

# **IN-PERSON AND VIRTUAL**

# The Mark E. Josephson Thirty-Second Annual

# State-of-the-Art Arrhythmia Symposium

**Arrhythmia Diagnosis & Treatment Standards 2025** 

Mark E. Josephson Keynote Lecture



Wendy Tzou, MD

# **Leonard N. Horowitz Keynote Lecture**



William Sauer, MD



7:30 AM - 5:00 PM EST

In-Person Meeting Location Marriott Old City One Dock Street Philadelphia, PA 19106







# **PROGRAM OVERVIEW & TARGET AUDIENCE**

This is the 32nd year for the *State-of-the-Art Arrhythmia Symposium*. Using a combination of case presentations with audience participation, didactic presentations, and question and answer sessions, our goal is to educate the participants in state-of-the-art information on invasive and non-invasive electrophysiologic and electrocardiographic tools used in the current diagnosis, evaluation, and treatment of cardiac rhythm disorders. The program is taught by members of the faculty and staff from the University of Pennsylvania Health System, Department of Electrophysiology, in addition to invited speakers from other institutions. This year we are featuring two keynote speakers for the Leonard N. Horowitz Memorial Lecture and the Mark E. Josephson Keynote ECG Lecture given by leaders in cardiology, Dr. Wendy Tzou (director of Cardiac Electrophysiology at the University of Colorado) and Dr. William Sauer (section chief, Cardiac Arrhythmia Service, Brigham and Women's Hospital). The course is structured to meet the educational needs of electrophysiologists, cardiologists, internists, nurses, and associated professionals with an interest in the care of patients with cardiac rhythm disorders. In addition to the morning session with lectures aimed at the entire audience, there are three breakout sessions in the afternoon aimed at 1) associated professionals 2) general cardiology and 3) an advanced electrophysiology session aimed at EP fellows, electrophysiologists, and EP lab staff.

# **Learning Objectives**

Upon completion of this activity, participants should be better able to:

- Describe the appropriate evaluation of patients with frequent PVCs and NSVT as well as indications for treatment including ablation and antiarrhythmic medications.
- Recognize ECG clues to detect patients at risk for serious arrhythmias and sudden death.
- Apply in practice the newest information regarding evaluation and treatment of atrial arrhythmias including screening for episodes and ablation indications, techniques, and endpoints.
- Review the indications for "leadless" pacing and defibrillating devices and describe optimum implantation techniques.
- Discuss the indications, contraindications, and complications associated with left atrial (LA) appendage occlusion and closure.
- Describe the methods, techniques, associated tools, and equipment including emerging technologies to perform to catheter ablation of atrial fibrillation and flutter.
- Recognize use and value of new techniques and technologies employed for complex EP device and ablation cases.
- Apply into practice the ECG patterns/clinical characteristics, evaluation, and treatment of patients with genetically linked arrhythmia syndromes.
- Describe appropriate management of post-operative pain to avoid use of opioid analgesics.
- Recognize the use and value of ambulatory monitoring for screening/treating arrhythmias and assessing clinical status.
- Indicate the latest advances in device therapy for the treatment of patients with heart failure including cardiac contractility modulation and conduction system pacing.

#### **IN-PERSON AND VIRTUAL**

# The Mark E. Josephson Thirty-Second Annual State-of-the-Art Arrhythmia Symposium

**Arrhythmia Diagnosis & Treatment Standards 2025** 

A CME/CNE-ACCREDITED SYMPOSIUM

**Saturday, September 6, 2025** 7:30 AM - 5:00 PM EST

# **Hosting Department**

The Mark E. Josephson Thirty-Second Annual State-of-the-Art Arrhythmia Symposium is hosted by the Department of Medicine, Division of Cardiology, Electrophysiology Section, University of Pennsylvania Health System.

# **Accreditation**



In support of improving patient care, Penn Medicine 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.

# **Designation of Credit**

**Physicians:** Penn Medicine designates this live activity for a maximum of 7.75 AMA PRA Category 1 Credits<sup>TM</sup>. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

ABIM MOC: Successful completion of this CME activity, which includes participation in the evaluation component, enables the participant to earn up to 7.75 MOC points in the American Board of Internal Medicine's (ABIM) Maintenance of Certification (MOC) program. Participants will earn MOC points equivalent to the amount of CME credits claimed for the activity. It is the CME activity provider's responsibility to submit participant completion information to ACCME for the purpose of granting ABIM MOC credit.

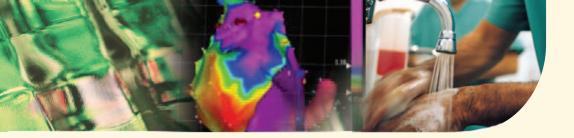
Nurses: This program provides 7.75 NCPD hours.

**Physician Assistants:** Penn Medicine 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 7.75 AAPA Category 1 CME credits. PAs should only claim credit commensurate with the extent of their participation.

Certificates and Transcripts: After the conference has concluded, all participants will receive a followup email with a link and instructions on how to complete the post-test and evaluation as well as claim their credit. Once participants submit the request for credit, the earned credits will be available for viewing on your transcript or available for printing at <a href="https://upenn.cloud-cme.com">https://upenn.cloud-cme.com</a>. Please note that the individual certificate will not be mailed.

Services for the Disabled If special arrangements are required for an individual with a disability to participate in this meeting, please contact the Office of Continuing Medical and Interprofessional Education no later than August 22, 2025, at 215-898-6400.

**Nondiscrimination Statement** The University of Pennsylvania values diversity and seeks talented students, faculty, and staff from diverse backgrounds. The University of Pennsylvania does not discriminate on the basis of race, sex, sexual orientation, gender identity, religion, color, national or ethnic origin, age, disability, or status as a Vietnam Era Veteran or disabled veteran in the administration of educational policies, programs or activities; admissions policies; scholarship and loan awards; athletic, or other University administered programs or employment. Questions or complaints regarding this policy should be directed to Executive Director, Office of Affirmative Action and Equal Opportunity Programs, 3600 Chestnut Street, Sansom Place East Suite 228, Philadelphia PA 19104-6106 or 215-898-6993 (Voice) or 215-898-7803 (TDD). www.upenn.edu/affirm-action.



# LIVE AND VIRTUAL PRESENTATIONS

The Mark E. Josephson Thirty-Second Annual State-of-the-Art Arrhythmia Symposium will be held Saturday, September 6, 2025 by in-person or live-stream (virtual) attendance. The live and virtual presentations will follow the scheduled agenda in real time (EDT).

#### TO ATTEND IN-PERSON:

# **Meeting Location**

Marriott Old City, One Dock Street, Philadelphia, PA 19106

# Parking Options

Your registration includes parking at the Marriott Old City. Please note this hotel offers valet-only parking. During peak hours, wait times can be 30-45 minute. If you plan to valet park, please plan accordingly.

If you prefer to self-park, you may do so at The Autopark at Old City Garage located at 125 S 2nd Street, Philadelphia, PA 19106. This garage is a 3-minute walk to/from the Marriott Old City. The cost for parking at this garage is \$25 for up to 10 hours. Please note that self-parking at this garage is not validated or reimbursed by the symposium.

# **REGISTRATION INFORMATION AND FEES**

Please register online at https://upenn.cloud-cme.com/arrhythmia2025.

Verified attendance includes access to view the presentations online for one year. Pre-registration is required to attend. Walk-ins are discouraged. Please be sure to register in advance. In-person and virtual attendees will be required to sign-in to be marked as attended, receive credit and view the recorded content.

#### **IN-PERSON REGISTRATION:**

The fees to attend in-person are as follows: \$90 for physicians and industry attendees, \$75 for nurse practitioners, physician assistants and other healthcare professionals. There is no fee for residents, fellows, students and Penn Medicine faculty and staff to attend.

Attendees registered to attend virtually will receive an email that includes the link to join the symposium and the electronic program handout within 48 hours of the symposium.

\*Penn Medicine faculty and staff must register using a valid Penn Medicine email address to receive the discounted registration fee.

# LIVE-STREAM (VIRTUAL) REGISTRATION:

The fee to attend virtually is \$75 for all virtual attendees, including Penn Medicine faculty and staff. Attendees who are registered to attend virtually will receive an email including the link to join the symposium 48 hours in advance. All virtual attendees will be required to sign into the meeting using your first name, last name and email address in order to be marked as attended, receive credit and view the recordings.

# Need to Register by Mail?

*Please note:* mailed registrations may take 5 business days before they are received. We encourage all attendees to register online. See the registration form for mailing instructions. All registrations will be confirmed by email as long as your registration is received before September 4, 2025.

Please save our Penn Medicine email (penncme@upenn.cloud-cme.com) to alleviate our emails from going to spam.

# **Cancellation Policy**

In order to process refunds for course withdrawals, cancellations must be received in writing by August 22, 2025 (subject to a service charge equivalent to 10% of the registration fee, but no less than \$25). No refunds will be issued thereafter.

The University reserves the right to cancel or postpone any course due to unforeseen circumstances. In the event of cancellation or postponement, the University will refund registration fees but is not responsible for related costs or expenses to participants, including cancellation fees assessed by hotels, airlines, and travel agencies.

#### **Course Director**

#### Francis Marchlinski, MD

Richard T. and Angela Clark President's Distinguished Professor Director, Cardiac Electrophysiology University of Pennsylvania Health System Philadelphia, PA

# **Guest Faculty**

# William Sauer, MD

Professor of Medicine Section Chief, Cardiac Arrhythmia Service Brigham and Women's Hospital Harvard Medical School Boston, MA

# Maully Shah, MBBS

Director, Cardiac Electrophysiology The Children's Hospital of Philadelphia Philadelphia, PA

# Wendy Tzou, MD

Professor of Medicine Director of Cardiac Electrophysiology University of Colorado Anschutz Medical Campus Aurora, CO

# **Faculty**

All faculty listed below are affiliated with the Perelman School of Medicine at the University of Pennsylvania, Philadelphia, PA

# Trevor Bonney, PA-C

Physician Assistant Cardiac Electrophysiology Hospital of the University of Pennsylvania/UPHS

#### John Bullinga, MD

Associate Professor of Clinical Medicine Penn Presbyterian Medical Center/UPHS

#### David Callans, MD

Professor of Medicine Co-Director Cardiac Electrophysiology Hospital of the University of Pennsylvania/UPHS

### Rajat Deo, MD

Associate Professor of Medicine Director, EP Genetics Cardiac Electrophysiology Hospital of the University of Pennsylvania/UPHS

# Benjamin D'Souza, MD

Associate Professor of Medicine Director, Cardiac Electrophysiology Laboratory Cardiac Electrophysiology Penn Presbyterian Medical Center/UPHS

#### Sanjay Dixit, MD

Professor of Medicine Director, Electrophysiology Laboratory Philadelphia VA Medical Center

# Andres Enriquez, MD

Assistant Professor of Medicine Cardiac Electrophysiology Hospital of the University of Pennsylvania/UPHS

# Andrew Epstein, MD

Professor of Medicine Chief, Cardiology Section Philadelphia VA Medical Center

# David Frankel, MD

Professor of Medicine Director, Cardiac Electrophysiology Laboratory Cardiac Electrophysiology Hospital of the University of Pennsylvania/UPHS

# Fermin Garcia, MD

Associate Professor of Medicine
Director of VT Ablation Center
Director of International EP Program
Cardiac Electrophysiology
Hospital of the University of Pennsylvania/UPHS

#### Gustavo Guandalini, MD

Assistant Professor of Medicine Cardiac Electrophysiology Hospital of the University of Pennsylvania/UPHS

# Balaram Krishna Hanumanthu, MD

Assistant Professor of Clinical Medicine Cardiac Electrophysiology Hospital of the University of Pennsylvania/UPHS

# Robert Hipp, PA-C, MS, MBA

Physician Assistant Cardiac Electrophysiology Hospital of the University of Pennsylvania/UPHS

#### Matthew Hyman, MD, PhD

Assistant Professor of Medicine Cardiac Electrophysiology Hospital of the University of Pennsylvania/UPHS

# Ramanan Kumareswaran, MD

Assistant Professor of Clinical Medicine
Director of ECG Lab/Heart Station
Co-Director, Cardiac Electrophysiology
Fellowship Program
Cardiac Electrophysiology
Hospital of the University of Pennsylvania/UPHS

#### David Lin, MD

Associate Professor of Medicine Directory of Remote and Ambulatory Monitoring Cardiac Electrophysiology Hospital of the University of Pennsylvania/UPHS

# Jeffrey Luebbert, MD

Assistant Professor of Clinical Medicine Director of Cardiac Electrophysiology Laboratory Pennsylvania Hospital/UPHS

#### Timothy Markman, MD

Assistant Professor of Medicine Cardiac Electrophysiology Hospital of the University of Pennsylvania/UPHS

#### Tracey Munson, CRNP

Nurse Practitioner Cardiac Electrophysiology University of Pennsylvania Health System

#### Saman Nazarian, MD, PhD

Professor of Medicine Director of Arrhythmia Imaging Laboratory Cardiac Electrophysiology Hospital of the University of Pennsylvania/UPHS

#### Lauren Novak, CRNP

Nurse Practitioner Cardiac Electrophysiology University of Pennsylvania Health System

# Tara Parham Graham, DNP, CRNP

Nurse Practitioner Cardiac Electrophysiology University of Pennsylvania Health System

# Cynthia Ramos, CRNP

Nurse Practitioner Cardiac Electrophysiology University of Pennsylvania Health System

# Michael Riley, MD, PhD

Associate Professor of Clinical Medicine Cardiac Electrophysiology Hospital of the University of Pennsylvania/UPHS

# Andrea Rosso, RN

Manager/Clinical Coordinator Cardiac Device Remote Monitoring Service Hospital of the University of Pennsylvania/UPHS

# Robert Schaller, DO

Associate Professor of Clinical Medicine Director of EP Device and Extraction Programs Cardiac Electrophysiology Hospital of the University of Pennsylvania/UPHS

### Vincent See, MD

Associate Professor of Clinical Medicine Director, Complex Ablation Cardiac Electrophysiology Pennsylvania Hospital/UPHS



# Poojita Shivamurthy, MD

Assistant Professor of Clinical Medicine Cardiac Electrophysiology Hospital of the University of Pennsylvania/UPHS

# Gregory Supple, MD

Associate Professor of Clinical Medicine Co-Director, Electrophysiology Laboratory/HUP Director, Cardiac Electrophysiology Fellowship Program University of Pennsylvania Health System

# Cory Tschabrunn, PhD

Director, Translational Electrophysiology Program Cardiac Electrophysiology University of Pennsylvania Health System

# Christian Yacono, PA-C

Physician Assistant Cardiac Electrophysiology Hospital of the University of Pennsylvania/UPHS

# Erica Zado, PA-C

Physician Assistant Cardiac Electrophysiology Hospital of the University of Pennsylvania/UPHS

#### **Disclosures**

Penn Medicine, Office of Continuing Medical and Interprofessional Education, adheres to the ACCME Standards for Integrity and Independence in Accredited Continuing Education. Faculty disclosure information will be made available in the conference materials and syllabi. Faculty members are also expected to disclose to participants any discussions of off-label and/or investigational uses of products or devices within their presentations.

# **AGENDA**

# Saturday, September 6, 2025

#### 7:00 - 7:30 AM

**In-person Sign-in and Continental Breakfast** 

#### 7:15 - 7:30 AM

Virtual Attendee Sign-in | Join the Live Stream Broadcast

#### 7:30 AM - 12:00 PM

#### **Morning Combined Group Session**

Moderator: Francis Marchlinski, MD

#### 7:30 - 7:35 AM

#### **Welcome and Introduction**

Francis Marchlinski, MD

#### 7:35 - 8:00 AM

# Managing Asymptomatic Atrial Fibrillation: Important Considerations

- Role of cardioversion for symptom assessment
- EAST-AFNET
- When to consider catheter ablation?
- Symptom impact of changing atrial fibrillation to atrial flutter

Francis Marchlinski, MD

#### 8:00 - 8:40 AM

Mark E. Josephson Keynote Lecture

# **How to Identify Critical Substrate and Best Ablate VT**

- How to record (which tools) and in which rhythm?
- Role of pace mapping and entrainment mapping
- Which endpoint for ablation?

Wendy Tzou, MD

# 8:40 - 9:40 AM

#### Focused Updates on the Management of PVCs

(12 minute presentations + 3 minute Q&A)

Moderator: Francis Marchlinski, MD

# Role of Drug Therapy for PVC Suppression

- Which beta blocker and what dose?
- When to use flecainide/propafenone
- What role for amiodarone/dofetilide?

Dave Frankel, MD

# Short-coupled PVCs Triggering VF?

- Characteristic ECG patterns
- Anatomic targets for ablation
- Role of quinidine?

Fermin Garcia, MD

#### How PVCs Interfere with Normal Device Function

- Tips for accurately assessing PVC burden
- PVC burden that prevents resynchronization therapy
- Lethal PVCs with "normal" and abnormal pacemaker function

Ramanan Kumareswaran, MD

# Ablation of Parahisian PVCs

- Definition of parahisian PVC
- Logical approach to localization
- Ablating from adjacent structures
- · Rescue ablation strategies for resistant arrhythmias

Andres Enriquez, MD

# 9:40 - 10:10 AM Break and Visit Exhibits

#### 10:10 - 10:45 AM

# Panel Discussion: PVC Mapping and Ablation (Case-based presentation/audience response)

- What testing should be done in patients with frequent PVCs?
- How to best monitor patients with PVCs?
- How will pulsed field ablation influence PVC ablation?

Moderator: Francis Marchlinski, MD

Panelists: David Frankel, MD, Fermin Garcia, MD, Ramanan Kumareswaran, MD,

William Sauer, MD, Wendy Tzou, MD

#### 10:45 - 11:20 AM

Debate: Patients with Afib Who Want to be Off Anticoagulation Should Undergo Simultaneous Left Atrial Appendage Occlusion with their Ablation Procedure

Pro: Robert Schaller, DO (15 minutes)
Con: David Lin, MD (15 minutes)
Rebuttal and Q&A: 5 minutes

#### 11:20 AM - 12:00 PM

Leonard N. Horowitz MD - Keynote Lecture

# **Understanding Catheter Ablation Energy Delivery to Improve Patient Outcomes**

- What are the optimal settings for delivering radiofrequency energy in different arrhythmia substrates?
- How can we modify existing ablation equipment to improve energy delivery?
- What are the safety concerns with pulsed field ablation and how can we mitigate risk? William Sauer, MD

#### 12:00 - 1:00 PM Lunch and Visit Exhibits

#### **Afternoon Breakout Sessions**

#### 1:00 - 3:15 PM

# General Cardiology Afternoon Session - PART I

Moderator: David Callans, MD

#### 1:00 - 1:25 PM

#### Atrial Fibrillation Burden: Why is it Important in Medical Decision Making?

- Definition?
- How best to document AF burden?

David Callans, MD

#### 1:25 - 1:50 PM

#### Arrhythmia Related Genetic Testing: When to order? Which Test? What to do With Results?

- What to do with positive results?
- Must know genetic arrhythmia syndromes
- Complimentary testing that should be considered when testing is abnormal
- Variants of uncertain significance (VUS)?

Rajat Deo, MD

#### 1:50 - 2:15 PM

# Don't Miss ECG Clues for Serious Arrhythmia Risk!!

- Phase 4 block
- Early repolarization and QRS fractionation
- Transient repolarization abnormalities
- WPW with Afib

Ramanan Kumareswaran, MD

# 2:15 - 3:15 PM

# Focused Overview and Case Presentations/Panel Discussion –

Advances in Device Therapy for Heart Failure Patients

 Focused Overview on Standard of Care: New Techniques + Technology/Indications/Future (20 minutes with 5 minute Q&A)
 Balaram Hanumanthu, MD

Device Therapy for the Patient with Systolic Dysfunction

(Case Discussions/Audience Participation 35 minutes)

- Patient selection for cardiac contractility modulation (CCM), conduction system pacing (CSP), "traditional" CRT
- Management of patients with refractory heart failure despite device therapy Moderator: Saman Nazarian, MD, PhD

Panelists: Andrew Epstein, MD, Jeffrey Luebbert, MD, Robert Schaller, DO, Balaram Hanumanthu, MD, Benjamin D'Souza, MD, Matthew Hyman, MD, PhD

#### 3:15 - 3:30 PM Break and Visit Exhibits

#### 3:30 - 5:00 PM

# **General Cardiology Afternoon Session - PART II**

Moderator: Saman Nazarian, MD, PhD

#### 3:30 - 4:00 PM

#### **Leadless Devices: When, How, Outcomes, Limitations?**

#### **Prerecorded Implantation**

- Which patients should get a leadless device?
- Optimum implantation technique (Prerecorded implantation highlights)
- Current challenges

Robert Schaller, DO

#### 4:00 - 5:00 PM

# Case Presentations/Audience Response – Atrial Fibrillation Management

Prerecorded Highlights from PFA Cases - Michael Riley MD (20 minutes)

- Lowering threshold for ablation Which patients?
- Stopping anticoagulation therapy Which patients?
- Implantable loop monitors Which patients, how to program?

Moderator and Case Presentation: Saman Nazarian, MD, PhD

Panelists: John Bullinga, MD, Sanjay Dixit, MD, Gustavo Guandalini, MD, David Lin, MD, Michael Riley, MD, PhD, Vincent See, MD

#### 1:00 - 3:15 PM

#### Advanced EP Afternoon Session - PART I

Moderator: Gregory Supple, MD

#### 1:00 - 1:25 PM

# Lines of Blocks - How to Identify and Incorporate into Your Ablation Strategy

- Functional versus fixed lines of block?
- Relationship to hyperboloid model
- What is best ablation strategy?
- Core isolation versus small electrode remapping?

Wendy Tzou, MD

#### 1:25 - 1:50 PM

#### PFA Tips and Tricks to Improve Outcome: Why not Just Ablate More With PFA?

- Avoiding complications?
- Are all PFA systems similar enough?
- Will there be a role for focused PFA delivery?

William Sauer, MD

# 1:50 - 2:15 PM

# Pacing/Entrainment for Diagnosis of Arrhythmia Mechanism and Localization of Best Ablation Site

- Triggered versus reentrant circuits
- How to diagnose inner loop sites?
- When is VT termination a good thing?
- Do you need a stable tachycardia cycle length to identify good ablation sites? *Gregory Supple*, MD

# 2:15 - 2:40 PM

#### Ablation Tips for Arrhythmias Associated with Common Congenital Anomalies

- · Focal tachycardia vs. reentrant circuits
- · Anatomic considerations understanding surgical scars and arrhythmogenic isthmuses
- Vascular approaches when standard routes are obstructed
- Ablation endpoints

Maully Shah, MBBS

# 2:40 - 3:15 PM

### Predicting Reversibility of LV Dysfunction – What is the Role of Electrophysiologist?

- Reversibility of arrhythmia/pacing induced LV dysfunction
- eMAP trial results

David Frankel, MD

#### 3:15 - 3:30 PM Break and Visit Exhibits

#### 3:30 - 5:00 PM

#### **Advanced EP Afternoon Session - PART II**

Moderator: Francis Marchlinski, MD

#### 3:30 - 4:30 PM

# Rapid Fire Technology/Technique/and EP Science Updates (12 minute presentations, 3 minute Q&A)

- Surgeon's Role in VT Ablation: Gaining Epicardial Access, PIVATAL Trial and Beyond Gregory Supple, MD
- Alcohol Venous Ablation: Tips to Prevent Harm Fermin Garcia, MD
- CO2 Insufflation to Identify Adhesions and Facilitate Epicardial Access Matthew Hyman, MD, PhD
- Cardio-neural Ablation Basic Primer: Targets/How to Recognize GPS Timothy Markman, MD

#### 4:30 - 5:00 PM

# Translational Science- What We Learned in 2024-2025 that Every Clinician Should Know

- Enhancing RF ablation lesion size
- PFA for VT ablation
- Emerging techniques and technologies

Cory Tschabrunn, PhD

#### 1:00 - 3:15 PM

# Associated Professionals Afternoon Breakout Session - PART I

Moderator: Erica Zado, PA-C

### 1:00 - 1:30 PM

### Managing Post-operative Pain in Patients Undergoing CIED Implantation

- · Avoiding opioids
- Role of tumescent local anesthesia
- Importance of pre-operative teaching and setting expectations
- Non-opioid pain management techniques

Trevor Bonney, PA-C

#### 1:30 - 2:10 PM

# **Pulsed Field Ablation Update**

- · Expected results compared to RF and cryo ablation techniques
- Patient selection
- Complications to be avoided: hemolysis (how to diagnose/prevent injury?), coronary vasospasm (how to diagnose/prevent injury?), other potential unique complications

Robert Hipp, PA-C

#### 2:10 - 3:10 PM

# Panel Discussion/Audience Response: Case Presentations Highlighting the Utility of Ambulatory Monitoring

- · Remote monitoring of CIEDs-arrhythmias, hemodynamics and clues to clinical status
- Choice of ambulatory monitor
- How to incorporate information from personal wearable devices
- Reprogramming ILRs to optimize arrhythmia detection
- Use of electrogram information from devices in procedure planning

Moderator: Christian Yacono, PA-C

Panelists: Tracey Munson, CRNP, Lauren Novak, CRNP, Andrea Rosso, RN, Erica Zado, PA-C

#### 3:10 - 3:30 PM Break and Visit Exhibits

### 3:00 - 5:00 PM

# Associated Professionals Afternoon Breakout Session - PART II

Moderator: Cynthia Ramos, CRNP

# 3:30 - 4:00 PM

#### **Antiarrhythmic Medications in Special Circumstances**

- Pregnancy
- Flecainide for PVC cardiomyopathy and patients with ARVC
- Choice of beta blocker in patients with LQTS
- Reinitiating dofetilide post brief interruption

Tara Parham Graham, DNP, CRNP

# 4:00 - 5:00 PM

# **Managing Patients With Defibrillator Problems**

- Failed defibrillation shocks (high DFTs)
- VT below rate cut off
- ICD broken lead How to recognize and treat?
- What to watch for with MR imaging or radiation therapy?
- Troubleshooting new technology (SQ and EV ICD)

Poojita Shivamurthy, MD

#### 5:00 PM

Join Us for the 32nd State-of-the-Art Arrhythmia Symposium Reception

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#### Questions? Contact us at:

penncme@pennmedicine.upenn.edu • Phone: 215-898-6400 or 215-898-8005

Please note we are unable to accept faxed registration forms.

#### PLEASE PRINT OR TYPE

Name (First)	(Last)	
Academic Degree		
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REGISTRATION FEES		
Registration is required to attend		
IN-PERSON ATTENDANCE:		
☐ Physicians and industry employees – \$90		
<ul><li>☐ Nurse practitioners, nurses, pharmacists</li><li>☐ There is no fee for residents, fellows, stu</li></ul>	, physician assistants, researchers and other	
*Penn Medicine staff must register using a	valid Penn Medicine email address to rec	eive the discounted registration fee.
LIVE-STREAM (VIRTUAL) ATTENDANCE:		

# PAYMENT METHOD

 If you are paying by check or credit card, please register online at https://upenn.cloud-cme.com/arrhythmia2025

□ \$75 for all virtual attendees, including Penn Medicine faculty and staff

 If you are paying by check, you may mail your completed registration form and check made payable to The Trustees of the University of Pennsylvania/CME to:

Conference Manager Office of Continuing Medical & Interprofessional Education 3400 Civic Center Blvd, Bldg 421, 6th Floor, JMEC/CME Philadelphia, PA 19104-5162

Do not include any credit card information on the registration form or share via email.