

# 21st Valve Disease, Structural Interventions, and Diastology Summit



**March 8-10, 2019**

Loews Portofino Bay Hotel at Universal Orlando™  
Orlando, FL

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## **New this Year!**

- Get CME and MOC at the same time!
- How to Sessions on Strain, 3-D, and Diastology
- Guideline-Based Valve Disease Management
- LAA Closure Devices
- New Structural Devices

Register Today! [ccfcme.org/echo](http://ccfcme.org/echo)

## Join us for a one of a kind summit tackling the latest issues in valve disease, structural interventions, and diastology!

The 21st Cleveland Clinic Valve Disease, Structural Interventions, and Diastology Summit will focus on mitral, aortic and tricuspid valve diseases as well as the latest advances in structural interventions including TAVR, percutaneous mitral repair and LAA occluder devices. This summit will include case-based lectures and workshops about strain, 3-D and contrast echo.

This will provide you a unique opportunity to receive updates in new and emerging topics from basic to advanced imaging techniques including 3-D echocardiography, strain imaging, echo guidance of transcatheter therapies as well as MRI/CT. The new ASE guidelines on diastolic function will be discussed as well as advances in pericardial and myocardial diseases.

### BY ATTENDING, YOU WILL BE ABLE TO:

- Apply echocardiography to diagnose the severity, mechanism, etiology, and hemodynamic impact of the many types of valve disease, including mitral regurgitation, mitral stenosis, aortic stenosis, aortic regurgitation and tricuspid valve disorders
- Assess the most recent innovations in structural interventions and describe their clinical use
- Translate new guideline criteria on imaging into current decision-making regarding structural valve interventions, medical treatment, and surgical valve repair/replacement
- Utilize echocardiographic imaging for imaging before, during, and after interventional procedures, including transcatheter valve replacement (aortic and mitral), closure of periprosthetic leaks, LAA closure, and edge-to-edge mitral and tricuspid repair as well LAA occluder devices
- Gain an updated understanding on new and emerging imaging techniques, including 3-D echocardiography, strain imaging, and MRI/CT
- Describe clinical methods to diagnose diastolic dysfunction and manage disorders such as heart failure with preserved ejection fraction, constrictive pericarditis, amyloid heart disease, and hypertrophic cardiomyopathy
- Discuss role of clinical indications and emerging uses of contrast echocardiography

### WHO SHOULD ATTEND?

Noninvasive and invasive cardiologists, cardiac surgeons, anesthesiologists, sonographers, nurses, fellows, cardiology nurse practitioners, and physician assistants will benefit from attending this summit.

#### SUMMIT DIRECTOR



**Allan L. Klein, MD, FRCP(C), FACC, FAHA, FASE, FESC**  
Past President, American Society of Echocardiography  
Professor of Medicine  
Director, Pericardial Disease Center  
Department of Cardiovascular Medicine  
Heart and Vascular Institute  
Cleveland Clinic

#### SUMMIT CO-DIRECTORS



**Christine Jellis, MD, PhD**  
Assistant Professor of Medicine  
Co-Director Pericardial Disease Center  
Cardiovascular Medicine  
Heart and Vascular Institute  
Cleveland Clinic



**Samir Kapadia, MD**  
Director, Sones Catheterization Laboratories  
Cardiovascular Medicine  
Heart and Vascular Institute  
Cleveland Clinic



**L. Leonardo Rodriguez, MD**  
Program Director, Advanced Imaging Fellowship  
Editor in Chief, CASE  
Cardiovascular Medicine  
Heart and Vascular Institute  
Cleveland Clinic

## GUEST FACULTY

**Hisham Dokainish, MD, FRCP(C), FASE**  
Professor of Medicine  
McMaster University  
Hamilton, Ontario

**Linda Gillam, MD, MPH, FACC, FASE, FESC**  
Professor of Medicine  
Thomas Jefferson University  
Chair, Cardiovascular Medicine  
Morristown Medical Center/Atlantic Health  
System  
Morristown, NJ

**Stephen H. Little, MD, FRCP(C), FACC, FASE**  
Director, Cardiovascular Fellowship Program  
Associate Professor  
Weill Cornell Medicine  
Houston Methodist Hospital  
Houston, TX

**Maurice Sarano, MD**  
Cardiovascular Disease  
Mayo Clinic  
Rochester, MN

**Igal A. Sebag, MD, FRCP(C), FACC, FASE**  
Associate Professor of Medicine,  
McGill University  
Director, Echocardiography and Medical  
Diagnostics  
Director, Fellowships in Echocardiography and  
Integrated Cardiac Imaging  
Sir Mortimer B. Davis–Jewish General Hospital  
Montreal, Quebec

## CLEVELAND CLINIC FACULTY

**Robert J. Cubeddu, MD**  
Chair, Department of Cardiovascular  
Medicine  
Cleveland Clinic Florida

**Amy Dillenbeck, MS, RDCS, FASE**  
Coordinator, Education and Training  
Cardiovascular Medicine

**Richard Grimm, DO**  
Director, Echocardiography Laboratory  
Cardiovascular Medicine

**William J. Stewart, MD**  
Cleveland Clinic Lerner College of Medicine  
of Case Western Reserve University

**Lars G. Svensson, MD, PhD**  
Chairman, Heart and Vascular Institute  
Thoracic and Cardiovascular Surgery

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## REGISTER ONLINE AT [ccfcme.org/echo](http://ccfcme.org/echo)

Cleveland Clinic employee fees and registration are available online only.

### Fees

**Fee includes:** continental breakfast, refreshment breaks, and faculty PowerPoint presentations available online.

|                                                    | Fee on or before<br>Jan 4, 2019 | Fee after<br>Jan 4, 2019 |
|----------------------------------------------------|---------------------------------|--------------------------|
| Physician                                          | \$875                           | \$975                    |
| ASE Physician                                      | \$700                           | \$800                    |
| Sonographer/Non-Physician/ Resident/<br>Fellow*    | \$475                           | \$575                    |
| ASE Sonographer/Non-Physician/<br>Resident/Fellow* | \$380                           | \$460                    |
| Cleveland Clinic Alumnus                           | \$787                           | \$877                    |

\*Letter from program director is required to receive the discounted fee. If letter is not received two weeks prior to the activity, the full physician fee will be charged.

### Registration and Cancellation

Preregistrations are accepted until 2:00 pm ET March 5, 2019. Register on-site after this date.

In case of cancellation, email notification is required to process your refund. A full refund will be issued if canceled by February 8, 2019. After February 8, 2019, a \$150 cancellation fee will be deducted from your refund. No refunds will be issued after March 1, 2019.

For questions about registration or cancellation, email us at [cmeregistration@ccf.org](mailto:cmeregistration@ccf.org) or call 216-444-9990.

*Cleveland Clinic Center for Continuing Education reserves the right to cancel or postpone an activity at our sole discretion. In the unlikely event that this occurs, any registration fee(s) paid will be refunded. Be advised that Cleveland Clinic is not responsible for related costs including airline tickets, hotel costs, or any similar fee penalties incurred as a result of any trip cancellations or changes.*

## AGENDA

### FRIDAY, MARCH 8, 2019

- 5:15 AM** Registration, Continental Breakfast, and Visit Exhibits
- 6:00 AM** Coffee with the Experts: Informal Discussion on Mitral Valve and Structural Interventions
- 6:50 AM** Introduction  
*Allan L. Klein, MD; Christine Jellis, MD, PhD; and L. Leonardo Rodriguez, MD*

#### SESSION 1 VALVE DISEASE: FOCUS ON THE MITRAL VALVE

*Moderators: Maurice Sarano, MD, and William J. Stewart, MD*

- 7:00 AM** Complexities of the Mitral Valve Structure and Mechanics  
*Maurice Sarano, MD*
- 7:20 AM** Mitral Regurgitation: Etiology and How this Impacts on Treatment  
*Linda Gillam, MD, MPH*
- 7:40 AM** Basic to Advanced Quantification of MR: What Do the New ASE Guidelines Say?  
*Allan L. Klein, MD*
- 8:00 AM** Management of MR: Past Controversies and Current ACC/AHA/ESC Guideline-Based Recommendations  
*Stephen H. Little, MD*
- 8:20 AM** Ischemic/Secondary Mitral Regurgitation – Who, Who-Not, and When to do Surgery?  
*Lars G. Svensson, MD, PhD*
- 8:40 AM** Asymptomatic Severe Mitral Regurgitation: Choosing the Golden Moment  
*William J. Stewart, MD*
- 9:00 AM** Calcific Mitral Stenosis: Percutaneous and Surgical Options and Challenges  
*Samir Kapadia, MD*
- 9:20 AM** Panel Discussion  
*Moderator: L. Leonardo Rodriguez, Linda Gillam, MD, MPH; Samir Kapadia, MD; Allan L. Klein, MD; Maurice Sarano, MD; William J. Stewart, MD; and Lars G. Svensson, MD, PhD*
- 9:40 AM** Refreshment Break and Visit Exhibits

#### SESSION 2 STRUCTURAL INTERVENTIONS: MITRAL VALVE AND LEFT ATRIUM

*Moderators: Linda Gillam, MD, MPH and L. Leonardo Rodriguez, MD*

- 10:00 AM** Exercise Testing in Mitral Valve Disease: What do the Guidelines Say?  
*Stephen H. Little, MD*
- 10:20 AM** Percutaneous Mitral Repair/Replacements: What do you do for Functional Mitral Regurgitation  
*Robert J. Cubeddu, MD*
- 10:40 AM** Percutaneous Mitral Valve Repair— Intra-Procedural TEE Guidance: 3-D and Biplane Echo  
*Maurice Sarano, MD*
- 11:00 AM** Left Atrial Size and Function – How to Evaluate and Implications in Management of Patients with Valvular Heart Disease  
*Linda Gillam, MD, MPH*
- 11:20 AM** LAA Occluder Devices – Current Indications  
*Samir Kapadia, MD*
- 11:40 AM** How Does the Sonographer Acquire Quality 2-D and 3-D Data for the Mitral Valve and the Left Atrium  
*Amy Dillenbeck, RDCS*
- 12:00 PM** Panel Discussion  
*Moderator: Samir Kapadia, MD; Robert J. Cubeddu, MD; Amy Dillenbeck, RDCS; Stephen H. Little, MD; L. Leonardo Rodriguez, MD; and Maurice Sarano, MD*

#### Simultaneous Sessions

##### 12:20 PM How to Do Session A: 3-D Reconstruction and Cropping in Valve Disease

*Moderators: Amy Dillenbeck, RDCS and Richard Grimm, DO  
Linda Gillam, MD, MPH and Christine Jellis, MD, PhD*

##### 12:20 PM Case Workshops: Robotic MV Surgery, Functional vs. Degenerative MR, Percutaneous MV Surgery, LAA Closure, Contrast Cases 3-D Printing

*Moderator: Robert J. Cubeddu, MD  
Samir Kapadia, MD; Stephen H. Little, MD; L. Leonardo Rodriguez, MD; Maurice Sarano, MD; William J. Stewart, MD; and Lars G. Svensson, MD, PhD*

**1:30 PM** Adjourn

## SATURDAY, MARCH 9, 2019

- 5:30 AM** Registration, Continental Breakfast, and Visit Exhibits
- 6:00 AM** Coffee with the Experts: Informal Discussion on Aortic Valve and Structural Interventions

### SESSION 3 VALVE DISEASE: FOCUS ON THE AORTIC VALVE

*Moderators: Stephen H. Little, MD and Lars G. Svensson, MD, PhD*

- 7:00 AM** Aortic Valve Morphology and Common Associations  
*L. Leonardo Rodriguez, MD*
- 7:20 AM** Paradoxical or Not: Low Flow, Low Gradient Aortic Stenosis  
*William J. Stewart, MD*
- 7:40 AM** Stress Echo in Aortic Stenosis – Indications, Methods, Impact on Management  
*Christine Jellis, MD, PhD*
- 8:00 AM** Aortic Root Anatomy – Utilizing the Best of Echo and CT Imaging to Optimize TAVR Outcomes  
*Richard Grimm, DO*
- 8:20 AM** TAVR – New Devices and Expanding Indications  
*Samir Kapadia, MD*
- 8:40 AM** How to Choose between TAVR vs. SAVR  
*Lars G. Svensson, MD, PhD*
- 9:00 AM** Aortic Regurgitation: Mechanism and Quantification by Multimodality Imaging and Impact on Treatment  
*Hisham Dokainish, MD*
- 9:20 AM** Panel Discussion  
*Moderator: Richard Grimm, DO; Hisham Dokainish, MD; Christine Jellis, MD, PhD; Samir Kapadia, MD; William J. Stewart, MD; and Lars G. Svensson, MD, PhD*
- 9:40 AM** Refreshment Break and Visit Exhibits

### SESSION 4

#### STRUCTURAL INTERVENTIONS: TRICUSPID VALVE, RIGHT VENTRICLE and THORACIC AORTA

*Moderators: Robert J. Cubeddu, MD and Igal A. Sebag, MD*

- 10:00 AM** Thoracic Aortic Involvement: Timing of Intervention and Surgical Techniques  
*Lars G. Svensson, MD, PhD*
- 10:20 AM** Clinical Presentation of Right-Sided Heart Disease – “Look-alikes” and Evaluation  
*Linda Gillam, MD, MPH*
- 10:40 AM** Tricuspid Valve Dysfunction-Subtypes and Outcomes  
*Stephen H. Little, MD*
- 11:00 AM** Surgical Approach to Tricuspid Regurgitation: When and How?  
*Lars G. Svensson, MD, PhD*
- 11:20 AM** Percutaneous Treatment of Tricuspid Regurgitation: Which Patients and What Devices?  
*Samir Kapadia, MD*
- 11:40 AM** How Does the Sonographer Acquire Quality 2-D and 3-D Data for the Tricuspid Valve and Right-Sided Chambers  
*Amy Dillenbeck, RDCS*
- 12:00 PM** Panel Discussion  
*Moderator: Robert J. Cubeddu, MD; Amy Dillenbeck, RDCS; Linda Gillam, MD, MPH; Stephen H. Little, MD; Maurice Sarano, MD; and Lars G. Svensson, MD, PhD*

#### Simultaneous Sessions

##### 12:20 PM How to Do Session B: Strain and Diastology Implementation and Interpretation

*Moderators: Amy Dillenbeck, RDCS and Christine Jellis MD, PhD; Hisham Dokainish, MD and Richard Grimm, DO*

##### 12:20 PM Case Workshop – Low Flow, Low Gradient Aortic Stenosis, Choosing TAVR vs SAVR Tricuspid Regurgitation, Right Ventricle and Contrast Cases

*Moderator: William J. Stewart, MD; Robert J. Cubeddu, MD; Samir Kapadia, MD; Stephen H. Little, MD; Maurice Sarano, MD; Igal A. Sebag, MD; and Lars G. Svensson, MD, PhD*

**1:30 PM** Adjourn



Cleveland Clinic has ranked as the nation's #1 heart care program for 24 consecutive years by U.S. News & World Report.

SUNDAY, MARCH 10, 2019

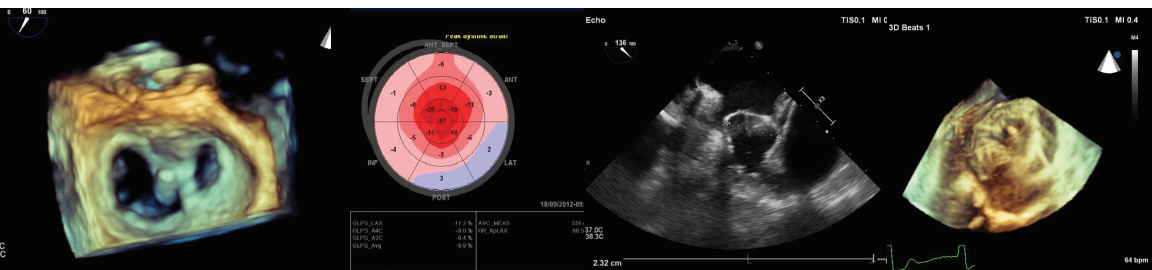
- 5:45 AM Continental Breakfast and Visit Exhibits
- 6:00 AM Coffee with the Experts:  
Informal Discussion on Diastology and Strain

SESSION 5  
DIASTOLIC FUNCTION EVALUATION

- Moderators: Hisham Dokainish, MD and Allan L. Klein, MD
- 7:00 AM Physiology of Left Ventricular Diastolic Function: Is it Really That Complicated?  
Hisham Dokainish, MD
  - 7:20 AM Estimating LV Filling Pressures with Doppler Echo  
L. Leonardo Rodriguez, MD
  - 7:40 AM Hemodynamic Correlates of Diastolic Dysfunction: What Do the Studies Show?  
Richard Grimm, DO
  - 8:00 AM Practical Approach to Diastolic Function: Limitations and Pitfalls  
Amy Dillenbeck, RDCS
  - 8:20 AM State of the Art: American Society of Echocardiography Guidelines Diastology Update  
Hisham Dokainish, MD
  - 8:40 AM Diastolic Dysfunction in Special Populations  
Christine Jellis, MD, PhD
  - 9:00 AM Constriction and Amyloid: Diastolic Dysfunction  
Allan L. Klein, MD
  - 9:20 AM Panel Discussion  
Moderator: Allan L. Klein, MD  
Amy Dillenbeck, RDCS;  
Hisham Dokainish, MD;  
Richard Grimm, DO;  
Christine Jellis, MD, PhD; and  
L. Leonardo Rodriguez, MD
  - 9:40 AM Refreshment Break and Visit Exhibits

SESSION 6  
MYOCARDIAL AND PERICARDIAL DISEASES

- Moderators: Amy Dillenbeck, RDCS and Igal A. Sebag, MD
- 10:00 AM How to Differentiate Athlete's Heart from Non-obstructive Hypertrophic Cardiomyopathy – Management Pearls  
Christine Jellis, MD, PhD
  - 10:20 AM Radiation Associated Cardiac Disease  
Igal A. Sebag, MD
  - 10:40 AM Complicated Pericarditis: A New Imaging Guided Approach  
Allan L. Klein, MD
  - 11:00 AM LV Strain in Cardio-Oncology  
Igal A. Sebag, MD
  - 11:20 AM Role of Contrast Echo in Assessing Left and Right Heart Function  
Amy Dillenbeck, RDCS
  - 11:40 AM Panel Discussion  
Moderator: Allan L. Klein, MD  
Amy Dillenbeck, RDCS;  
Christine Jellis, MD, PhD; and  
Igal A. Sebag, MD
  - 12:00 PM Case Workshop – Constriction, Restriction, Pericarditis, Cardio-Oncology, Contrast Echo  
Moderator: Christine Jellis, MD, PhD  
Robert J. Cubeddu, MD;  
Amy Dillenbeck, RDCS;  
Hisham Dokainish, MD;  
Allan L. Klein, MD;  
L. Leonardo Rodriguez, MD; and  
Igal A. Sebag, MD
  - 1:00 PM Question and Answer
  - 1:30 PM Adjourn



## GENERAL INFORMATION

### Location

#### **Loews Portofino Bay Hotel at Universal Orlando™**

5601 Universal Blvd.  
Orlando, FL 32819  
Phone: 407.503.1000

### Hotel Accommodations

A limited block of rooms has been reserved at the Loews Portofino Bay Hotel only until Thursday, February 14, 2019. Rooms are \$269 per night plus tax and are on a first-come, first-served basis so hurry to reserve yours now!

To make your reservations, contact the hotel at 866-360-7395 and identify yourself as an attendee for the Cleveland Clinic Diastology Summit or go online at [www.ccfme.org/ValveHotel](http://www.ccfme.org/ValveHotel)

When staying at the Loews Portofino Bay Hotel, you'll receive special benefits to the theme parks including complimentary water taxis, and shuttle busses to all three Universal Orlando™ theme parks and Universal CityWalk™ as well as complimentary access to select live entertainment venues at Universal's CityWalk™. Some restrictions apply, call the hotel for details.

### Universal Orlando™ Theme Parks

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### Information

For further information about this activity, visit the Cleveland Clinic Center for Continuing Education website: [ccfme.org/echo](http://ccfme.org/echo)

### Study References

Faculty presentations will be available online in PDF format on a password protected website. You will have access prior to and after the activity to allow you to download or print the slides.

### Accreditation

The Cleveland Clinic Foundation Center for Continuing Education is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

The Cleveland Clinic Foundation Center for Continuing Education designates this live activity for a maximum of 21.75 *AMA PRA Category 1 Credits™*. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Participants claiming CME credit from this activity may submit the credit hours to the American Osteopathic Association for Category 2 credit.

### American Board of Internal Medicine MOC

Successful completion of this CME activity, which includes participation in the evaluation component, enables the participant to earn up to 21.75 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.

MOC is available for full course attendance only.

### Other Health Care Professionals

A certificate of participation will be provided to other health care professionals for requesting credits in accordance with state nursing boards, specialty societies, or other professional associations.

### Faculty Disclosure

The Cleveland Clinic Foundation Center for Continuing Education has implemented a policy to comply with the current Accreditation Council for Continuing Medical Education Standards for Commercial Support requiring resolution of all faculty conflicts of interest. Faculty declaring a relevant commercial interest will be identified in the activity syllabus.

### Americans with Disabilities Act

The Cleveland Clinic Foundation Center for Continuing Education fully intends to comply with the legal requirements of the Americans with Disabilities Act. If you need assistance, please notify us at least two weeks prior to the activity.

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