2ND ANNUAL
CATHETER AND SURGICAL THERAPIES FOR ATRIAL FIBRILLATION CAST-AF

August 21-22, 2020
Radisson Blu Aqua Hotel
Chicago, Illinois

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

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THIS ACTIVITY HAS BEEN APPROVED FOR
16 AMA PRA CATEGORY 1 CREDITS™

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2ND ANNUAL
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.

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.
12. Discuss the electrophysiologic 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.

CALL FOR ABSTRACTS
Trainees are invited to submit abstracts for the poster presentation. A designated space will feature posters by trainees to present findings, interact with notable faculty, and further advance education. Trainees can submit abstract presentation online at: https://forms.feinberg.northwestern.edu/view.php?id=887483.

DEADLINE FOR SUBMISSION: 11:00 PM Central Daylight Time on July 10, 2020.
Notifications for abstract acceptance will be announced via e-mail.
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San Francisco, CA

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Roger Winkle, MD
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Palo Alto, CA
### FRIDAY, AUGUST 21, 2020

<table>
<thead>
<tr>
<th>Time</th>
<th>Session Description</th>
<th>Details</th>
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</thead>
<tbody>
<tr>
<td>7:00 am</td>
<td>BREAKFAST</td>
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</tr>
<tr>
<td>7:45 am</td>
<td>Welcome</td>
<td>Patrick McCarthy, MD</td>
</tr>
<tr>
<td>7:45 am</td>
<td>Opening Comments</td>
<td>James Cox, MD; Bradley Knight, MD</td>
</tr>
<tr>
<td>8:00 am</td>
<td><strong>PLENARY LECTURES: Fundamentals of AF Intervention</strong></td>
<td><strong>MODERATORS:</strong> Patrick McCarthy, MD; Robert Bonow, MD, MS; Susan Kim, MD</td>
</tr>
<tr>
<td>8:00 am</td>
<td>Anatomy and Physiology Pertinent to Intervention for Atrial Fibrillation</td>
<td>James Cox, MD</td>
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<tr>
<td>8:15 am</td>
<td>Impact of Clinical Trials in AF Interventional Therapies</td>
<td>Greg Michaud, MD</td>
</tr>
<tr>
<td>8:30 am</td>
<td>Importance of Disparate Endocardial and Epicardial Activation in the Clinical Mapping of Atrial Fibrillation</td>
<td>Natasja de Groot, MD</td>
</tr>
<tr>
<td>8:45 am</td>
<td>Effect of Catheter Ablation and Maze Procedures on LA Function</td>
<td>James Thomas, MD</td>
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<tr>
<td>9:00 am</td>
<td>The Future of Long-Term Monitoring Following Catheter and Surgical Intervention for Atrial Fibrillation</td>
<td>Rod Passman, MD</td>
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<tr>
<td>9:15 am</td>
<td>Panel Discussion</td>
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<tr>
<td>9:30 am</td>
<td>BREAK</td>
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<tr>
<td>10:00 am</td>
<td><strong>PLENARY ROUNDTABLE: How Should Success be Defined and Reported Following Catheter or Surgical Ablation for Atrial Fibrillation?</strong></td>
<td><strong>MODERATORS:</strong> Meleze Hocini, MD; Rod Passman, MD; S. Chris Malaisrie, MD</td>
</tr>
<tr>
<td>10:30 am</td>
<td><strong>PLENARY LECTURES: LAA Closure: How I do it</strong></td>
<td><strong>Moderators:</strong> DJ Lakkireddy, MD; Vera Rigolin, MD; Paul Friedman, MD</td>
</tr>
<tr>
<td>10:30 am</td>
<td>Anatomy and Physiology of the LAA</td>
<td>Manuel Castella, MD</td>
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<tr>
<td>10:45 am</td>
<td>How I do it: Thoracoscopic LAA Closure with an Epicardial AtriClip</td>
<td>Stefano Benussi, MD, PhD</td>
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<tr>
<td>11:00 am</td>
<td>How I do it: Endocardial LAA Closure with a Plug</td>
<td>Rodney Horton, MD</td>
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<tr>
<td>11:15 am</td>
<td>How I do it: Epicardial LAA Closure with a LARIAT Device</td>
<td>Randall Lee, MD, PhD</td>
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<tr>
<td>11:30 am</td>
<td>Results of the LAACOS-III Trial</td>
<td>Richard Whitlock, MD, PhD</td>
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<tr>
<td>11:45 am</td>
<td>Panel Discussion</td>
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<tr>
<td>12:00 pm</td>
<td>LUNCH</td>
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<tr>
<td>1:00 pm</td>
<td><strong>PLENARY DEBATE: What is the Optimal Interventional Treatment Following Multiple Catheter Ablation Failures for Long-Standing Persistent AF?</strong></td>
<td><strong>MODERATORS:</strong> Amiran Revishvili, MD, PhD; Carina Blomstrom-Lundqvist, MD; Vinay Badhwar, MD</td>
</tr>
<tr>
<td>1:00 pm</td>
<td>His Bundle Ablation is the Best Option</td>
<td>Carina Blomstrom-Lundqvist, MD</td>
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<tr>
<td>1:10 pm</td>
<td>A Joint Hybrid Procedure is the Best Option</td>
<td>Mark La Meir, MD</td>
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<td>1:20 pm</td>
<td>The Convergent Procedure is the Best Option</td>
<td>David Delurgio, MD</td>
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<tr>
<td>1:30 pm</td>
<td>Minimally Invasive CryoMaze III is the Best Option</td>
<td>Niv Ad, MD</td>
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<tr>
<td>1:40 pm</td>
<td>Open Debate of the Best Option</td>
<td>All Faculty</td>
</tr>
<tr>
<td>2:00 pm</td>
<td><strong>PLENARY LECTURES: AF Management in Specific Clinical Scenarios</strong></td>
<td><strong>MODERATORS:</strong> Stefano Benussi, MD, PhD; Annabelle Santos Volgman, MD; Robert Bonow, MD, MS</td>
</tr>
<tr>
<td>2:00 pm</td>
<td>Concomitant Treatment of Atrial Fibrillation during MVR</td>
<td>Patrick McCarthy, MD</td>
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<tr>
<td>2:15 pm</td>
<td>Late Atrial Fibrillation Arising de novo Following MVR</td>
<td>Christopher Mehta, MD</td>
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<tr>
<td>2:30 pm</td>
<td>Catheter Ablation of Atrial Tachycardias and Flutter following Surgery for Congenital Heart Disease</td>
<td>Sabrina Tsao, MD, MBBS</td>
</tr>
<tr>
<td>2:45 pm</td>
<td>Concomitant Treatment of Atrial Fibrillation during CABG</td>
<td>Andrei Churyla, MD</td>
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<tr>
<td>3:00 pm</td>
<td>Pre-Op Atrial Strain and Post-CABG Atrial Fibrillation</td>
<td>Olga Kislitsina, MD, PhD</td>
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<tr>
<td>3:15 pm</td>
<td>Panel Discussion</td>
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<tr>
<td>3:30 pm</td>
<td>BREAK</td>
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<tr>
<td>4:00 pm</td>
<td><strong>PLENARY LECTURES: Special Considerations During AF Interventions</strong></td>
<td><strong>MODERATORS:</strong> Ralph Damiano, MD; Olga Kislitsina, MD, PhD; Manuel Castella, MD</td>
</tr>
<tr>
<td>4:00 pm</td>
<td>Heating and Cooling the Esophagus during AF Ablation</td>
<td>Nishant Verma, MD</td>
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<tr>
<td>4:15 pm</td>
<td>Esophageal Deviation during AF Ablation</td>
<td>Emile Daoud, MD</td>
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<tr>
<td>4:30 pm</td>
<td>Atrial Fibrillation and Atrial Cardiomyopathies</td>
<td>Jane Wilcox, MD, MSc</td>
</tr>
<tr>
<td>4:45 pm</td>
<td>Neurohormonal Consequences of Epicardial vs Endocardial LAA closure</td>
<td>DJ Lakkireddy, MD</td>
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<tr>
<td>5:00 pm</td>
<td>Anticoagulation and Intervention for Atrial Fibrillation</td>
<td>Andrea Russo, MD</td>
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<tr>
<td>5:15 pm</td>
<td>Panel Discussion</td>
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<tr>
<td>5:30 pm</td>
<td><strong>PLENARY ROUNDTABLE: When Should the LAA be Closed?</strong></td>
<td><strong>MODERATORS:</strong> Stefano Benussi, MD, PhD; Piotr Suwalski, MD; Hung-Fat Tse, MD</td>
</tr>
<tr>
<td>5:30 pm</td>
<td>Results of the LAACOS-III Trial</td>
<td>Richard Whitlock, MD, PhD; Randall Lee, MD, PhD; Andrea Russo, MD</td>
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<tr>
<td>6:00 pm</td>
<td>COCKTAILS ON THE TERRACE</td>
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**PLENARY SESSION**

**SATURDAY, AUGUST 22, 2020**

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<tr>
<th>Time</th>
<th>Activity</th>
<th>Speakers</th>
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<tbody>
<tr>
<td>7:00 am</td>
<td><strong>BREAKFAST</strong></td>
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<tr>
<td>7:45 am</td>
<td>Opening Comments</td>
<td>Patrick McCarthy, MD</td>
</tr>
<tr>
<td>8:00 am</td>
<td><strong>PLENARY LECTURES: Results of Contemporary Interventional Procedures for AF Ablation</strong></td>
<td>Carina Blomstrom-Lundqvist, MD; Bradley Knight, MD; Amiran Revishvili, MD, PhD</td>
</tr>
<tr>
<td>8:00 am</td>
<td>Results of Catheter Ablation for PAF</td>
<td>Kenneth Ellenbogen, MD</td>
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<tr>
<td>8:15 am</td>
<td>Results of Catheter Ablation for Persistent and Long-Standing Persistent AF</td>
<td>Meleze Hocini, MD</td>
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<tr>
<td>8:30 am</td>
<td>Results of Hybrid Procedures for Persistent and Long-Standing Persistent AF</td>
<td>Mark La Meir, MD</td>
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<tr>
<td>8:45 am</td>
<td>Results of the Maze-IV Procedure for Persistent and Long-Standing Persistent AF</td>
<td>Ralph Damiano, MD</td>
</tr>
<tr>
<td>9:00 am</td>
<td>Results of the Minimally Invasive CryoMaze III for Persistent and Long-Standing Persistent AF</td>
<td>Niv Ad, MD</td>
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<tr>
<td>9:15 am</td>
<td>Panel Discussion</td>
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<td>9:30 am</td>
<td><strong>BREAK</strong></td>
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<tr>
<td>10:00 am</td>
<td><strong>PLENARY ROUNDTABLE: After 2-3 Failed Catheter Ablations, What Next?</strong></td>
<td>Fred Morady, MD; Patrick McCarthy, MD; Susan Kim, MD</td>
</tr>
<tr>
<td>10:30 am</td>
<td><strong>PLENARY LECTURES: Biophysics of Novel Catheter-Based AF Therapies</strong></td>
<td>Bradley Knight, MD; Olga Kislitsina, MD, PhD; Meleze Hocini, MD</td>
</tr>
<tr>
<td>11:00 am</td>
<td>Biophysics of Pulsed Electrical Field Ablation</td>
<td>David Haines, MD</td>
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<tr>
<td>11:15 am</td>
<td>Bioengineering of a Near-Critical Nitrogen Linear Cryoablation Catheter</td>
<td>James Cox, MD</td>
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<tr>
<td>11:30 am</td>
<td>High-Power, Short-Duration RF Catheter Ablation for AF</td>
<td>Roger Winkle, MD</td>
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<tr>
<td>11:45 am</td>
<td>AF Ablation Technologies Beyond Electroporation and Ultra-Low Cryothermia</td>
<td>Andrea Natale, MD</td>
</tr>
<tr>
<td>12:00 pm</td>
<td><strong>LUNCH</strong></td>
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<tr>
<td>2:00 pm</td>
<td><strong>PLENARY LECTURES: Early and Long-Term Results of Interventional AF Therapy</strong></td>
<td>Mark La Meir, MD; Manuel Castella, MD; Wendy Tzou, MD</td>
</tr>
<tr>
<td>2:15 pm</td>
<td>Early Experience with Low Energy Multistage Electrotherapy for AF</td>
<td>Igor Effimov, MD</td>
</tr>
<tr>
<td>2:30 pm</td>
<td>Early Clinical Results with the Ultra-Low Linear Cryoablation Catheter</td>
<td>Suneeet Mittal, MD</td>
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<tr>
<td>2:45 pm</td>
<td>Long-Term Results of LAA Closure with the AtriClip</td>
<td>Sacha Salzberg, MD, PhD</td>
</tr>
<tr>
<td>3:00 pm</td>
<td>Long-Term Results of the Maze-IV Procedure for Atrial Fibrillation</td>
<td>Ralph Damiano, MD</td>
</tr>
<tr>
<td>3:15 pm</td>
<td>Long-Term Results of the Minimally Invasive CryoMaze III Procedure for Atrial Fibrillation</td>
<td>Niv Ad, MD</td>
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<tr>
<td>3:30 pm</td>
<td><strong>BREAK</strong></td>
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**BREAKOUT SESSIONS**

**SESSION I**

<table>
<thead>
<tr>
<th>Time</th>
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<th>Speakers</th>
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<tbody>
<tr>
<td>1:00 pm</td>
<td><strong>ELECTROPHYSIOLOGY</strong></td>
<td></td>
</tr>
<tr>
<td>1:00 pm</td>
<td>Optimal Technique for PVI</td>
<td>Oussama Waqni, MD; Andrea Natale, MD; Wendy Tzou, MD</td>
</tr>
<tr>
<td>1:10 pm</td>
<td>Cryoballoon</td>
<td>Jason Andrade, MD</td>
</tr>
<tr>
<td>1:20 pm</td>
<td>Pulsed Electrical Field Ablation</td>
<td>David Hanies, MD</td>
</tr>
<tr>
<td>1:30 pm</td>
<td>LAA Closure Improves Results of CA</td>
<td>DJ Lakkireddy, MD</td>
</tr>
<tr>
<td>1:40 pm</td>
<td>RF Balloon</td>
<td>Amin Al-Ahmad, MD</td>
</tr>
<tr>
<td>1:50 pm</td>
<td>Panel Discussion</td>
<td></td>
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<tr>
<td>2:00 pm</td>
<td><strong>SURGERY</strong></td>
<td></td>
</tr>
<tr>
<td>2:45 pm</td>
<td>Maze-IV Procedure - Surgical Technique</td>
<td>Ralph Damiano, MD</td>
</tr>
<tr>
<td>3:00 pm</td>
<td>CryoMaze III Procedure - Surgical Technique</td>
<td>Niv Ad, MD</td>
</tr>
<tr>
<td>3:15 pm</td>
<td>Robotic Maze Procedure - Surgical Technique</td>
<td>Harold Roberts, MD</td>
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</table>

**SESSION II**

<table>
<thead>
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<th>Time</th>
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<tbody>
<tr>
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<tr>
<td>1:10 pm</td>
<td>Cryoballoon</td>
<td>Jason Andrade, MD</td>
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<tr>
<td>1:20 pm</td>
<td>Pulsed Electrical Field Ablation</td>
<td>David Hanies, MD</td>
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<tr>
<td>1:30 pm</td>
<td>LAA Closure Improves Results of CA</td>
<td>DJ Lakkireddy, MD</td>
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<tr>
<td>1:40 pm</td>
<td>RF Balloon</td>
<td>Amin Al-Ahmad, MD</td>
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<tr>
<td>1:50 pm</td>
<td>Panel Discussion</td>
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<tr>
<td>2:00 pm</td>
<td>Surgery</td>
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<td>2:00 pm</td>
<td>Variations of the Maze Procedure</td>
<td>S. Chris Malaisrie, MD; Andrei Churyla, MD; Sacha Salzberg, MD, PhD</td>
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<td>2:10 pm</td>
<td>Pearls on the Maze Lesions</td>
<td>Manuel Castella, MD</td>
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<tr>
<td>2:20 pm</td>
<td>Technical Modification of Maze Procedure</td>
<td>Patrick McCarthy, MD</td>
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<tr>
<td>2:30 pm</td>
<td>Maze-IV Procedure - Surgical Technique</td>
<td>Ralph Damiano, MD</td>
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<tr>
<td>2:40 pm</td>
<td>CryoMaze III Procedure - Surgical Technique</td>
<td>Niv Ad, MD</td>
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<tr>
<td>2:50 pm</td>
<td>Robotic Maze Procedure - Surgical Technique</td>
<td>Harold Roberts, MD</td>
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<tr>
<td>3:00 pm</td>
<td>Panel Discussion</td>
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<td>3:30 pm</td>
<td><strong>BREAK</strong></td>
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BREAKOUT SESSIONS

SESSION II

ELECTROPHYSIOLOGY

CONTROVERSIES IN AF ABLATION

MODERATORS:
Emile Daoud, MD;
HF Tse, MD, PhD;
Wendy Tzou, MD

4:00 pm Preventing Life-Threatening Complications During AF Ablation
Oussama Wazni, MD

4:10 pm Post Ablation LA Flutters
Aman Chugh, MD

4:20 pm AF Drivers
Sanjiv Narayan, MD

4:30 pm Adjunctive LAA Ligation
Ali Lin, MD

4:40 pm Imaging in AF Ablation
Nasir Marrouche, MD

4:50 pm Panel Discussion

SURGERY

SURGICAL OPTIONS, RESULTS, AND GUIDELINES

MODERATORS:
Patrick McCarthy, MD;
S. Chris Malaisrie, MD;
Harold Roberts, MD

4:00 pm Surgical Options for Patients with AF Undergoing Primary CABG, AVR, or MVR
James Cox, MD

4:10 pm Long-Term Benefits of Concomitant AF Surgery
Andrei Churyla, MD

4:20 pm Hybrid Procedures vs CryoMaze-III for LSpAF
Niv Ad, MD

4:30 pm Convergent Procedure - Surgical Technique
Omar Lattouf, MD

4:40 pm Guidelines for AF Surgery
Vinay Badhwar, MD

4:50 pm Panel Discussion

5:00 pm PLENARY LECTURES: Catheter and Surgical Therapies for AF - History and Future Directions

MODERATORS:
Ken Ellenbogen, MD; Susan Kim, MD

5:00 pm The Future of Catheter Ablation for AF
Bradley Knight, MD

5:15 pm The Future of Concomitant AF Ablation in Cardiac Surgery
Patrick McCarthy, MD

5:30 pm The History of Medical and Surgical Cooperation in AF Interventional Therapy
James Cox, MD

5:45 pm Panel Discussion

6:00 pm Adjourn

REGISTRATION

2ND ANNUAL CATHETER AND SURGICAL THERAPIES FOR ATRIAL FIBRILLATION CAST-AF
AUGUST 21-22, 2020 | RADISSON BLU AQUA HOTEL | CHICAGO, ILLINOIS

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Early Bird Ends July 10, 2020 at 5:00 PM
Regular Rate Begins July 11, 2020

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□ $450
□ $550

Industry
□ $500
□ $600

Northwestern Medicine Physician
□ $250
□ $350

Nurse, Technician, or Fellow in Training
□ $150
□ $250

Northwestern Medicine Alumni
□ $250
□ $350

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ONLINE - Please visit cme.northwestern.edu/conferences

MAIL - Mail the registration form with a check made payable to Northwestern University Office of CME:
Northwestern University’s Feinberg School of Medicine
676 N. St. Clair St., Suite 2330
Chicago, Illinois 60611

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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 August 1st, 2020.

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.

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

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Please indicate any special needs __________________________

Please indicate any dietary needs __________________________

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**June 26, 2020** | Chicago, Illinois

9th Annual Chicago Cardiovascular Update  
**July 23-25, 2020** | Chicago, Illinois

Northwestern Medicine Cardiothoracic Nursing Symposium  
**September 3-4, 2020** | Chicago, Illinois

42nd Annual ECHO Northwestern  
**September 11-13, 2020** | Chicago, Illinois

2nd Annual Heart Team Summit  
**October 23-24, 2020** | St. Louis, Missouri

Northwestern Snowbirds: Hot Topics in Cardiovascular Medicine  
**November 8-9, 2020** | Miami, Florida

The 16th Annual Heart Failure Holiday Symposium  
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