

Continuing Medical Education



Perelman
School of Medicine
UNIVERSITY of PENNSYLVANIA

Twenty First Annual **State-of-the-Art** **Arrhythmia Symposium**

Arrhythmia Diagnosis & Treatment Standards 2013
and Leonard N. Horowitz, MD
Memorial Lecture

A CME-CERTIFIED COURSE

Saturday, September 7, 2013

Hyatt Regency Philadelphia
at Penn's Landing
201 South Christopher Columbus Blvd
Philadelphia, PA 19106

In Conjunction with
Hospital of the University of Pennsylvania
Department of Nursing Education
Innovation and Professional Development

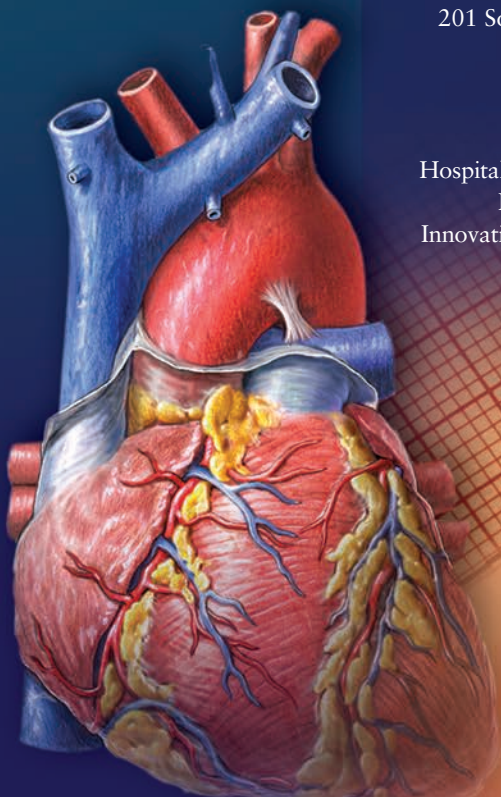
www.penncmeonline.com

Co-sponsored with:

American Heart
Association®



Heart
Rhythm
SocietySM



Saturday, September 7, 2013

Hyatt Regency at Penn's Landing
201 South Christopher Columbus Blvd.
Philadelphia, PA 19106
215-928-1234

PROGRAM OVERVIEW & TARGET AUDIENCE

This program is designed to provide electrophysiologists, cardiologists, internists, and associated professionals with state-of-the-art information on invasive and non-invasive electrocardiographic and electrophysiologic tools used in the diagnosis, evaluation, and treatment of cardiac rhythm disorders. Attendees of the symposium will develop an understanding of the best practice approaches to diagnosing and treating patients with atrial fibrillation, other atrial and ventricular tachycardias, and risk factors for sudden death.

Learning Objectives

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

- Identify patients with inherited channelopathies such as long QT and Brugada syndromes
- Discuss role of ablation for patients with atrial fibrillation including current recommendations and expected outcomes
- Discuss the evaluation and treatment of syncope
- Identify the role arrhythmias play in cardiac dysfunction
- Discuss the evidence for and use of Vitamin K antagonists and the novel anticoagulants
- Discuss new techniques and technologies used during complex EP device and ablation cases

Hosting Department

The *Twenty First 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

Physicians: The Perelman School of Medicine at the University of Pennsylvania is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

Nurses: The Hospital of the University of Pennsylvania, Department of Nursing Education, Innovation and Professional Development is an approved provider of continuing nursing education by the PA State Nurses Association, and an accredited approver by the American Nurses Credentialing Center's Commission on Accreditation.

Designation of Credit

Physicians: The Perelman School of Medicine at the University of Pennsylvania designates this live activity for a maximum of 7.25 *AMA PRA Category 1 Credits*TM. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Nurses: Hospital of the University of Pennsylvania, Department of Nursing Education, Innovation and Professional Development awards this activity 7.25 contact hours.

Certificates and Transcripts: A few days prior to the symposium, pre-registered participants will receive an email containing directions, additional symposium information and a link to the symposium pre-test, which is an anonymous, short questionnaire that will be used to gauge participant knowledge. After the symposium has concluded, all participants will receive a follow-up email containing a link to the post-test, symposium evaluation and request for credit (please note that certificates are not automatically issued). Once participants submit the request for credit, the credit can be viewed on a transcript by logging onto www.penncmehonline.com two weeks after the symposium. Additionally, a certificate will be mailed via the US postal service 4-6 weeks after the symposium has concluded.

Registration Fees

The registration fees for the *Twenty First Annual State-of-the-Art Arrhythmia Symposium* are \$120 for physicians and industry employees, \$100 for nurses and healthcare professionals, and \$65 for residents, fellows and retired physicians. Penn Medicine employees, faculty, staff and students will receive special course rates of \$100 for physicians, \$65 for nurses, healthcare professionals, residents and fellows and \$60 for students. A valid Penn Medicine ID is required to receive the special rate. The registration fee includes attendance to the symposium, a course booklet and a link to view the presentations online, continental breakfast, mid-morning and afternoon refreshments, lunch, post-symposium reception and garage-only parking at the Hyatt Regency Philadelphia at Penn's Landing.

You may register online for the course by visiting www.pennmcmeonline.com and click on CME Activities. You may also mail or fax your completed registration form and payment. Please see the top of the registration form for mailing and faxing information. All registrations will be confirmed in writing if your registration form and fee are received by August 23, 2013.

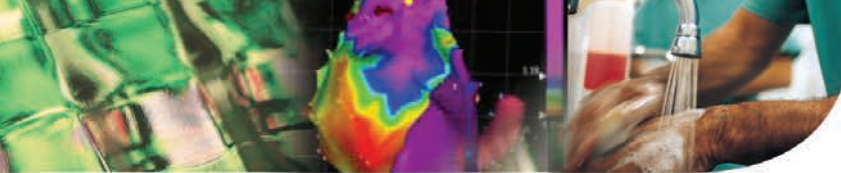
Cancellation and Refund Policy

In order to process refunds for course withdrawals, cancellations must be received in writing by August 23, 2013 (subject to a \$15 service charge). 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.

Services for the Disabled If special arrangements are required for an individual with a disability to attend this meeting, please contact the Office of Continuing Medical Education no later than August 23, 2013, 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.



Meeting Location and Parking

The *Twenty First Annual State-of-the-Art Arrhythmia Symposium* will take place at the Hyatt Regency Philadelphia at Penn's Landing, 201 South Christopher Columbus Boulevard, Philadelphia, PA. The hotel's main number is 215-928-1234. If you need overnight reservations, please call 1-800-233-1234. Please visit the Hyatt's website at www.pennslanding.hyatt.com for directions and additional information.

The Hyatt parking garage is located just past the hotel's main entrance. The parking fee is included in your registration fee. Your parking in the Hyatt garage will be validated at the registration desk on the day of the conference.

For information on additional overnight accommodations or what to do or see while you're in Philadelphia, please go to www.gophila.com.

Disclosures

Perelman School of Medicine at the University of Pennsylvania, Office of Continuing Medical Education, adheres to the ACCME *Standards for Commercial Support*. 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 pharmaceutical products within their presentations.

Course Director

Francis Marchlinski, MD
Professor of Medicine
Director, Cardiac Electrophysiology
University of Pennsylvania
Health System
Philadelphia, PA

Guest Faculty

Edward Walsh, MD
Professor of Pediatrics
Director Cardiac Electrophysiology
Harvard Medical School
Boston, MA

Andrew Krahn, MD
Professor, Division of Cardiology
London Health Sciences Center
London Cardiac Institute
London, Ontario
President, Canadian Heart
Rhythm Society

Robert Coyne, MD
Director, Electrophysiology
Laboratory Operations
Morristown Medical Center
of Atlantic Health System
Morristown, NJ

Reginald Ho, MD, FACC, FHRS
Associate Professor of Medicine
Thomas Jefferson University Hospital
Electrophysiology Service
Philadelphia, PA

Jeffrey Luebbert, MD
Clinical Assistant Professor
Pennsylvania Hospital
Philadelphia, PA

Maully J. Shah, MD
Associate Professor of Pediatrics
Perelman School of Medicine
at the University of Pennsylvania
Children's Hospital of Philadelphia
Philadelphia, PA

Cory Tschabrunn, CEPS
Research Associate
Harvard Medical School
Harvard-Thorndike Electrophysiology
Institute Beth Israel Deaconess
Medical Center
Boston, MA

Faculty

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

Rupa Bala, MD
Assistant Professor of Medicine
Cardiac Electrophysiology

David Callans, MD
Professor of Medicine
Cardiac Electrophysiology

Nancy Cash, CRNP
Nurse Practitioner
Clinical Cardiac Electrophysiology

Joshua Cooper, MD
Associate Professor of Medicine
Cardiac Electrophysiology

Donna Damm, CRNP
Nurse Practitioner
Clinical Cardiac Electrophysiology

Rajat Deo, MD
Assistant Professor of Medicine
Cardiac Electrophysiology

Nimesh D. Desai, MD
Assistant Professor of Surgery
Division of Cardiovascular Surgery

Sanjay Dixit, MD
Associate Professor of Medicine
Director, Electrophysiology Laboratory
Philadelphia VA Medical Center

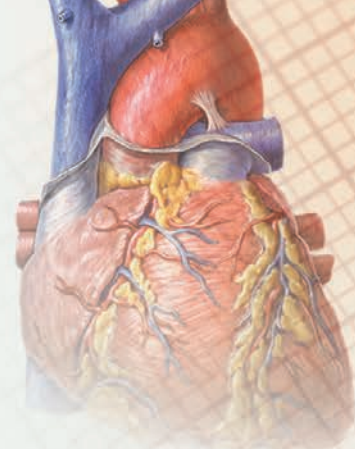
Andrew Epstein, MD
Professor of Medicine
Chief, Cardiology Section
Philadelphia VA Medical Center

David Frankel, MD
Assistant Professor of Medicine
Cardiac Electrophysiology

Fermin Garcia, MD
Assistant Professor of Medicine
Cardiac Electrophysiology

Mathew Hutchinson, MD
Assistant Professor of Medicine
Cardiac Electrophysiology

Nancy Jacob, PA-C
Physician Assistant
Clinical Cardiac Electrophysiology



Yuli Kim, MD
Assistant Professor of Medicine
Director, Adult Congenital
Heart Disease Center

David Lin, MD
Assistant Professor of Medicine
Cardiac Electrophysiology

Monica Pammer, PA-C
Physician Assistant
Clinical Cardiac Electrophysiology

Tara Parham, CRNP
Nurse Practitioner
Clinical Cardiac Electrophysiology

Rutuke Patel, PA-C
Physician Assistant
Clinical Cardiac Electrophysiology

Allyson Prasad, CRNP
Nurse Practitioner
Clinical Cardiac Electrophysiology

Michael Riley, MD, PhD
Assistant Professor of Medicine
Cardiac Electrophysiology

Robert Schaller, DO
Assistant Professor of Clinical Medicine
Cardiac Electrophysiology

Gerilynn Schott, CRNP
Nurse Practitioner
Clinical Cardiac Electrophysiology

Gregory Supple, MD
Assistant Professor of Medicine
Cardiac Electrophysiology

Erica Zado, PA-C
Physician Assistant
Clinical Cardiac Electrophysiology

Twenty First Annual State-of-the-Art Arrhythmia Symposium

Saturday, September 7, 2013

AGENDA

7:15 – 7:45 AM
Registration and Continental Breakfast

**General Cardiology
Morning Session – 7:45 – 11:00 AM**
Moderator: Francis Marchlinski, MD

Welcome & Introduction
Francis Marchlinski, MD

8:00 – 8:20 AM
**New Outcome Data and Expanded
Indications for AF Ablation**
Francis Marchlinski, MD

- Late AF recurrence after ablation – a benign syndrome
- AF ablation as primary therapy – RAAFT Trial
- AF catheter ablation in patients with prior mitral surgery
- Long-standing AF – predictors of ablation success

8:25 – 8:50 AM
Novel Devices and Techniques
Fermin Garcia, MD

- Subcutaneous ICD lead system
- Percutaneous left atrial occlusion
- Renal artery denervation
- Epicardial ablation

8:55 – 9:15 AM
**Upcoming/Ongoing Trials or
New Technologies to Consider**
David Callans, MD

- CABANA
- ASPIRE
- nCONTACT (hybrid AF ablation)
- OAT AF

9:20 – 10:00 AM
**Case Presentation/Audience Participation:
Difficult AF Management Issues**
Moderator: Francis Marchlinski, MD
Panel: Fermin Garcia, MD, Andrew Krahn, MD, David Callans, MD, Nimesh Desai, MD, Michael Riley, MD, PhD

- Drug–drug interactions
- When to consider left atrial appendage occlusion?
- Surgery versus catheter ablation or both
- Safely stopping anticoagulants – In whom?
- When to bridge?

10:00 – 10:25 AM
**Inherited Arrhythmia Channelopathies:
How to Recognize and Treat**
Andrew Krahn, MD

- Long QT syndrome
- Brugada syndrome
- Short QT syndrome
- Early repolarization
- Catecholaminergic polymorphic VT

10:30 – 11:00 AM
Break/Visit Exhibits

11:00 AM – 12:00 PM
Leonard N. Horowitz, MD
Memorial Lecture
**Arrhythmias in the Adult with
Congenital Heart Disease**
Edward Walsh, MD

12:00 – 1:00 PM Lunch
**General Cardiology
Afternoon Session – 1:00 – 3:00 PM**
Moderator: David Callans, MD

1:00 – 1:30 PM
Vasovagal Syncope/POTS
Andrew Krahn, MD

- Role of tilt table testing
- Role of heart rate variability assessment
- Appropriate treatment strategies

1:35 – 1:55 PM
**Appropriate ECG Monitoring and EP Evaluation
for Patients with Syncope**
Robert Schaller, DO

- Pro and cons of different ECG monitoring techniques
- Clues from history that suggest that an EP evaluation is warranted
- Important findings at EP study

2:00 – 2:40 PM
**Case Presentation/Audience Participation:
Difficult Syncope Management Decisions**
Moderator: David Callans, MD
Panel: Andrew Krahn, MD, Reginald Ho, MD, Mathew Hutchinson, MD, Maully Shah, MD

- When to ablate inappropriate sinus tachycardia?
- What testing is optimal?
- Who needs a defibrillator?
- Who needs a neurologic evaluation?
- Special considerations in children?

2:45 – 3:05 PM Break

**General Cardiology
Afternoon Session – 3:00 – 5:00 PM**
Moderator: Michael Riley, MD, PhD

3:05 – 3:30 PM
**Improving Outcome in Patients with Heart Failure:
Role of the Electrophysiologist**
David Lin, MD

- Limiting RV pacing
- Eliminating arrhythmia induced cardiomyopathy
- Predicting reversibility of heart failure
- Indications for biventricular pacing

3:35 – 4:00 PM
**New Anticoagulants:
Trial Data and Clinical Experience**
David Frankel, MD

- RE-LY, ROCKET-AF and ARISTOTLE Trials
- When and how to switch from warfarin?
- When is warfarin the preferred agent?
- Clinical considerations around the time of surgery

4:00 – 5:00 PM
**Case Presentation/Audience Participation:
Challenges and Controversies in Arrhythmia
Management and Diagnosis**
Moderator: Michael Riley, MD, PhD
Panel: Andrew Epstein, MD, Rupa Bala, MD, Sanjay Dixit, MD, Gregory Supple, MD

- Diagnosis of Brugada syndrome
- Goals for rate control during AF
- Identifying risk in asymptomatic WPW – when to ablate
- Atrial flutter ablation-when to consider concomitant AF ablation
- Newly diagnosed cardiomyopathy-timing of primary prevention ICD
- Atrial fibrillation and LV dysfunction-role of rhythm control

**Associated Professional – 1:00 – 3:00 PM
Afternoon Breakout Session**
Moderator – Gerilynn Schott, CRNP

1:00 – 1:45 PM
Selecting the Appropriate Device Therapy
Rutuke Patel, PA-C

- ICD vs. pacemaker
- Dual vs. single chamber
- CRT
- When to consider SubQ ICD?

1:50 – 2:40 PM
Common Device and ECG Questions/Diagnostic Errors
Cory Tschabrunn, CEPS

- Pacer spikes in the wrong place
- Is the QT too long?
- Is this heart block?
- What is this wide rhythm?

2:45 – 3:05 PM Break

**Associated Professional
Afternoon Breakout Session – 3:00 – 5:00 PM**
Moderator – Monica Pammer, PA-C

3:05 – 3:50 PM
Antiarrhythmic Drug Choices
Tara Parham, CRNP

- When to hospitalize for initiation
- How to monitor/what to look for
- Proarrhythmia
- Interactions with common drugs and the current regimen

3:55 – 5:00 PM
**Challenges in Pre/post Procedure Management –
Cases/Audience Participation**
Nancy Cash, CRNP, Donna Damm, CRNP, Nancy Jacob, PA-C, Allyson Prasad, CRNP

- Post procedure pain
- Distinguishing atrial flutter from atrial fibrillation
- Anticoagulation management
- Managing procedural complications – when to worry

**Advanced EP
Afternoon Session – 1:00 – 5:00 PM**
Moderator: Francis Marchlinski, MD

1:00 – 1:45 PM
**Panel Discussion: Optimizing the Arrhythmia Care of
Patients with Congenital Heart Disease and Family
Members with Channelopathies**
Moderator: Francis Marchlinski, MD
Panel: Yuli Kim, MD, Maully Shah, MD, Rupa Bala, MD, Edward Walsh, MD, Rajat Deo, MD
1:45 – 2:10 PM
**Atrial Fibrillation Ablation –
Improving Contact and Outcome**
Gregory Supple, MD

- Prerecorded highlights from cases
- Intracardiac echo to identify thrombus and confirm contact
- Use of JET ventilation
- New information on the phrenic nerve
- New techniques for identifying reconnected veins

2:15 – 2:40 PM
**Epicardial Ablation –
Indications, Access, Technique and Risks**
Francis Marchlinski, MD

- ECG and unipolar identification of epicardial VT
- Gaining access
- Identifying abnormal substrate
- Targets and outcome

2:45 – 3:05 PM Break

3:05 – 3:30 PM
Arrhythmias in Hypertrophic Cardiomyopathy
Mathew Hutchinson, MD

- Apical aneurysms ECG
- Is there still a role for RV pacing?
- Managing arrhythmia risk
- Outcome with AF ablation

3:35 – 4:30 PM
**Panel Discussion –
Complicated Ablation Cases**
Moderator: Francis Marchlinski, MD
Panel Members: Robert Coyne, MD, Reginald Ho, MD, Jeffrey Luebbert, MD

4:30 – 5:00 PM
Sarcoidosis: What the EP Doc Needs to Know
Joshua Cooper, MD

- Current understanding of pathogenesis and anatomic distribution
- How to diagnose
- Common arrhythmia presentations
- When to treat with steroids, ablation, ICD
- Important registry data

5:00 PM Adjourn

5:00 – 6:00 PM Reception

Twenty First Annual State-of-the-Art Arrhythmia Symposium

Arrhythmia Diagnosis and Treatment Standards 2013 and
Leonard N. Horowitz, MD Memorial Lecture

Saturday, September 7, 2013

To register online for the course please visit www.penncmeonline.com
and click on CME Activities

You May Also Mail or Fax Payment and Registration Information to:

Conference Coordinator, Perelman School of Medicine at the University of Pennsylvania
Office of Continuing Medical Education
333 Blockley Hall, 423 Guardian Drive, Philadelphia, PA 19104-6021
Phone: 215-898-6400 or 215-898-8005; Fax: 215-898-1888
penncme@mail.med.upenn.edu

PLEASE PRINT OR TYPE

Name (First) _____ (Last) _____

Academic Degree _____

Medical Specialty _____

Affiliation (Hospital, Office, or Company) _____

Address (☐ affiliation ☐ home) _____

City _____ State _____ Zip _____

Phone _____ Fax _____

E-mail _____

Breakout Session Preference (Please Check One)

☐ General Cardiology ☐ Associated Professionals ☐ Advanced EP

Registration Fees

(pre-payment is required to be officially registered)

☐ \$120 Physicians or Industry

☐ \$100 Nurses or Healthcare Professionals

☐ \$100 Penn Medicine Physicians

☐ \$65 Residents and Fellows (Penn and Non-Penn)

☐ \$65 Retired Physicians

☐ \$65 Penn Medicine Nurses or Healthcare Professionals

☐ \$60 Penn Medicine Students

Penn Medicine ID # _____

Payment Method

Make check payable to: Trustees of the University of Pennsylvania/CME

☐ Visa ☐ MasterCard ☐ Discover ☐ American Express

Authorization Signature _____

Cardholder Name _____

Card # _____ Exp. Date _____ Security Code _____

*Please Note: Walk-in registrants must bring payment to the program.
Seating may be limited for walk-in registrants.*

Continuing Medical Education



333 Blockley Hall | 423 Guardian Drive
Philadelphia, Pennsylvania 19104-6021
PHONE: 215-898-9800 FAX: 215-898-1888

Non-Profit Org.
U.S. Postage
PAID
Permit No. 2563
Phila., PA 19104

21st Annual State-of-the-Art Arrhythmia Symposium
ARRHYTHMIA DIAGNOSIS AND TREATMENT STANDARDS 2013
A CME-certified Course

Saturday, September 7, 2013

Hyatt Regency Philadelphia at Penn's Landing
201 S. Christopher Columbus Blvd.
Philadelphia, PA 19106