

# CATHETER and SURGICAL THERAPIES for ATRIAL FIBRILLATION [CAST-AF]

August 16-17, 2019

Loews Chicago Hotel Chicago, Illinois

#### **COURSE DIRECTORS**

James Cox, MD
Bradley Knight, MD
Patrick McCarthy, MD

#### THIS ACTIVITY HAS BEEN APPROVED FOR

**14.75** AMA PRA CATEGORY

#### **SPONSORED BY**

Bluhm Cardiovascular Institute of Northwestern Memorial Hospital Northwestern University Feinberg School of Medicine Office of Continuing Medical Education CO-SPONSORED BY



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# PROGRAM INFORMATION

# **CATHETER** and **SURGICAL THERAPIES** for **ATRIAL FIBRILLATION** [CAST-AF]

This conference has attracted an international community of leading interventional electrophysiologists and cardiac arrhythmia surgeons, to present the contemporary and most advanced techniques for both the catheter and surgical treatment of atrial fibrillation. In addition, current recommendations for the management of the left atrial appendage will be presented and debated and the results of new LAA occlusion devices will be discussed. The format for the conference consists of plenary lectures, plenary roundtables, and plenary debates on topics of controversy as well as extensive specialty interventional EP and surgical breakout sessions. A special invited plenary lecture will also be delivered by Professor Amiran Revishvili of Moscow, Russian Federation, who is both an interventional EP and a cardiac arrhythmia surgeon. Audience participation will be by electronic means at the end of the plenary roundtables and plenary debates.

#### **LEARNING OBJECTIVES**

#### After this activity, participants will be able to:

- Discuss the electrophysiology of atrial fibrillation
- Cite the newest concepts of atrial electrophysiology, including differences in endocardial and epicardial conduction patterns and how they can impact the interpretation of electrophysiologic mapping
- Identify the advantages and limitations of activation-time mapping, voltage mapping, and phase mapping for the analysis of the electrophysiology of atrial fibrillation
- Apply the most advanced techniques for the catheter ablation of atrial fibrillation
- Describe the most advanced techniques for the surgical ablation of atrial fibrillation
- Discuss the electrophysiological basis of catheter ablation for paroxysmal and nonparoxysmal atrial fibrillation
- Cite the current indications for catheter ablation of atrial fibrillation in paroxysmal and non-paroxysmal atrial fibrillation
- Explain the current results of catheter ablation for paroxysmal and non-paroxysmal atrial fibrillation
- 9. Discuss the current results of surgical ablation for non-paroxysmal atrial fibrillation

- Determine the limitations of the HRS definitions of success and failure for the interventional (catheter and surgical) treatment of atrial fibrillation
- Examine the differences in the electrophysiology of primary ("stand-alone") and secondary ("concomitant") atrial fibrillation
- 12. Discuss the electrophysiological basis of concomitant surgical ablation for atrial fibrillation in patients undergoing valve surgery with or without coronary artery disease.
- Review the surgical options for the treatment of atrial fibrillation in patients undergoing mitral valve, aortic valve, and/or coronary artery bypass surgery
- 14. Restate the currently recommended surgical lesion patterns for the concomitant surgical treatment of atrial fibrillation in patients undergoing mitral valve, aortic valve, and/or coronary artery bypass surgery
- 15. Discuss the current results of concomitant surgical ablation of atrial fibrillation during mitral valve, aortic valve, and/or coronary artery bypass surgery.

# PROGRAM INFORMATION

#### **TARGET AUDIENCE**

This CME program has been designed to meet the educational needs of Cardiologists, Electrophysiologists, Cardiac Surgeons, Internists, Cardiology Trainees, Cardiac Surgery Trainees, Physician Assistants, Nurse Practitioners, Nurses and any other health care professionals who participate in the care of atrial fibrillation.

#### CONFERENCE LOCATION

The program will be held at the Loews Chicago Hotel located at 455 N Park Dr, Chicago, IL 60611. Directions and parking information are available at www.loewshotels.com/chicago-downtown.

#### **ACCOMMODATIONS**

We are now accepting hotel reservations at the Loews Chicago Hotel! The room block rates start at \$249. Online bookings accepted at https://book.passkey.com/e/49812292.

#### **ACCREDITATION STATEMENT**

The Northwestern University Feinberg School of Medicine is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

#### **CREDIT DESIGNATION STATEMENT**

The Northwestern University Feinberg School of Medicine designates this live activity for a maximum of 14.75 *AMA PRA Category 1 Credit(s)*<sup>TIM</sup>. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

#### OTHER CREDITS

The American Academy of Nurse Practitioners and the American Nurses Credentialing Center accept *AMA PRA Category 1 Credit(s)*<sup>TM</sup> from organizations accredited by the ACCME.

#### **FACULTY DISCLOSURE**

The Northwestern University Feinberg School of Medicine requires course directors, speakers, instructors, planners and other individuals who are able to control the content of this activity to disclose any relevant financial relationships. All identified potential conflicts of interest, scientific objectivity of studies mentioned in the materials or used as the basis for content, and appropriateness of patient care recommendations are thoroughly vetted by The Northwestern University Feinberg School of Medicine for fair balance. The faculty disclosures will be indicated in the course syllabus.

#### **SPECIAL NEEDS**

The Northwestern University Feinberg School of Medicine intends to comply fully with the legal requirements of the Americans with Disabilities Act. If any participant of this conference needs accommodation please indicate those needs on the registration form or submit written requests to the Office of CME at least one month prior to the conference date.

#### ADDITIONAL INFORMATION

Contact the Bluhm Cardiovascular Institute by email: <a href="mailto:cvconferences@northwestern.edu">cvconferences@northwestern.edu</a> or by phone at 312-664-3278.

#### CALL FOR ABSTRACTS

Trainees will be provided the opportunity to submit abstracts as part of our inaugural poster presentation. We are thrilled to foster a space where trainees can present their findings, interact with notable faculty and continue their education. Trainees can submit abstract presentations here: https://tinyurl.com/y64y7qtw.

**DEADLINE FOR SUBMISSION:** 11:00 PM Central Daylight Time on July 15, 2019. Notifications for abstract acceptance will be announced via e-mail.

## FACULTY

#### COURSE DIRECTORS

#### James Cox, MD

Surgical Director,
Center for Heart Rhythm Disorders
Director, Comprehensive Atrial
Fibrillation Program
Professor of Surgery
Bluhm Cardiovascular Institute
Feinberg School of Medicine
Northwestern University

#### **Bradley Knight, MD**

Medical Director,
Center for Heart Rhythm Disorders
Director, Comprehensive Atrial
Fibrillation Program
Chester C. and Deborah M. Cooley
Distinguished Professor of Cardiology
Professor of Medicine
Feinberg School of Medicine
Northwestern University

#### Patrick McCarthy, MD

Executive Director,
Bluhm Cardiovascular Institute
Vice President,
Northwestern Medical Group
Chief, Division of Cardiac Surgery
Heller-Sacks Professor of Surgery
Northwestern Medicine

#### PLANNING COMMITTEE

#### Susan Kim, MD

Associate Professor of Medicine Feinberg School of Medicine Northwestern University

#### Olga Kislitsina, MD, PhD

Associate Professor of Medicine Feinberg School of Medicine Northwestern University

#### Vera Rigolin, MD

Professor of Medicine Feinberg School of Medicine Northwestern University

#### Ranya Sweis, MD

Associate Professor of Medicine Feinberg School of Medicine Northwestern University

#### Jane Wilcox, MD, MSc

Assistant Professor of Medicine Feinberg School of Medicine Northwestern University

### FEINBERG SCHOOL OF MEDICINE FACULTY NORTHWESTERN UNIVERSITY

#### Rishi Arora, MD

Professor of Medicine

#### Robert Bonow, MD, MS

Vice Chair for Development and Innovation Department of Medicine Max and Lilly Goldberg Distinguished Professor of Cardiology

#### Andrei Churyla, MD

Assistant Professor of Surgery

#### Charles Davidson, MD

Professor of Medicine
Vice Chair of Clinical Affairs
Department of Medicine
Clinical Chief
Division of Cardiology
Medical Director
Bluhm Cardiovascular Institute

#### Al Lin. MD

Associate Professor of Medicine

#### S. Chris Malaisrie, MD

Program Director,
Thoracic Surgery Residency
Co-Director,
Thoracic Aortic Surgery Program
Associate Director,
Center for Heart Valve Disease
Bluhm Cardiovascular Institute
Associate Professor of Surgery
Division of Cardiac Surgery

#### Rod Passman, MD

Jules J. Reingold Professor of Electrophysiology Professor of Medicine and Preventive Medicine Northwestern University Feinberg School of Medicine Associate Director, Cardiac Electrophysiology Director, Bluhm Cardiovascular Center for Atrial Fibrillation Northwestern Memorial Hospital

#### James Thomas, MD

Director, Center for Heart Valve Disease Director, Academic Affairs Bluhm Cardiovascular Institute Lead Scientist for Ultrasound, NASA Past-President, American Society of Echocardiography

#### Nishant Verma, MD, MPH

Assistant Professor of Medicine

## **GUEST FACULTY**

#### Niv Ad, MD

Washington Adventist Hospital and University of Maryland Takoma Park, MD

#### Amin Al-Ahmad, MD

Texas Cardiac Arrhythmia Austin. TX

#### Jason Andrade, MD

University of British Columbia Vancouver, British Columbia, Canada

#### Vinay Badhwar, MD

West Virginia Univeristy Morgantown, WV

#### Graydon Beatty, PhD

Acutus Carlsbad, CA

#### Stefano Benussi, MD, PhD

Spedali Civili di Brescia University Hospital Brescia, Italy

#### Gianluigi Bisleri, MD

Queen's University Kingston, Ontario, Canada

#### Steven Bolling, MD

University of Michigan Ann Arbor, MI

#### John Camm, MD

St George's University of London London, United Kingdom

#### Michael Carrel

Atricure, Inc. Mason, OH

#### Manuel Castella, MD

Clinic Hospital Barcelona University

Barcelona, Spain

#### Larry Chinitz, MD

NYU School of Medicine New York, NY

#### Michael Dale

Abbott Inc. Santa Clara, CA

#### Ralph Damiano, MD

Washington University School of Medicine St. Louis St. Louis. MO

#### Tom De Potter, MD

OLV Hospital Aalst, Belgium

#### Marek Ehrlich, MD

Vienna University General Hospital Vienna, Austria

#### Christopher Ellis, MD

Vanderbilt University Medical Center Nashville, TN

#### Syd Gaynor, MD

Atricure Mason, OH

#### Nader Ghaly, MD, MSc

Biosence Webster Irvine. CA

David Haines. MD

#### David Hailles, IVID

William Beaumont School of Medicine, Oakland University Royal Oak, MI

#### **Bradley Horst**

Boston Scientific St. Paul. MN

#### Rodney Horton, MD

Texas Cardiac Arrhythmia Austin, TX

#### Armin Kiankhooy, MD

Keck Medical Center of USC Los Angeles, CA

#### Mark La Meir, MD

University of Brussels Brussels, Belgium

#### Omar Lattouf, MD, PhD

Emory University Atlanta, GA

#### Randall Lee, MD, PhD

University of California San Francisco San Francisco, CA

#### Moussa Mansour, MD

Harvard University Boston, MA

#### Nassir Marrouche, MD

University of Utah Health Salt Lake City, UT

#### Gregory Michaud, MD

Vanderbilt University Nashville, TN

#### Fred Morady, MD

University of Michigan Ann Arbor, MI

## Ann Arbor, MI Sanjiv Narayan, MD, PhD

Stanford University Stanford, CA

#### Andrea Natale, MD

The University of Texas Austin Texas Cardiac Arrhythmia Institute Austin, TX

#### Kaustubha Patil, MD

Johns Hopkins University Baltimore. MD

#### Frank Pelosi, MD

University of Michigan Ann Arbor, MI

#### Amiran Revishvili, MD, PhD

Vishnevsky Institute Moscow, Russia

#### Harold Roberts, MD

West Virginia University Morgantown, WV

#### Andrea Russo, MD

Cooper Medical School of Rowan University President of HRS Camden, NJ

#### Sacha Salzberg, MD, PhD

Heart and Rhythm Center Zurich, Switzerland

#### Richard Schuessler, PhD

Washington University School of Medicine St Louis St. Louis. MO

#### **Russ Seiber**

SentreHEART, Inc. Redwood City, CA

#### **Mark Stewart**

Medtronic, Inc. Minneapolis, MN

#### HF Tse, MD, PhD

University of Hong Kong Hong Kong, China

#### Atul Verma, MD

Southlake Regional Heart Centre North York, Ontario, Canada

#### Timo Weimar, MD, PhD

Sana Cardiac Surgery Stuttgart, Germany

#### Richard Whitlock, MD, PhD

McMasters University Hamilton, Ontario, Canada

#### **Uri Yaron**

Biosense Webster Brunswick, NJ

#### FRIDAY, AUGUST 16, 2019

7:00 am **BREAKFAST** 

7:45 am **Opening Comments** 

James Cox, MD; Bradley Knight, MD

8:00 am PLENARY LECTURES

MODERATORS:

Patrick McCarthy, MD; Robert Bonow, MD, MS

8:00 am Anatomy Pertinent to Intervention for Atrial Fibrillation

James Cox, MD

8:30 am Electrophysiology Pertinent to Intervention for Atrial Fibrillation

Richard Schuessler, PhD

9:00 am Anatomy and Physiology of the LAA

Manuel Castella, MD

9:35 am PLENARY ROUNDTABLE

Should the LAA be Closed in All Patients with Atrial Fibrillation?

MODERATORS:

Moussa Mansour, MD; Stefano Benussi, MD, PhD

PANELISTS:

Sacha Salzberg, MD, PhD; Richard Whitlock, MD; Randall Lee, MD, PhD;

S. Chris Malaisrie, MD; Rodney Horton, MD

10:10 am Proposals and Audience Voting

#### PLENARY DEBATE

What is the Optimal Treatment for Drug-Refractory Long-Standing Persistent Atrial Fibrillation?

MODERATORS:

lames Cox, MD; Andrea Russo, MD

10:25 am Medical Rate Control

John Camm, MD

10:30 am Catheter Ablation

Amin Al-Ahmad, MD

10:35 am Hybrid Procedure

Mark La Meir, MD

10:40 am Surgical Ablation

Niv Ad, MD

10:45 am LAA Closure

Steven Bolling, MD

10:50 am Group Discussion

11:00 am Proposals and Audience Voting

# SIMULTANEOUS SESSIONS

#### **SESSION I**

ELECTROPHYSIOLOGY WHAT IS THE BEST TOOL TO ISOLATE THE PULMONARY VEINS?		SURGERY SURGICAL MANAGEMENT OF THE LAA		
77727 027	MODERATOR: Rod Passman, MD		MODERATORS: Sacha Salzberg, MD, PhD Vinay Badhwar, MD	
	Point-by-Point RF Catheter Ablation Larry Chinitz, MD	11:15 am	Effect of LAA Closure on Left Atrial Function Vera Rigolin, MD	
11:30 am	<b>Cryoballoon Device</b> Jason Andrade, MD	11:30 am	am Neurohormonal Consequences	
11:45 am	Other Balloon-Based Devices Beyond Cryoballoon	44.45	of Epicardial LAA Closure Manuel Castella, MD	
12:00 pm	Amin Al-Ahmad, MD  Electroporation David Haines, MD	11:45 am	Long-Term Results of LAA Closure with the Epicardial AtriClip Sacha Salzberg, MD, PhD	
	Panel Discussion	12:00 pm	How I do it: Thoracoscopic Closure of LAA	
12:30 pm	LUNCH	12:15 nm	Stefano Benussi, MD, PhD  Results of the LAAOS-III Trial	
		12.13 piii	Richard Whitlock, MD, PhD	
		12:30 pm	LUNCH	
SESSION	<u> </u>			
ELECTROPHYSIOLOGY WHAT SHOULD BE DONE DURING FIRST-TIME		SURGERY SURGICAL TECHNIQUES FOR AF ABLATION		
WHAT SHO	OULD BE DONE DURING FIRST-TIME			
WHAT SHO	OULD BE DONE DURING FIRST-TIME I FOR PERSISTENT AF? MODERATORS: Rishi Arora,MD			
WHAT SHO	OULD BE DONE DURING FIRST-TIME I FOR PERSISTENT AF? MODERATORS:		TECHNIQUES FOR AF ABLATION  MODERATORS: Ralph Damiano, MD	
WHAT SHO ABLATION	OULD BE DONE DURING FIRST-TIME I FOR PERSISTENT AF?  MODERATORS: Rishi Arora,MD Nishant Verma, MD, MPH  PVI only	SURGICAL	TECHNIQUES FOR AF ABLATION  MODERATORS: Ralph Damiano, MD Timo Weimar, MD  Energy Sources for Performing AF Surgery (Non-CME)	
WHAT SHO ABLATION 1:00 pm	OULD BE DONE DURING FIRST-TIME I FOR PERSISTENT AF?  MODERATORS: Rishi Arora,MD Nishant Verma, MD, MPH  PVI only Atul Verma, MD  Posterior Box Isolation Using Cryo-Catheter	SURGICAL 1:00 pm	TECHNIQUES FOR AF ABLATION  MODERATORS: Ralph Damiano, MD Timo Weimar, MD  Energy Sources for Performing AF Surgery (Non-CME) Syd Gaynor, MD  Pearls on the Lesions of the Maze Procedure	
WHAT SHO ABLATION 1:00 pm 1:15 pm	OULD BE DONE DURING FIRST-TIME I FOR PERSISTENT AF?  MODERATORS: Rishi Arora,MD Nishant Verma, MD, MPH  PVI only Atul Verma, MD  Posterior Box Isolation Using Cryo-Catheter Frank Pelosi, MD  Posterior Wall Ablation plus Triggers	1:00 pm 1:15 pm	TECHNIQUES FOR AF ABLATION  MODERATORS: Ralph Damiano, MD Timo Weimar, MD  Energy Sources for Performing AF Surgery (Non-CME) Syd Gaynor, MD  Pearls on the Lesions of the Maze Procedure Manuel Castella, MD  How I do it: CryoMaze-III Procedure	
WHAT SHO ABLATION 1:00 pm 1:15 pm 1:30 pm	MODERATORS: Rishi Arora,MD Nishant Verma, MD, MPH  PVI only Atul Verma, MD  Posterior Box Isolation Using Cryo-Catheter Frank Pelosi, MD  Posterior Wall Ablation plus Triggers Andrea Natale, MD  PVI plus Rotors	1:00 pm 1:15 pm 1:30 pm	TECHNIQUES FOR AF ABLATION  MODERATORS: Ralph Damiano, MD Timo Weimar, MD  Energy Sources for Performing AF Surgery (Non-CME) Syd Gaynor, MD  Pearls on the Lesions of the Maze Procedure Manuel Castella, MD  How I do it: CryoMaze-III  Procedure Niv Ad, MD  How I do it: Maze-IV Procedure	
1:00 pm 1:15 pm 1:30 pm 1:45 pm	MODERATORS: Rishi Arora,MD Nishant Verma, MD, MPH  PVI only Atul Verma, MD  Posterior Box Isolation Using Cryo-Catheter Frank Pelosi, MD  Posterior Wall Ablation plus Triggers Andrea Natale, MD  PVI plus Rotors Sanjiv Narayan, MD, PhD  PVI plus LAA ligation	1:00 pm 1:15 pm 1:30 pm 1:45 pm	TECHNIQUES FOR AF ABLATION  MODERATORS: Ralph Damiano, MD Timo Weimar, MD  Energy Sources for Performing AF Surgery (Non-CME) Syd Gaynor, MD  Pearls on the Lesions of the Maze Procedure Manuel Castella, MD  How I do it: CryoMaze-III Procedure Niv Ad, MD  How I do it: Maze-IV Procedure Ralph Damiano, MD  How I do it: TT Maze Procedure	

2:45 pm

**How I do it: Joint Hybrid Procedure for AF**Mark La Meir, MD

2:45 pm Panel Discussion

3:00 pm PLENARY ROUNDTABLE

How Should Failure be Defined and Reported Following Catheter or Surgical Ablation for Atrial Fibrillation?

MODERATORS:

John Camm, MD; Gianluigi Bisleri, MD

PANELISTS:

Stefano Benussi, MD, PhD; Andrea Russo, MD; Manuel Castella, MD; HF Tse, MD, PhD

3:35 pm Proposals and Audience Voting

3:45 pm PLENARY LECTURES

MODERATORS:

John Camm, MD; Manuel Castella, MD

3:45 pm A Comparison of the Current Medical and Surgical Guidelines

for the Treatment of Atrial Fibrillation

Andrea Russo, MD

4:15 pm Atrial Fibrillation in TAVR and SAVR Patients

Charles Davidson, MD

4:45 pm The Future of Long-Term Monitoring Following Catheter

and Surgical Intervention for Atrial Fibrillation

Rod Passman, MD

5:15 pm: COCKTAILS ON THE ROOF

Streeterville Social | Loews Chicago Hotel Rooftop Bar

#### SATURDAY, AUGUST 17, 2019

7:30 am BREAKFAST

8:00 am PLENARY LECTURES

MODERATORS:

Amiran Revishvili, MD, PhD; Fred Morady, MD

8:00 am Atrial Fibrillation and Valvular Heart Disease

Robert Bonow, MD, MS

8:30 am Ultralow Cryoablation for AF: Early Clinical Experience

Tom De Potter, MD

9:00 am Effect of Catheter Ablation and Maze Procedures on LA Function

lames Thomas, MD

9:35 am PLENARY ROUNDTABLE

After 2-3 Failed Catheter Ablations, What Next?

MODERATORS:

Niv Ad, MD; Susan Kim, MD

PANFLISTS:

Amiran Revishvili, MD, PhD; Fred Morady, MD; Steven Bolling, MD; Vinay Badhwar, MD; Ralph Damiano, MD; David Haines, MD

10:10 am Proposals and Audience Voting

10:25 am PLENARY DEBATE

Optimal Off-Pump Closure of the LAA

MODERATORS:

Ralph Damiano, MD; Vera Rigolin, MD

10:25 am Percutaneous Endocardial Devices

Rodnev Horton, MD

10:30 am Percutaneous Epicardial LARIAT

Randall Lee, MD, PhD

10:35 am Thoracoscopic Epicardial AtriClip

Stefano Benussi, MD, PhD

10:40 am Group Discussion

11:00 am Proposals and Audience Voting

# SIMULTANEOUS SESSIONS"

#### SESSION I

ELECTROPHYSIOLOGY LEFT ATRIAL APPENDAGE CLOSURE		SURGERY CONCOMITANT AF SURGERY – I		
	MODERATORS: Bradley Knight, MD		MODERATOR: Patrick McCarthy, MD	
11:15 am <b>0</b>	Al Lin , MD  Optimal Watchman and Amulet Implant Techniques Rodney Horton, MD	11:15 am	Surgical Options for Patients with AF Undergoing Primary CABG, AVR, or MVR James Cox, MD	
11:30 am	Closing Post-Surgical LAA Leaks Christopher Ellis, MD	11:30 am	Long-term Results of the Maze Procedure for Atrial Fibrillation	
11:45 am	<b>LACC using Suture Snare</b> Randall Lee, MD, PhD	11:45 am	Ralph Damiano, MD  Long-term Benefits of Concomitant  AF Ablation during Cardiac Surgery  Andrei Churyla, MD	
12:00 pm	Future LAAC Devices Andrea Natale, MD			
12:15 pm 12:30 pm	Panel Discussion LUNCH	12:00 pm	Concomitant AF Ablation in Patients Undergoing Mitral Valve Surgery Patrick McCarthy, MD	
		12:15 pm	Concomitant AF surgery in Patients Undergoing Coronary Artery Bypass Surgery Steven Bolling, MD	
		12:30 pm	LUNCH	
SESSION	II.			
ELECTRO MAPPING	PPHYSIOLOGY AND IMAGING SYSTEM FOR	SURGER'	TANT AF SURGERY – II	
ELECTRO MAPPING	OPHYSIOLOGY AND IMAGING SYSTEM FOR ION PROCEDURES (Non-CME) MODERATORS:			
ELECTRO MAPPING	DPHYSIOLOGY AND IMAGING SYSTEM FOR ION PROCEDURES (Non-CME)		TANT AF SURGERY – II MODERATOR:	
ELECTRO MAPPING	DPHYSIOLOGY AND IMAGING SYSTEM FOR ON PROCEDURES (Non-CME)  MODERATORS: Kaustubha Patil, MD Bradley Knight, MD	CONCOMIT	MODERATOR: Patrick McCarthy, MD  Concomitant AF Surgery in Patients Undergoing Aortic Valve Surgery	
ELECTRO MAPPING A AF ABLAT	OPHYSIOLOGY AND IMAGING SYSTEM FOR ION PROCEDURES (Non-CME)  MODERATORS: Kaustubha Patil, MD Bradley Knight, MD Gregory Michaud, MD  CARTO/Biosense	1:00 pm 1:15 pm	MODERATOR: Patrick McCarthy, MD  Concomitant AF Surgery in Patients Undergoing Aortic Valve Surgery Timo Weimar, MD  Results of Staged Hybrid Procedures for Persistent and L-S Persistent AF Gianluigi Bisleri, MD	
ELECTRO MAPPING A AF ABLAT	DPHYSIOLOGY AND IMAGING SYSTEM FOR ON PROCEDURES (Non-CME)  MODERATORS: Kaustubha Patil, MD Bradley Knight, MD Gregory Michaud, MD  CARTO/Biosense Nader Ghaly, MD, MSc  NavX/Abbott/Topera	1:00 pm	MODERATOR: Patrick McCarthy, MD  Concomitant AF Surgery in Patients Undergoing Aortic Valve Surgery Timo Weimar, MD  Results of Staged Hybrid Procedures for Persistent and L-S Persistent AF	
ELECTRO MAPPING AF ABLAT 1:00 pm 1:15 pm	PHYSIOLOGY AND IMAGING SYSTEM FOR ON PROCEDURES (Non-CME)  MODERATORS: Kaustubha Patil, MD Bradley Knight, MD Gregory Michaud, MD  CARTO/Biosense Nader Ghaly, MD, MSc  NavX/Abbott/Topera Industry Representative  Rhythmia/BSCI	1:00 pm 1:15 pm	MODERATOR: Patrick McCarthy, MD  Concomitant AF Surgery in Patients Undergoing Aortic Valve Surgery Timo Weimar, MD  Results of Staged Hybrid Procedures for Persistent and L-S Persistent AF Gianluigi Bisleri, MD  Results of Joint Hybrid Procedures for Persistent and L-S Persistent AF Mark La Meir, MD  Hybrid Procedures vs Minimally Invasive CryoMaze PRocedure for	
1:00 pm 1:15 pm 1:30 pm	PHYSIOLOGY AND IMAGING SYSTEM FOR ON PROCEDURES (Non-CME)  MODERATORS: Kaustubha Patil, MD Bradley Knight, MD Gregory Michaud, MD  CARTO/Biosense Nader Ghaly, MD, MSc  NavX/Abbott/Topera Industry Representative  Rhythmia/BSCI Bradley Horst  AcQMap/Acutus	1:00 pm 1:15 pm 1:30 pm	MODERATOR: Patrick McCarthy, MD  Concomitant AF Surgery in Patients Undergoing Aortic Valve Surgery Timo Weimar, MD  Results of Staged Hybrid Procedures for Persistent and L-S Persistent AF Gianluigi Bisleri, MD  Results of Joint Hybrid Procedures for Persistent and L-S Persistent AF Mark La Meir, MD  Hybrid Procedures vs Minimally	

#### 2:15 pm SPECIAL INVITED LECTURE

INTRODUCTION: lames Cox, MD

How I Treat Long-Standing Persistent AF as both an Interventional Electrophysiologist and a Cardiac Arrhythmia Surgeon

Amiran Sh. Revishvili, MD, PhD

#### 3:00 pm INDUSTRY ROUNDTABLE (Non-CME)

#### The Role of Industry in the Diagnosis and Treatment of Atrial Fibrillation

MODERATORS:

Patrick McCarthy, MD; Andrea Natale, MD

#### **ABBOTT**

Michael Dale, President of

Structural Heart

#### ATRICURE

Michael Carrel, CEO

#### **SENTREHEART**

Russ Seiber, CEO

#### **BIOSENSE-WEBSTER**

Uri Yaron, Worldwide President

#### **BOSTON SCIENTIFIC**

Bradley Horst, Vice-President

#### MEDTRONIC

Mark Stewart, Sr. Prin. Scientist

#### **PHILIPS**

Industry Representative



# REGISTRATION

### **CATHETER** and **SURGICAL THERAPIES** for ATRIAL FIBRILLATION [CAST-AF]

REGISTRATION FEE	<b>Early Bird</b> Ends July 15, 2019 at 5:00 PM	Regular Rate
Physicians	\$450	\$550
Industry	\$500	\$600
Northwestern Medicine Physician	\$250	\$350
Nurse, Technician, or Fellow in Training	\$150	\$250
Northwestern Medicine Alumni	\$200	\$300

#### **HOW TO REGISTER**



ONLINE - Please visit cme.northwestern.edu



MAIL - Mail the registration form with a check made payable to Northwestern University

> Attn: Department of Medicine, CAST-AF Northwestern University Feinberg School of Medicine 676 N. St. Clair St., Suite 2330 Chicago, Illinois 60611

#### **CANCELLATION POLICY**

Cancellations must be made in writing via email to the Office of CME: cme@northwestern.edu. The paid registration fee, minus a \$50 administrative charge, will be refunded. No refunds will be granted after July 15, 2019.

#### **OUESTIONS**

Questions regarding registration should be directed to the Office of CME at cme@northwestern.edu or 312-503-8533. Registrations will not be accepted by telephone.

#### PLEASE TYPE OR PRINT

<u>Last Name</u>	First Name				
□ MD □ DO □ PhD □ RN □ Other (plea	ase specify)				
Address					
City	State	ZIP Code			
Daytime Phone	Fax				
E-mail (Required)	confirmation will be e-mailed				
rour registration	conjuniation will be e-mailed				
Specialty					
& Please indicate any special needs					
Please indicate any dietary needs					

# CATHETER and SURGICAL THERAPIES for ATRIAL FIBRILLATION [CAST-AF]





676 North St. Clair Street Suite 2330 Chicago, Illinois 60611

# **SAVE THE DATE!**

8th Annual Chicago Cardiovascular Update July 18-20, 2019 | Chicago, Illinois

4th Annual Advances in Pulmonary Hypertension August 2, 2019 | Chicago, Illinois

Cardiothoracic Nursing Symposium September 5-6, 2019 | Chicago, Illinois

41st Annual Echo Northwestern Program September 20-22, 2019 | Chicago, Illinois

(New!) Heart Team Summit October 18-19, 2019 | Chicago, Illinois 15th Annual Heart Failure Holiday Symposium December 6-7, 2019 | Chicago, Illinois

**REGISTER TODAY!** cme.northwestern.edu

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