



Epilepsy Center

2025 Symposia

The Role of SEEG After Failed Epilepsy Surgery: When, Why and How

September 10–13, 2025

Hilton Garden Inn Cleveland Downtown
Cleveland, Ohio
and Live Stream

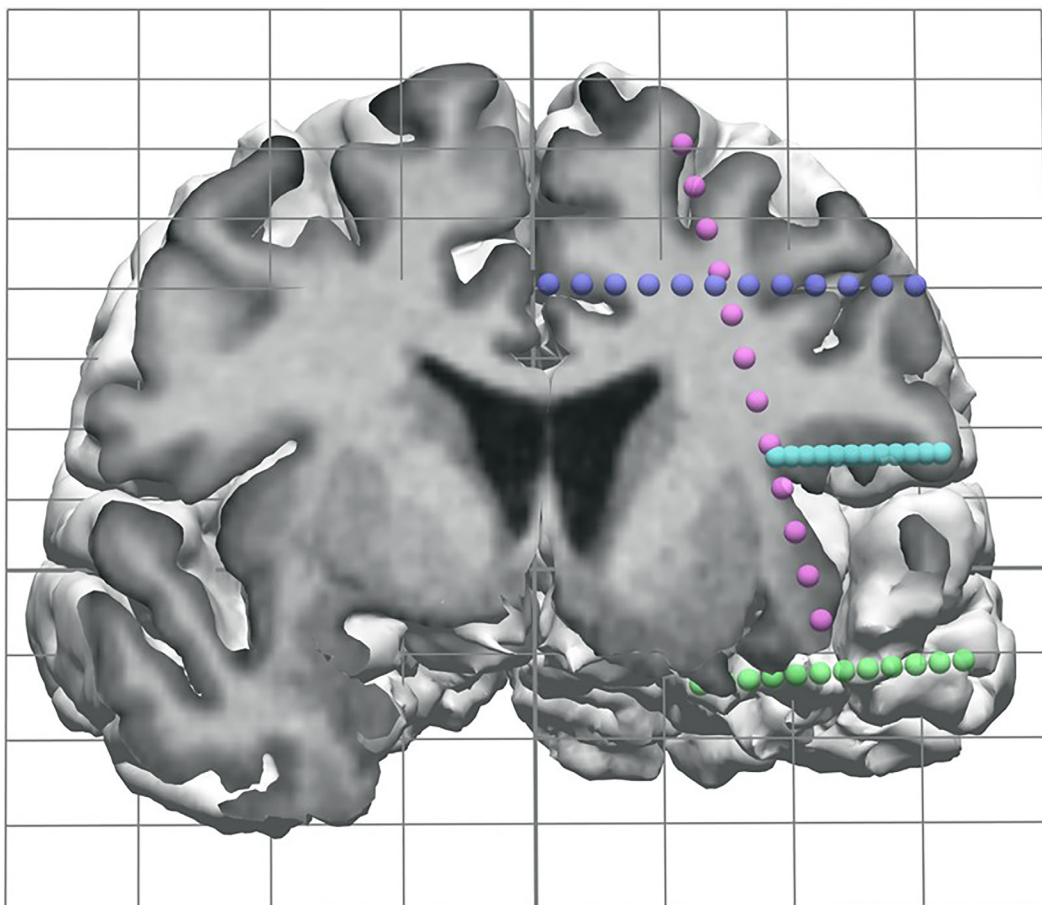
Epilepsy Surgery Dissection Workshop

September 11–13, 2025

Hilton Garden Inn Cleveland Downtown
and Lutheran Hospital
Cleveland, Ohio

SEEG **Hands-On** Sessions:
Limited to 40 Participants

Epilepsy Surgery Dissection Workshop:
Limited to 40 Participants



Epilepsy Center 2025 Symposia

Target Audience

This course is designed for neurosurgeons, neurologists, neurophysiologists, fellows, physician assistants and nurse practitioners involved in the surgical treatment of epilepsy.

Learning Objectives

Upon completion of this activity, participants will be able to:

SEEG

- Define the clinical, anatomical, electrophysiological, and genetic mechanisms that may contribute to the failure of epilepsy surgery.
- Describe the role of SEEG in the diagnostic re-evaluation of patients with failed epilepsy surgery and its implications for treatment planning.
- Implement a multimodal approach—incorporating imaging, neurophysiology, semiology, and pathology—to reassess and localize seizure onset.
- Design individualized, comprehensive management plans for patients who are not candidates for traditional resective surgery.

Epilepsy Surgery

- Describe the surgical anatomy of the temporal lobe and how the underlying pathology relates to the choice of surgical technique.
- Summarize the overall outcomes from surgeries for treating patients with epilepsy.
- Demonstrate the basic surgical techniques necessary to complete a functional disconnection of the epileptic cerebral hemisphere.
- Discuss the complexity of identifying ictal onsets in cortical regions outside the temporal lobe and identify specific techniques that allow safe surgical resection in eloquent cortex areas.
- Debate the rationale and show the appropriate techniques for placement of intracerebral electrodes to prove a hypothesis of seizure onset based on individual patient characteristics.
- Demonstrate the techniques of and rationale for vagus nerve stimulation, responsive neurostimulation, and deep brain stimulation therapies.

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The Role of SEEG After Failed Epilepsy Surgery: When, Why and How

Overview

Medically refractory epilepsy remains one of the most complex and debilitating neurological disorders to manage. While surgical resection can achieve long-term seizure control in 60–80% of patients with temporal lobe epilepsy and 40–60% with extratemporal epilepsy, a substantial number of patients continue to experience seizures following surgery. These post-surgical failures represent a uniquely challenging clinical population, where therapeutic options are limited, and decision-making becomes increasingly nuanced.

This course centers on the critical role of **SEEG** in the re-evaluation and management of patients with failed epilepsy surgery. Since seizure recurrence significantly diminishes quality of life and increases the risk of morbidity, mortality, cognitive decline, and psychosocial complications, identifying the best path forward for these patients is of paramount importance.

Through expert-led lectures, interactive case discussions, and immersive hands-on **SEEG** analysis workshops, this course aims to define the most effective, evidence-informed approaches to reassess and treat patients who have not achieved seizure freedom after an initial surgical attempt.

Participants will explore how to integrate multimodal data—including seizure semiology, neuroimaging, electrophysiology, neuropathology, and genetics—into a comprehensive diagnostic and therapeutic strategy.

Particular emphasis will be placed on refining hypotheses for **SEEG** implantation, interpreting complex **SEEG** and cortical stimulation data, and determining when reoperation, neuromodulation, or alternative therapies may be most appropriate. Attendees will gain practical tools and clinical frameworks to support multidisciplinary decision-making and improve outcomes in this high-risk population.

Wednesday, September 10

Moderator: Dileep Nair

- 4:30 pm **Registration/Continental Breakfast/ Exhibits/Sign on**
- 5:00 pm Welcome and Opening Remarks
Juan Bulacio
- 5:10 pm SEEG Failure: Scope of the Problem
Juan Bulacio
- 5:50 pm Understanding Epilepsy Surgery Failure: Patterns and Mechanisms
Imad Najm
- 6:30 pm Q & A
Course Faculty
- 6:45 pm Adjourn

Welcome Reception

Thursday, September 11

7:30 am **Continental Breakfast / Exhibits/Sign on**

Presurgical Approach After Failed Epilepsy Surgery

Moderator: Ahsan Moosa Naduvil Valappil

- 8:00 am Seizure Semiology Post-Surgery: What Happens When It Does or Doesn't Change?
Patrick Chauvel
- 8:45 am How to Approach Patients with Failed Epilepsy Surgery: The Role of Multimodal Evaluation
Andreas Alexopoulos
- 9:30 am Q & A
Course Faculty
- 9:45 am **Break/Exhibits**
- 10:00 am **Hands-on SEEG Analysis Sessions**
Group discussion: Phase I. Non-invasive data analysis. Preimplantation hypothesis.
Drs. Alexopoulos, Bulacio, Chisholm, Galla, Kheder, Khoury, Moosa, Murakami, Nair, Najm, Parfyonov, Parikh, Perven, Raghupathi, Shaker, Tsai
(available for in-person attendance only)

Epilepsy Center 2025 Symposia

The Role of SEEG After Failed Epilepsy Surgery: When, Why and How

- 12:30 pm **Lunch/Exhibits**
- 1:30 pm SEEG Implantation and Robotic-Assisted SEEG
William Bingaman, Richard Rammo, Demitre Serletis, Stephen Harasimchuk
- 2:15 pm **Plenary Discussion**
Phase I. Preimplantation map
Moderators: Patrick Chauvel and Jean Khoury
Drs. Alexopoulos, Bingaman, Bulacio, Chisholm, Galla, Kheder, Khoury, Moosa, Murakami, Nair, Najm, Parfyonov, Parikh, Perven, Raghupathi, Rammo, Serletis, Shaker, Tsai
- 5:00 pm **Break / Exhibits**
- Redrawing the map with MEG**
Moderator: Irene Wang
- 5:30 pm MEG when surgery doesn't control the seizures
Hiroatsu Murakami
- 6:15 pm **Adjourn**

Friday, September 12

When Surgery Fails: SEEG as a Tool for Second-Chance Success

Moderator: Jessica Fesler

- 7:30 am **Continental Breakfast / Exhibits / Sign on**
- 8:00 am Unraveling Surgical Failure through Precision: SEEG-Informed Surgery and Data-Driven Insights
Demitre Serletis
- 8:45 am **Artificial Intelligence in Epilepsy Surgery**
Balu Krishnan
- 9:30 am Q&A
Course Faculty
- 9:45 am **Break/Exhibits**
- 10:00 am **Hands-on SEEG Analysis Sessions**
Group Discussion on SEEG Analysis, Cortical Stimulation Findings, and Proposed Plans
Drs. Alexopoulos, Bulacio, Chisholm, Galla, Kheder, Khoury, Moosa, Murakami, Nair, Najm, Parfyonov, Parikh, Perven, Raghupathi, Shaker, Tsai
(available for in-person attendance only)
- 12:30 pm **Lunch/Exhibits**

Neurophysiology after Failed Surgery

Moderator: Ajay Gupta

- 1:30 pm The Pitfalls of Interpreting SEEG After Failed Epilepsy Surgery: Advantages and Limitations
Jason Chisholm
- 2:15 pm **Plenary Discussion**
SEEG findings and Proposed Plan
Moderators: Juan Bulacio and Jason Chisholm
Drs. Alexopoulos, Bingaman, Bulacio, Chisholm, Galla, Kheder, Khoury, Moosa, Murakami, Nair, Najm, Parfyonov, Parikh, Perven, Raghupathi, Shaker, Tsai
- 4:30 pm **Break/Exhibits**

Rethinking the Treatment Pathway

Moderator: Richard Rammo

- 5:00 pm Navigating the Challenges and Approach After Epilepsy Surgery Failure
William Bingaman
- 5:40 pm When Resective Epilepsy Surgery is Off the Table: The Path Forward
Dileep Nair
- 6:20 pm Panel Discussion
Moderator: William Bingaman
Drs. Alexopoulos, Gupta, Nair, Najm, Serletis and Rammo
- 6:45 pm **Adjourn**
- 7:10 pm **Cleveland Guardians Baseball Game**

Saturday, September 13 (Non-CME)

- 8:00 am **Continental Breakfast/Exhibits/Sign on**
- 8:30 am Discussion with Case Presentations
Moderator: Ahsan Moosa Naduvil Valappil
Panel: Drs. Alexopoulos, Galla, Kheder, Nair, Najm, Parikh
- 10:00 am Discussion with Case Presentations
Moderator: Hussam Shaker
Panel: Drs. Gupta, Najm, Perven, Punia, Raghupathi
- 12:00 pm **Adjourn**

Epilepsy Center 2025 Symposia

Epilepsy Surgery Dissection Workshop

Workshop Overview

Epilepsy surgery offers hope to patients afflicted with drug resistant seizures and can lead to significant improvements in their quality of life, including seizure freedom. As many as one million patients are potential candidates for epilepsy surgery in the United States, and yet surgical volumes are not improving, implying that barriers continue to limit the adequate referral and surgical work-up of these patients. Moreover, with the majority of open surgical epilepsy procedures now focused to a smaller number of specialized centers, adequate training in the art of open techniques is becoming a lost skill

The goal of this course is to provide a hands-on educational forum for seasoned epilepsy neurosurgeons to interact with young neurosurgeons in-training and junior neurosurgery faculty. Basic anatomy, historical themes, detailed epilepsy surgery techniques and representative case presentations will be reviewed in both the classroom and laboratory

setting. Indications regarding open resection versus neuromodulation will be emphasized. The topics of robotic stereotactic surgery, laser ablation, vagal nerve stimulation, responsive neurostimulation, deep brain stimulation and focused ultrasound will also be reviewed, spanning the armamentarium of innovative techniques available to the aspiring epilepsy neurosurgeon of the modern era.

The neurosurgical lab at Lutheran Hospital will be utilized to demonstrate and offer hands-on practice of core epilepsy surgical techniques using cadaveric anatomical specimens. Additionally, strategies for developing an epilepsy surgery practice, and inherent challenges to successful epilepsy surgery, will be highlighted. Ultimately, this course is dedicated to training the next generation of emerging surgical leaders in epilepsy, in a collaborative and collegial environment, to improve care for epilepsy patients around the country.

Thursday, September 11

Hilton Garden Inn

- 5:00 pm **Registration**
- 5:30 pm Welcome
William Bingaman
- 5:45 pm History of Epilepsy Surgery
Imad Najm
- 6:30 pm Tech Summit: Nuances of the Intracerebral Electrode
William Bingaman, Richard Rammo and Demitre Serletis
- 8:30 pm Adjourn

Friday, September 12

Lutheran Hospital

- 7:30 am **Registration/Continental Breakfast/Exhibits**
- 8:00 am Temporal Lobe Surgical Anatomy
Nehaw Sarmey
- 8:30 am Hippocampal Function
Bradley Lega

- 9:00 am Cortico-amygdalo-hippocampectomy
Jason Hsieh
- 9:30 am Laser Ablation
Alexandar Whiting
- 10:00 am Strategies for Re-Operative Epilepsy Surgery
William Bingaman
- 10:30 am **Break/Exhibits**
- 10:45 am Stereoelectroencephalography Theory
Juan Bulacio
- 11:15 am Stereoelectroencephalography Surgery and RFTC
Demitre Serletis
- 11:45 am **Group Photo/Lunch/Exhibits**
- 1:00 pm Surgical Lab I: Temporal Lobectomy
All Course Faculty
- 4:00 pm Localizing and Preserving the Language System in Epilepsy Surgery
Nitin Tandon
- 4:30 pm **Adjourn**
- 7:10 pm **Cleveland Guardians Baseball Game**

Epilepsy Center 2025 Symposia

Epilepsy Surgery Dissection Workshop

Saturday, September 13

Lutheran Hospital

- 7:30 am **Continental Breakfast/Exhibits**
- 8:00 am Vegas Nerve Stimulation Therapy for Epilepsy
Francesco Pucci
- 8:30 am Responsive Neurostimulation for Epilepsy
Patrick Karas
- 9:00 am Deep Brain Stimulation for Epilepsy
Richard Rammo

- 9:30 am Hemispheric Surgery for Epilepsy
William Bingaman
- 10:00 am **Keynote Presentation**
Russell Lonser
- 11:00 am Surgical Lab II: Hemispherectomy Lab
All Course Faculty
- 3:00 pm **Adjourn**

All presentations include a 5-minute question and answer period.



Epilepsy Center 2025 Symposia

Faculty

Course Co-Directors

William Bingaman, MD
Juan Bulacio, MD
Richard Rammo, MD
Demitre Serletis, MD, PhD

Planning Committee

Andreas Alexopoulos, MD, MPH
Peter Cebull, MSN, FNP-BC
Jason Chisholm, MD
Susie Stanton, PA-C, MS, MSHS
Ahsan Moosa Naduvil Valappil, MD

Cleveland Clinic Faculty

Andreas Alexopoulos, MD, MPH
William Bingaman, MD
Juan Bulacio, MD
Patrick Chauvel, MD
Jason Chisholm, MD
Jessica Fesler, MD
Krishna Mourya Galla, MBBS
Ajay Gupta, MD
Stephen Harasimchuk, R. EEG T.
Jean Houry, MD
Balu Krishnan, PhD
Ahsan Moosa Naduvil Valappil, MD
Hiroatsu Murakami, MD, PhD
Dileep Nair, MD
Imad Najm, MD
Maksim Parfyonov, MD
Richard Rammo, MD
Demitre Serletis, MD, PhD
Carolyn Tsai, MD
Irene Wang, PhD

Non-CME Faculty

Vineet Punia, MD

Guest Faculty

Larry Bodden, MD
Kaiser Permanente Sacramento
Medical Center
Sacramento, CA

Jason Hsieh, MD
Northwestern University
Chicago, IL

Patrick Karas, MD
The University of Texas
Medical Branch
Galveston, TX

Ammar Kheder, MD, MRCP
Emory University and Children's
Healthcare of Atlanta
Atlanta, GA

Bradley Lega, MD
UT Southwestern Medical Center
Dallas, TX

Russell Lonser, MD
The Ohio State University
Columbus, OH

Robert McGovern, MD
The University of Minnesota
Minneapolis, MN

Prachi Parikh, MD
Duke University Health System
Durham, NC

Ghazala Perven, MD
UT Southwestern Medical Center
Dallas, TX

Francesco Pucci, MD
University of Illinois Chicago
Chicago, IL

Ramya Raghupathi, MD
University of Pennsylvania
Philadelphia, PA

James Rutka, MD
University of Toronto
Ontario, Canada

Abraham Sabersky, MD
Mary Washington Neurosurgery
Fredericksburg, VA

Nehaw Sarmey, MD
University of Arizona Tucson
Tucson, AZ

Michael Sather, MD
Penn State Health
University Park, PA

Hussam Shaker, MD
Trinity Health/Michigan
State University
Grand Rapids, MI

Nitin Tandon, MD
UTHealth Houston
Houston, TX

Alexander Whiting, MD
Allegheny General Hospital
Pittsburgh, PA

Epilepsy Center 2025 Symposia

General Information

Locations

SEEG

September 10–13
Hilton Garden Inn Cleveland Downtown
1100 Carnegie Avenue
Cleveland, OH 44115
Phone: 216.658.6400
www.clevelanddowntown.gardeninn.com

Epilepsy Surgery Dissection Workshop

Lectures (September 11)
Hilton Garden Inn Cleveland Downtown
Labs (September 12–13)
Lutheran Hospital
1730 W. 25th Street
Cleveland, OH 44113

Hotel Accommodations

A block of rooms has been reserved at the Hilton Garden Inn Cleveland Downtown for a special rate of \$179 plus taxes for conference attendees. To obtain this rate, reservations must be made by **Monday, August 10, 2025**. To make your reservation, call the hotel at 216.658.6400 and identify yourself as an attendee of the Cleveland Clinic SEEG course conference.

Parking and Transportation

Self and overnight parking are available at prevailing rates at the Hilton Garden Inn Cleveland Downtown. Parking is available at Lutheran Hospital at prevailing rates.

Transportation will be provided back and forth from the Hilton Garden Inn Cleveland Downtown to Lutheran Hospital for those registered for the Epilepsy Surgery Dissection Workshop.

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.

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 the below *AMA PRA Category 1 Credits™*. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

	<i>In-person</i>	<i>Virtual</i>
SEEG Hours of Instructions	19.25	14.25
Epilepsy Surgery Dissection Workshop Hours of Instructions	17.00	

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 19.25 ANCC contact hours.

	<i>In-person</i>	<i>Virtual</i>
SEEG Hours of Instructions	19.25	14.25

American Academy of PAs (AAPA)

Cleveland Clinic Center for Continuing Education has been authorized by the American Academy of PAs (AAPA) to award AAPA Category 1 CME credit for activities planned in accordance with AAPA CME Criteria. This activity is designated for 19.25 AAPA Category 1 CME credits. PAs should only claim credit commensurate with the extent of their participation.

	<i>In-person</i>	<i>Virtual</i>
SEEG Hours of Instructions	19.25	14.25

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.

	<i>In-person</i>	<i>Virtual</i>
SEEG Hours of Instructions	19.25	14.25
Epilepsy Surgery Dissection Workshop Hours of Instructions	17.00	

Epilepsy Center 2025 Symposia

Registration and Cancellation

REGISTER ONLINE AT
WWW.CCFCME.ORG/EPILEPSYSYMPOSIA

SEEG

September 10–13
Hilton Garden Inn Cleveland Downtown

Hands-on SEEG Analysis Sessions limited to 40 Participants. All other sessions open to all attendees.

Preregistrations are accepted online until 5 p.m. (EST) September 8, 2025. In case of cancellation, a full refund will be made if canceled by August 31, 2025. After August 31, 2025, a 25% cancellation fee will be deducted from your refund. Written notification of your cancellation is required in order to process your refund.

NO REFUNDS WILL BE ISSUED AFTER SEPTEMBER 10, 2025.

In-Person: \$500
(Includes course materials, continental breakfasts, lunches, breaks, Wednesday reception and Friday baseball game)

Virtual (U.S.): \$500
(Includes access to the lectures and case planning and discussion sessions)

Virtual (International): \$50
(Includes access to the lectures and case planning and discussion sessions)

For questions about registering online, call 216.448.8710 or cmeregistration@ccf.org

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.

Epilepsy Surgery Dissection Workshop

September 11–13
Lutheran Hospital

Limited to 40 Participants

Preregistrations are accepted online until 5 p.m. (EST), September 5, 2025. Please note, the course size is limited and onsite registrations will not be accepted. In case of cancellation, a full refund will be made if canceled by August 31, 2025. After August 31, 2025, a 25% cancellation fee will be deducted from your refund. Written notification of your cancellation is required in order to process your refund. **NO REFUNDS WILL BE ISSUED AFTER SEPTEMBER 10, 2025.**

Registration fee: \$500
(Includes course materials, continental breakfasts, lunches, breaks, Thursday dinner and Friday baseball game)

Health and Safety

All applicable Centers for Disease Control (CDC), state, and local safety protocols will be enforced for this event. As participants are responsible for their own health choices, the use of masks by all participants at this event is optional.

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 216.385.9076 at least two weeks prior to the activity.