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 1 CREDITS™

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

REGISTER TODAY! www.cme.northwestern.edu
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:

1. Discuss the electrophysiology of atrial fibrillation
2. 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
3. Identify the advantages and limitations of activation-time mapping, voltage mapping, and phase mapping for the analysis of the electrophysiology of atrial fibrillation
4. Apply the most advanced techniques for the catheter ablation of atrial fibrillation
5. Describe the most advanced techniques for the surgical ablation of atrial fibrillation
6. Discuss the electrophysiological basis of catheter ablation for paroxysmal and non-paroxysmal atrial fibrillation
7. Cite the current indications for catheter ablation of atrial fibrillation in paroxysmal and non-paroxysmal atrial fibrillation
8. 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
10. Determine the limitations of the HRS definitions of success and failure for the interventional (catheter and surgical) treatment of atrial fibrillation
11. 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.
13. 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.
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.

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)™. 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)™ from organizations accredited by the ACCME.

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

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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
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PLANNING COMMITTEE

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Associate Professor of Medicine

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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

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Past-President,
American Society of Echocardiography

Nishant Verma, MD, MPH
Assistant Professor of Medicine

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Takoma Park, MD

Amin Al-Ahmad, MD
Texas Cardiac Arrhythmia
Austin, TX

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University of British Columbia
Vancouver, British Columbia, Canada

Vinay Badhwar, MD
West Virginia University
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

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University of Michigan
Ann Arbor, MI

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Atricure, Inc.
Mason, OH

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University
Barcelona, Spain

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Washington University School of Medicine
St. Louis, MO

Tom De Potter, MD
OLV Hospital
Aalst, Belgium

Marek Ehrlich, MD
Vienna University General Hospital
Vienna, Austria

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Vanderbilt University Medical Center
Nashville, TN

Syd Gaynor, MD
Atricure
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Austin, TX

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Keck Medical Center of USC
Los Angeles, CA

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University of Brussels
Brussels, Belgium

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Emory University
Atlanta, GA

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University of California San Francisco
San Francisco, CA

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Harvard University
Boston, MA

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New Orleans, Louisiana

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Sanjiv Narayan, MD, PhD
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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 Revishevili, 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, 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

Annabelle Santos Volgman, MD
Rush University
Chicago, IL

Timo Weimar, MD, PhD
Sana Cardiac Surgery
Stuttgart, Germany

Richard Whitlock, MD, PhD
McMasters University
Hamilton, Ontario, Canada

Uri Yaron
Biosense Webster
Brunswick, NJ
PLENARY SESSION

FRIDAY, AUGUST 16, 2019

7:00 am BREAKFAST and ABSTRACT JUDGING (Non-CME)

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:
James Cox, MD; Andrea Russo, MD

10:25 am Medical Rate Control
Annabelle Santos Volgman, 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
SESSION I

ELECTROPHYSIOLOGY

WHAT IS THE BEST TOOL TO ISOLATE THE PULMONARY VEINS?

MODERATOR: Rod Passman, MD

11:15 am Point-by-Point RF Catheter Ablation
Larry Chinitz, MD

11:30 am Cryoballoon Device
Jason Andrade, MD

11:45 am Other Balloon-Based Devices Beyond Cryoballoon
Amin Al-Ahmad, MD

12:00 pm Electroporation
David Haines, MD

12:15 pm Panel Discussion

12:30 pm LUNCH

SESSION II

ELECTROPHYSIOLOGY

WHAT SHOULD BE DONE DURING FIRST-TIME ABLATION FOR PERSISTENT AF?

MODERATORS: Rishi Arora, MD, Nishant Verma, MD, MPH

1:00 pm PVI only
Atul Verma, MD

1:15 pm Posterior Box Isolation Using Cryo-Catheter
Frank Pelosi, MD

1:30 pm Posterior Wall Ablation plus Triggers
Andrea Natale, MD

1:45 pm PVI plus Rotors
Sanjiv Narayan, MD, PhD

2:00 pm PVI plus LAA ligation
Al Lin, MD

2:15 pm Minimally Invasive Maze Surgery
Niv Ad, MD

2:30 pm PVI plus Targeting Scar
Nasir Marrouche, MD

2:45 pm Panel Discussion

SURGERY

SURGICAL MANAGEMENT OF THE LAA

MODERATORS: Sacha Salzberg, MD, PhD
Vinay Badhwar, MD

11:15 am Effect of LAA Closure on Left Atrial Function
Vera Rigolin, MD

11:30 am Neurohormonal Consequences of Epicardial LAA Closure
Manuel Castella, MD

11:45 am Long-Term Results of LAA Closure with the Epicardial AtriClip
Sacha Salzberg, MD, PhD

12:00 pm How I do it: Thoracoscopic Closure of LAA
Stefano Benussi, MD, PhD

12:30 pm LUNCH

SURGICAL TECHNIQUES FOR AF ABLATION

MODERATORS: Ralph Damiano, MD

1:00 pm Energy Sources for Performing AF Surgery (Non-CME)
Syd Gaynor, MD

1:15 pm Pearls on the Lesions of the Maze Procedure
Manuel Castella, MD

1:30 pm How I do it: CryoMaze-III Procedure
Niv Ad, MD

1:45 pm How I do it: Maze-IV Procedure
Ralph Damiano, MD

2:00 pm How I do it: TT Maze Procedure
Armin Kiankhooy, MD

2:15 pm How I do it: Robotic Maze Procedure
Harold Roberts, MD

2:30 pm How I do it: Convergent Procedure
Omar Lattouf, MD, PhD

2:45 pm How I do it: Joint Hybrid Procedure for AF
Mark La Meir, MD
PLENARY SESSION

3:00 pm  **PLENARY ROUNDTABLE**

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

**MODERATORS:**
Annabelle Santos Volgman, 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:**
Annabelle Santos Volgman, 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
# PLENARY SESSION

**SATURDAY, AUGUST 17, 2019**

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<td>BREAKFAST</td>
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<td>8:00 am</td>
<td><strong>PLENARY LECTURES</strong></td>
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<td>MODERATORS: Amiran Revishvili, MD, PhD; Fred Morady, MD</td>
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<tr>
<td>8:00 am</td>
<td><em>Atrial Fibrillation and Valvular Heart Disease</em></td>
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<td>Robert Bonow, MD, MS</td>
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<td>8:30 am</td>
<td><em>Ultralow Cryoablation for AF: Early Clinical Experience</em></td>
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<td>Tom De Potter, MD</td>
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<td>9:00 am</td>
<td><em>Effect of Catheter Ablation and Maze Procedures on LA Function</em></td>
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<td>James Thomas, MD</td>
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<td>9:35 am</td>
<td><strong>PLENARY ROUNDTABLE</strong></td>
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<tr>
<td></td>
<td>After 2-3 Failed Catheter Ablations, What Next?</td>
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<td>MODERATORS: Niv Ad, MD; Susan Kim, MD</td>
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<td>PANELISTS: Amiran Revishvili, MD, PhD; Fred Morady, MD; Steven Bolling, MD; Vinay Badhwar, MD; Ralph Damiano, MD; David Haines, MD</td>
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<td>10:10 am</td>
<td>Proposals and Audience Voting</td>
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<td>10:25 am</td>
<td><strong>PLENARY DEBATE</strong></td>
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<td></td>
<td>Optimal Off-Pump Closure of the LAA</td>
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<td>MODERATORS: Ralph Damiano, MD; Vera Rigolin, MD</td>
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<td>10:25 am</td>
<td><em>Percutaneous Endocardial Devices</em></td>
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<td>Rodney Horton, MD</td>
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<td>10:30 am</td>
<td><em>Percutaneous Epicardial LARIAT</em></td>
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<td>Randall Lee, MD, PhD</td>
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<td>10:35 am</td>
<td><em>Thoracoscopic Epicardial AtriClip</em></td>
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<td>Stefano Benussi, MD, PhD</td>
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<td>10:40 am</td>
<td>Group Discussion</td>
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<tr>
<td>11:00 am</td>
<td>Proposals and Audience Voting</td>
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</tbody>
</table>
**SESSION I**

**ELECTROPHYSIOLOGY**  
**LEFT ATRIAL APPENDAGE CLOSURE**

**MODERATORS:**  
Bradley Knight, MD  
Al Lin, MD

- **11:15 am** Optimal Watchman and Amulet Implant Techniques  
  Rodney Horton, MD

- **11:30 am** Closing Post-Surgical LAA Leaks  
  Christopher Ellis, MD

- **11:45 am** LACC using Suture Snare  
  Randall Lee, MD, PhD

- **12:00 pm** Future LAAC Devices  
  Andrea Natale, MD

- **12:15 pm** Panel Discussion

- **12:30 pm** LUNCH

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**SURGERY**  
**CONCOMITANT AF SURGERY – I**

**MODERATOR:**  
Patrick McCarthy, MD

- **11:15 am** Surgical Options for Patients with AF Undergoing Primary CABG, AVR, or MVR  
  James Cox, MD

- **11:30 am** Long-term Results of the Maze Procedure for Atrial Fibrillation  
  Ralph Damiano, MD

- **11:45 am** Long-term Benefits of Concomitant AF Ablation during Cardiac Surgery  
  Andrei Churyla, MD

- **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

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**SESSION II**

**ELECTROPHYSIOLOGY**  
**MAPPING AND IMAGING SYSTEM FOR AF ABLATION PROCEDURES (Non-CME)**

**MODERATORS:**  
Kaustubha Patil, MD  
Bradley Knight, MD  
Gregory Michaud, MD

- **1:00 pm** CARTO/Biosense  
  Nader Ghaly, MD, MSc

- **1:15 pm** NavX/Abbott/Topera Industry Representative

- **1:30 pm** Rhythmia/BSCI  
  Bradley Horst

- **1:45 pm** AcQMap/Acutus  
  Graydon Beatty, PhD

- **2:00 pm** CardioInsight  
  Marek Ehrlich, MD

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**SURGERY**  
**CONCOMITANT AF SURGERY – II**

**MODERATOR:**  
Patrick McCarthy, MD

- **1:00 pm** Concomitant AF Surgery in Patients Undergoing Aortic Valve Surgery (Non-CME)  
  Gianluigi Bisleri, MD

- **1:15 pm** Results of Staged Hybrid Procedures for Persistent and L-S Persistent AF  
  Mark La Meir, MD

- **1:30 pm** Results of Joint Hybrid Procedures for Persistent and L-S Persistent AF  
  Niv Ad, MD

- **1:45 pm** Hybrid Procedures vs Minimally Invasive CryoMaze Procedure for Persistent and L-S Persistent AF  
  S. Chris Malaisrie, MD

- **2:00 pm** Late Atrial Fibrillation Arising de novo Following Mitral Valve Surgery  
  S. Chris Malaisrie, MD
2:15 pm  **SPECIAL INVITED LECTURE**

**INTRODUCTION:**
James 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

4:00 pm  **ADJOURN**
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.

QUESTIONS
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.

REGISTRATION FEE

<table>
<thead>
<tr>
<th>Registration Category</th>
<th>Early Bird Ends July 15, 2019 at 5:00 PM</th>
<th>Regular Rate</th>
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<td>Physicians</td>
<td>$450</td>
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<td>Industry</td>
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<tr>
<td>Northwestern Medicine Physician</td>
<td>$250</td>
<td>$350</td>
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<tr>
<td>Nurse, Technician, or Fellow in Training</td>
<td>$150</td>
<td>$250</td>
</tr>
<tr>
<td>Northwestern Medicine Alumni</td>
<td>$200</td>
<td>$300</td>
</tr>
</tbody>
</table>

Please type or print

Last Name    First Name

☐ MD  ☐ DO  ☐ PhD  ☐ RN  ☐ Other (please specify)

Address

City     State     ZIP Code

Daytime Phone     Fax

E-mail (Required)

Your registration confirmation will be e-mailed

Specialty

Please indicate any special needs

Please indicate any dietary needs
CATHETER and SURGICAL THERAPIES for ATRIAL FIBRILLATION [CAST-AF]
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

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