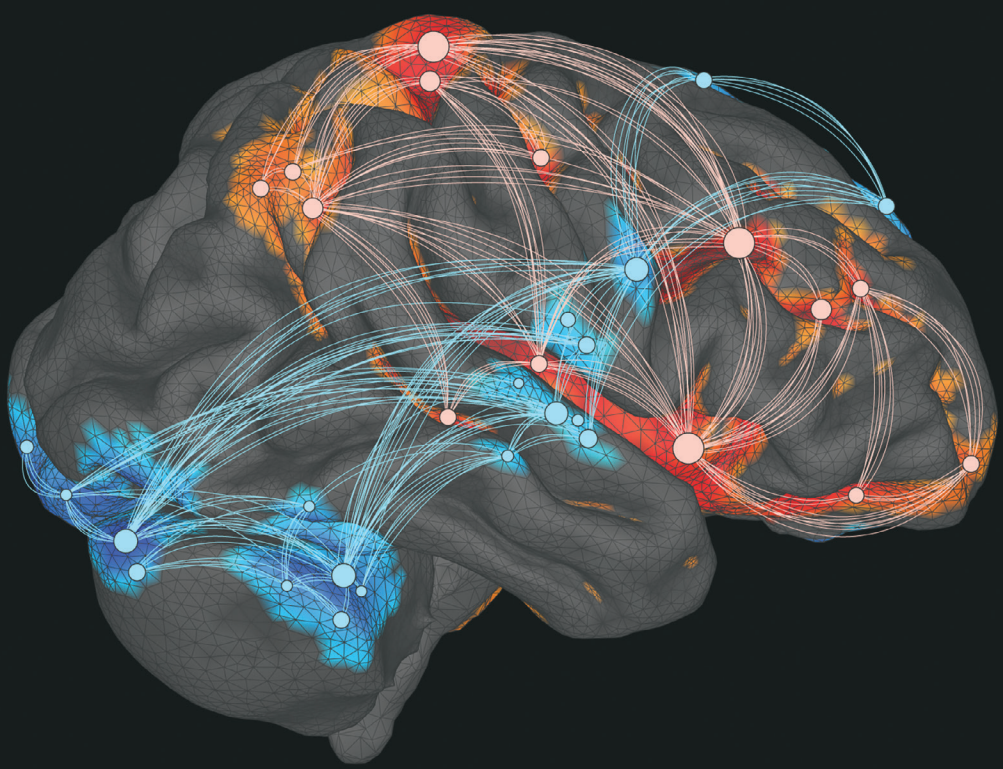
Cleveland Clinic

Cleveland Clinic International Epilepsy Summit

Current and Future Role of SEEG in Epilepsy Surgery

September 11–15, 2024

Hilton Cleveland Downtown Hotel, Cleveland, Ohio



www.ccfcme.org/epilepsysummit24

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Overview

Epilepsy is a relatively common neurological disorder that predisposes patients to recurrent seizures. Epilepsy affects approximately 1.2% of the United States population, with about 3.4 million people (both adults and children) having active cases and 5.1 million having a history of epilepsy. Of these patients, up to 30% have medically refractory epilepsy.

Research continues to provide insights into epilepsy pathology, focusing on genetic and molecular mechanisms as well as its cellular and anatomical characteristics. Recent therapeutic developments and the development of cutting-edge imaging modalities have improved the outcomes of management strategies for patients with epilepsy, especially in the area of epilepsy surgery and stereoelectroencephalograpy (SEEG).

Further, recent research on patients with medically intractable epilepsy due to focal cortical dysplasia (FCD) has led expert consensus groups to update recommendations for the classification of epilepsies, identifying their type and distinctive histopathologic features, which helps individualize management strategies. The most recent publication is the 2022 international consensus document on FCD classification.

The complexity and clinical implications of these innovations challenge both specialists and generalists to stay abreast of the data and interpret their impact on clinical care, which creates gaps in knowledge, competence, and practice among epilepsy practitioners. This, in turn, creates a pressing need for an educational activity focused on providing updates and critical analyses of the most important research into the assessment and treatment of patients with epilepsy.

The focus of the Cleveland Clinic International Epilepsy Summit will be on presenting a comprehensive overview of the latest advancements in epilepsy surgery and SEEG on a global scale and interpreting their potential use in clinical practice. Discussions of the evidence will provide the clinical knowledge to participants, all health care professionals, to help them assess patients with epilepsy, classify their pathologic type, and identify the most optimal management strategies. The overall goal is to improve outcomes of patients with epilepsy on both a medical and surgical level.

Target Audience

Adult and Pediatric Neurologists, Neurosurgeons, Epilepsy Fellows, Residents in Adult and Pediatric Neurology, Psychologists, Nurse Practitioners, Physician Assistants, Neuroscientists, Molecular Biologists, Pathologists, Pharmacists and Geneticists

Learning Objectives

After completing this educational activity, participants will be able to do the following:

- Discuss the current state of epilepsy surgery for various epileptic pathologies including focal cortical dysplasia, congenital tumors, and other epileptic brain lesions.
- Critically examine the current state of stereoelectroencephalography (SEEG) in the evaluation and management of drug-resistant focal epilepsies.

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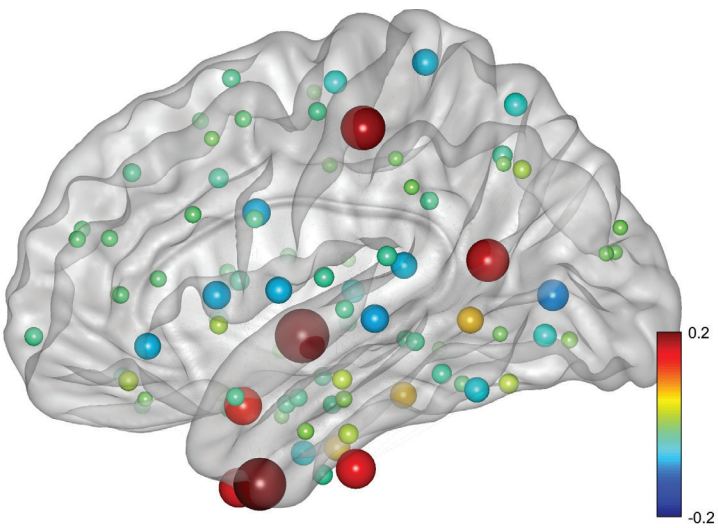
Learning Objectives (con't)

- Discuss the future indications of SEEG in the management of drug-resistant epilepsies.
- Analyze the evidence base and describe the practical implications of the 2022 ILAE classification of focal cortical dysplasia on the presurgical evaluation and surgical management of patients with drug-resistant epilepsies.
- Summarize the current evidence on congenital tumor evaluation and surgical treatment in patients with drug-resistant epilepsies.
- Identify the existing challenges for the surgical management of various uncommon focal epilepsies and those with no FCD pathology.
- Provide an overview of recent trends in gene-based therapies, neuroengineering, and use of artificial intelligence and discuss their potential implications for clinical practice.
- Provide an overview of recent trends in anti-seizure medications and discuss their role in the future management of patients with epilepsy

Call for Abstracts

Residents and fellows are invited to submit abstracts describing epilepsy-related research in the following categories: clinical epileptology; epilepsy surgery; epilepsy imaging; neuropsychiatric aspects of epilepsy; and neuropharmacology. Five abstracts will be awarded platform presentations and the registration fees will be waived for the presenting authors. Abstracts may be submitted to: clevelandclinic.org/epilepsysummitabstract

Deadline to submit is August 11, 2024.



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Faculty

Course Director

Imad Najm, MD
Cleveland Clinic

Invited Guest Faculty

Ingmar Blumcke, MD
University Hospital Erlangen

Kees Braun, MD
UMC Utrecht, Netherlands

György Buzsáki, MD
NYU Langone Health

Stephen Chabardes, MD
University of Grenoble, Grenoble, France

Mauro Costa-Mattioli, PhD
Baylor College of Medicine

Dominique Durand, PhD
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Emory University

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UT Southwestern Medical Center

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Cleveland Clinic Faculty

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Krishna Galla, MD
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Stephen Hantus, MD
Stephen Jones, MD, PhD
Jean Khoury, MD
Prakash Kotagal, MD
Balu Krishnan, MD
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Elizabeth Spurgeon, MD
Carolyn Tsai, MD
Irene Wang, PhD
Elaine Wyllie, MD
Zhong Ying, MD

Cleveland Clinic Planning Committee

Daria Diakonova-Curtis, PhD
Susan Stanton, PA-C
Ann Warbel, NP

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Agenda

Wednesday, September 11, 2024

4:30 p.m. Registration / Exhibits
5:30 p.m. Welcome and Introductions
5:45 p.m. **Opening Keynote: Pediatric Epilepsy Surgery**
6:45 p.m. Adjourn
7:00 p.m. Welcome Reception

Thursday, September 12, 2024

7:30 a.m. Continental Breakfast / Exhibits

Session I: Epilepsy Surgery – Then and Now

8:00 a.m. Lessons Learned From More Than 100 Years of Epilepsy Surgery
8:40 a.m. SEEG in the Presurgical Evaluation of Epilepsy: 15 Years of Experience at Cleveland Clinic
9:20 a.m. Epilepsy Surgery Candidates and Role of Invasive Evaluation
10:00 a.m. **Break / Exhibits**

Session II: SEEG Indications and Results from Around the World

10:20 a.m. France
10:40 a.m. Italy
11:00 a.m. India
11:20 a.m. Australia
11:40 a.m. China
12:00 p.m. Mexico
12:20 p.m. **Lunch / Exhibits**

Session III: SEEG – The Method

1:20 p.m. Principles
2:00 p.m. Role of Semiology
2:40 p.m. Role of Multimodal Studies
3:20 p.m. **Break / Exhibits**

Session IV: SEEG – From Preimplantation Planning to Surgical Resection

3:40 p.m. Principles of Implantation
4:20 p.m. Principles of SEEG Analysis
5:00 p.m. How to Use the SEEG Information for Surgical Planning
5:30 p.m. **Keynote Presentation: Future Role of SEEG in Epilepsy Surgery**
6:30 p.m. Adjourn

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Friday, September 13, 2024

7:30 a.m. Continental Breakfast / Exhibits

Session V: Pediatric Epilepsy Surgery

8:00 a.m. SEEG in the Pediatric Population

8:40 a.m. Pediatric Epilepsy Surgery in Eloquent Regions in the Brain

9:20 a.m. Is Surgery an Option in Some Epilepetic Encephalopathies?

10:00 a.m. **Break / Exhibits**

Session VI: Imaging

10:20 a.m. Current State of Imaging of the Epilepsies

10:50 a.m. Novel MR Sequences

11:20 a.m. Postprocessing Technologies

11:50 a.m. Imaging and Genetics of FCD

12:20 p.m. **Lunch Break**

Session VII: Presurgical Evaluation and Management of Epileptic Pathologies – Part I

1:20 p.m. The ILAE classification for Focal Cortical Dysplasia

2:00 p.m. Focal Cortical Dysplasia Type 1

2:40 p.m. Focal Cortical Dysplasia Type 3

3:20 p.m. **Break / Exhibits**

Session VIII: Presurgical Evaluation and Management of Suspected FCD Epilpetic Pathologies – Part II

3:40 p.m. FCD Type 2

4:20 p.m. mMCD and MOGHE

5:00 p.m. No FCD on Histopathology

5:30 p.m. **Keynote Presentation: Principles of Brain Rhythms and Synchronization: Lessons for Epilepsy**

6:30 p.m. Adjourn

Saturday, September 14, 2024

7:30 a.m. Continental Breakfast / Exhibits

Session IX: SEEG – Presurgical Evaluation and Management of Epileptic Pathologies – Congenital Tumors

8:00 a.m. Epilepsy Considerations in the Management of LEATs

8:30 a.m. Neuroimaging of Congenital Tumors: What is Desired?

9:00 a.m. Pathological Classification

9:30 a.m. Proposal for a Layered Approach to the Management of Congenital Tumors in Epilepsy

10:00 a.m. **Break / Exhibits**

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Session X: Presurgical Evaluation and Management of Other Epileptic Pathologies

10:20 a.m. Cavernomas
10:50 a.m. PMG
11:20 a.m. PVN
11:50 a.m. Temporal Encephalocele
12:20 p.m. **Break / Exhibits**

Session XI: Special Surgical Considerations in the Management of FCDs and Tumors

1:20 p.m. FCD1 –
1:40 p.m. FCD2 –
2:00 p.m. FCD3 –
2:20 p.m. MOGHE
2:40 p.m. Congenital Tumors
3:00 p.m. Ablative Surgeries: LITT and RFA
3:20 p.m. **Break / Exhibits**

Session XII: Non-Resective Approaches to Epilepsy Surgery

3:40 p.m. Stimulation of the Cortex vs Pathways: The Lab Perspective
4:10 p.m. RNS
4:40 p.m. DBS
5:10 p.m. VNS
5:30 p.m. Adjourn

Sunday, September 15, 2024

7:30 a.m. Continental Breakfast / Exhibits

Session XIII: Emerging Role of Novel Anti-seizure Medications and Genetics in Epilepsy Management

8:00 a.m. Current State of Knowledge in Epilepsy
8:20 a.m. Epigenetics in Epilepsy
8:40 a.m. Single Gene Methylation
9:00 a.m. Towards a More Personalized Treatment with Anti-seizure Medications
9:20 a.m. Are We Ready for Gene-based Therapies? Future Perspectives
9:40 a.m. Panel Discussion of New Anti-Seizure Medications and Gene Therapy
10:00 a.m. **Break / Exhibits**

Session XIV: Signal Processing, Engineering and AI: Trends in Epilepsy

10:20 a.m. Non-Invasice Mapping of Connectivity in Epileptic Network
10:40 a.m. Normative Brain Mapping: Scalp EEG, MEG, and Intracranial EEG
11:00 a.m. 4-Dimensional Mapping of Epileptic Networks
11:20 a.m. AI in Detection and Analysis of intracranial EEG
11:40 a.m. Taxonomy of Seizure Dynamotypes and Modeling of Epilepstic Seizures
12:00 p.m. Epileptiform Dynamics in SEEG: Neuroengineering, AI and the Renaissance in Epilepsy Surgery
12:20 p.m. **Lunch / Adjourn**

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General Information

Location

Hilton Cleveland Downtown
100 Lakeside Ave E
Cleveland, OH 44114

Hotel Accommodations

A block of room has been reserved at the Hilton Cleveland Downtown until August 14, 2024. To make a reservation, contact the Hotel Reservations Department at 216.413.5000, x1 or https://book.passkey.com/event/50726780/owner/14238363/home. Please identify yourself as being with the Cleveland Clinic Epilepsy Summit for the special rate of $259 plus 17.5% tax. The group code is CCECS.

Registration and Cancellation

Register at www.ccfcme.org/epilepsysummit24. Deadline for registration for the symposium is 5 p.m. (EST), Monday, September 9, 2024. A request for a refund must be received in writing by September 3, 2024. **No refunds will be given after September 3**, but registration is transferable through September 10. A $50 cancellation fee will be deducted from the refund for all cancellations.

FEES

CATEGORY	FEE
Physicians	$750
Residents, Fellows, PhD, Nurses, PAs, APN	$350

Fee includes: registration materials, AM & PM break refreshments, breakfasts and lunches.

Accreditation

In support of improving patient care, Cleveland Clinic Center for Continuing Education is jointly accredited by the Accreditation Council for Continuing Medical Education (ACCME), the Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC), to provide continuing education for the healthcare team.

Credit Designation

American Medical Association (AMA): Cleveland Clinic Center for Continuing Education designates this live activity for a maximum of 30.5 *AMA PRA Category 1 Credits*™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Participants claiming CME credit from this activity may submit the credit hours to the American Osteopathic Association for Category 2 credit.

American Nurses Credentialing Center (ANCC): Cleveland Clinic Center for Continuing Education designates this live activity for a maximum of 30.5 ANCC contact hours.

American Academy of PAs (AAPA): Cleveland Clinic Center for Continuing Education has been authorized by the American Academy of PAs (AAPA) to

For further information about this activity, contact Liz Eaton at Local: 216.445.5431 / Toll Free: 800.223.2273 x55431 / Email: eatonl3@ccf.org.

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General Information (con't)

award AAPA Category 1 CME credit for activities planned in accordance with AAPA CME Criteria. This activity is designated for 30.5 AAPA Category 1 CME credits. PAs should only claim credit commensurate with the extent of their participation.

American Board of Surgery (ABS): American Board of Surgery (ABS) MOC

Successful completion of this CME activity enables the learner to earn credit toward the CME requirements of the American Board of Surgery's Continuous Certification program. It is the CME activity provider's responsibility to submit learner completion information to ACCME for the purpose of granting ABS credit.

Credit will be reported within 30 days of claiming credit.

Certificate of Participation: A certificate of participation will be provided to other health care professionals for requesting credits in accordance with their professional boards and/or associations.

Faculty Disclosure

The Cleveland Clinic Center for Continuing Education has implemented a policy to comply with the current Accreditation Council for Continuing Medical Education Standards for Integrity and Independence requiring mitigation of all faculty conflicts of interest. Faculty declaring a relevant financial relationship will be identified in the activity syllabus.

Americans with Disabilities Act

The Cleveland Clinic Center for Continuing Education fully intends to comply with the legal requirements of the Americans with Disabilities Act. If you need assistance, please notify Liz Eaton at 216.445.5431 at least two weeks prior to the activity.

Cleveland Clinic Center for Continuing Education reserves the right to cancel or postpone activity in our sole discretion. In the unlikely event that this occurs, any registration fee(s) paid will be refunded. Be advised that Cleveland Clinic is not responsible for related costs including airline tickets, hotel costs, or any similar fee penalties incurred as a result of any trip cancellations or changes