeting of

The Eastern Neuroradiological Society

ENRS19

A late fee of \$75 will be added to any registration postmarked after July 22, 2019.

ENRS Member	□ \$425 ^{.00}
Non-Member	□ \$750.00
Members-in-Training	□ \$250 ^{.00}
☐ Resident ☐ Fellow ☐ Medical Student	

☐ Yes, I plan to attend the Welcome Receptions	15 ^{.00}
Thursday, August 22, 2019	

☐ Yes, I plan to attend the	
Annual Gala Dinner\$25	j.00
Saturday, August 24, 2019	

☐ Yes, I plan to have a guest attend	
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Degree ☐ M.D. ☐ D.O. ☐ Ph.D. ☐ Other

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Cancellations: Requests for refund of registration fees, less a \$75.00 administrative fee, will be made to those providing written notification of cancellation by July 22, 2019. After that date, there will be no refunds given for cancellations. Please email notice of cancellation to: cancel@edusymp.com or fax to 813-806-1001.





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Complimentary internet access within the guest room.

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King/Two Queen Beds (upon availability). Group room rates may be available three (3) days prior and after meeting, subject to availability and confirmation by the hotel.

HOTEL TAX: 14.75% and \$3.50 occupancy tax per night

HOTEL CUT-OFF DATE: July 24, 2019

PARKING: \$40 per night, SUVs are subject to additional charges.

DEPOSIT POLICY: Credit cards will be charged first night room and tax charges at time of reservation.

CANCELLATION POLICY: All cancellations, arrival and departure date changes must be made 72 hours or more prior to scheduled arrival date/time to avoid penalties. Check in time is: 4:00 PM; check out time is: 11:00 AM.

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