



COURSE SYLLABUS

August 27 – 28, 2021

Estancia La Jolla Hotel

San Diego, California

Ehtisham Mahmud, MD, FACC, MSCAI

Program Director

UC San Diego

School of Medicine

Commercial Support Acknowledgment

We would like to thank the following companies for providing educational support for this activity:

- Abbott
- Abiomed, Inc
- Amgen
- Boston Scientific Corporation
- Chiesi, USA
- Edwards Lifesciences
- Gore & Associates
- Medtronic
- Siemens Healthineers (Corindus Vascular Robotics)
- Terumo Medical

Course Description

Over the course of two days, The San Diego Cardiovascular Interventions Symposium will focus on disseminating the knowledge and evidence-based data regarding novel and innovative therapeutic options for patients with complex coronary, structural and peripheral vascular disease. The symposium will focus on the use of advanced techniques and technologies including robotics, atherectomy, hemodynamic support devices and the use of intravascular imaging and physiology for optimal cardiovascular revascularization. The impact of COVID-19 on the field of interventional cardiology and patient care will be addressed. New coronary CTO techniques and tools, indications for left main and bifurcation PCI with appropriate techniques will be reviewed. Outcomes of TAVR, percutaneous mitral and tricuspid valve repair, PFO/ASD closure and left atrial appendage closure will be presented. Adjunctive pharmacotherapy for cardiac interventions will be addressed. Participants will observe live cases and hear from international experts.

Target Audience

The San Diego Cardiovascular Interventions Symposium has been designed to meet the needs of Interventional Cardiologists, Clinical Cardiologists, Internists, Residents, Fellows in Training, Cath Lab Nurses and Technicians as well as other Allied Healthcare professionals with an interest in the field of cardiology.

Learning Objectives

At the conclusion of this activity, the participants should be able to:

- ❖ Identify the impact of COVID-19 on STEMI care and the field of interventional cardiology
- ❖ Identify new techniques and technologies for CTO, bifurcation and left main PCI
- ❖ Identify the role of various lesion modifications/atherectomy techniques prior to coronary stenting
- ❖ Identify the utility of adjunctive hemodynamic support to facilitate complete coronary revascularization and high-risk PCI
- ❖ Identify the advantages and utility of robotic PCI
- ❖ Review the data and indications for percutaneous VADs in severe decompensated CHF and cardiogenic shock
- ❖ Review the contemporary data and indications for TAVR
- ❖ Identify the role of left atrial appendage closure and percutaneous mitral valve repair
- ❖ Identify optimal oral and intravenous antiplatelet therapy for PCI
- ❖ Review optimal utilization of FFR, IVUS, and OCT in reducing inappropriate PCI
- ❖ Identify appropriate patients and approaches for peripheral vascular interventions
- ❖ Identify occupational hazards of interventional cardiology and strategies to reduce radiation association risk

Practice Gaps

- ❖ PRACTICE GAP I: DELAY IN TREATMENT OF CARDIOVASCULAR DISEASES AND STEMI DURING THE COVID-19 PANDEMIC DUE TO POORLY UNDERSTOOD IMPLICATIONS OF THE CORONAVIRUS ON CARDIOVASCULAR DISEASE
- ❖ PRACTICE GAP II: UNDER TREATMENT OF CHRONIC TOTAL OCCLUSIONS, AND HIGH-RISK COMPLEX LESIONS DUE TO LACK OF EXPOSURE TO NEW TECHNIQUES AND DATA
- ❖ PRACTICE GAP III: UNDERUTILIZATION OF HEMODYNAMIC SUPPORT FOR ADVANCED HEART FAILURE AND HIGH-RISK PCI
- ❖ PRACTICE GAP IV: LACK OF UNDERSTANDING OF OCCUPATIONAL HAZARDS DURING PCI, RISK OF GEOGRAPHICAL MISS AND POTENTIAL BENEFITS OF ROBOTICS IN THE CATH LAB
- ❖ PRACTICE GAP V: UNDERUTILIZATION OF NEW INNOVATIONS AND MEDICAL THERAPIES FOR STRUCTURAL HEART INTERVENTIONS

PROGRAM AGENDA

FRIDAY, AUGUST 27, 2021

7:15 am **BREAKFAST AND REGISTRATION**
Pacifica Ballroom

8:00 am **Welcome and Introduction**
Ehtisham Mahmud, MD

COMPLEX AND HIGH-RISK INTERVENTIONAL PROCEDURES I

Moderator: *Ori Ben-Yehuda, MD*

8:05 am **Complex Hemodynamically Assisted PCI: Status in 2021 and Future Directions**
Ehtisham Mahmud, MD

8:15 am **Chronic Total Occlusion Revascularization: Technique and Outcomes**
Mitul P. Patel, MD

8:25 am **Calcified Coronary Lesions: Role of Rotational and Orbital Atherectomy**
Giora Weisz, MD

8:35 am **Coronary Calcification: Use of Intravascular Lithotripsy**
Ziad A. Ali, MD, DPhil

8:45 am **Does the Ischemia Trial Change Our Practice of Interventional Cardiology?**
Timothy D. Henry, MD

9:05 am **Q&A / Discussion**

LIVE CASES | Broadcast Live from Sulpizio Cardiovascular Center at UC San Diego, La Jolla, CA

Panelists: *Ziad A. Ali, MD, DPhil; Ori Ben-Yehuda, MD; Timothy D. Henry, MD; Rajiv Jauhar, MD; Giora Weisz, MD*

9:15 am **LIVE CASE #1: Complex PCI**

Operators: *Lawrence Ang, MD; Ehtisham Mahmud, MD; Rodrigo Mendirichaga, MD*

10:00 am **LIVE CASE #2: Complex PCI**
Operators: *Belal Al-Khiami, MD; Mitul P. Patel, MD; Daniel Walters, MD*

10:45 am **BREAK / VISIT EXHIBITS**

COMPLEX AND HIGH-RISK INTERVENTIONAL PROCEDURES II

Moderator: *William Penny, MD*

11:00 am **KEYNOTE LECTURE #1:**
Utility of Intravascular Imaging in Optimizing PCI: OCT, IVUS, or Both
Ziad A. Ali, MD, DPhil

11:20 am **Left Main and Bifurcation PCI**
Ehtisham Mahmud, MD

11:30 am **Hemodynamic Support for High-Risk PCI**
Aditya Bharadwaj, MD

11:40 am **Approach to Complex Coronary Interventions Early in the COVID-19 Pandemic**
Rajiv Jauhar, MD

11:50 am **Treatment of STEMI Patients During the COVID-19 Pandemic: Guidelines**
Ehtisham Mahmud, MD

12:00 pm **LUNCH / VISIT EXHIBITS**

12:30 pm **KEYNOTE LECTURE 2:**
North American COVID-19 Myocardial Infarction Registry
Timothy D. Henry, MD

INTERVENTIONAL ROBOTICS

Moderator: *Giora Weisz, MD*

1:00 pm **Robotic PCI: First-in-Man to Remote PCI**
Giora Weisz, MD

1:10 pm **Robotics: Complex Coronary and Peripheral Interventions**
Ehtisham Mahmud, MD

1:20 pm **Robotic Stroke Care: The New Frontier?**
Alex Khalessi, MD

1:30 pm **Incorporating Artificial Intelligence in Clinical Care**
Eric Adler, MD

1:45 pm **Q&A / Discussion**

LIVE CASES | Broadcast Live from Sulpizio Cardiovascular Center at UC San Diego, La Jolla, CA

Panelists: *Timothy D. Henry, MD; Rajiv Jauhar, MD; William Penny, MD; Daniel Walters, MD; Giora Weisz, MD*

- 2:00 pm** **LIVE CASE #3: ROBOTICALLY ASSISTED PCI**
Operators: *Lawrence Ang, MD; Ehtisham Mahmud, MD; Rodrigo Mendirichaga, MD*
- 2:45 pm** **LIVE CASE #4: COMPLEX INTERVENTION**
Operators: *Belal Al-Khiami, MD; Thao Duong, MD; Mitul P. Patel, MD*
- 3:30 pm** **BREAK / VISIT EXHIBITS**

IMAGING, PHYSIOLOGY AND COMPLICATIONS

Moderator: *Ziad A. Ali, MD, DPhil*

- 3:45 pm** **Assessment of Intermediate Coronary Lesions: FFR, iFR or CT-FFR**
Lawrence Ang, MD
- 3:55 pm** **Complications of High-Risk PCI: Management Approaches**
Timothy D. Henry, MD
- 4:05 pm** **How to Minimize the Risk of Acute Kidney Injury During PCI: Use No Contrast!**
Ziad A. Ali, MD, DPhil
- 4:15 pm** **Access Site Complications: Avoid by Using Radial Approach or Ultrasound-Guided Femoral Access**
Rajiv Jauhar, MD
- 4:35 pm** **Optimizing PCI Outcomes with 2nd Generation DES**
Daniel Walters, MD
- 4:45 pm** **Q&A / Discussion**
- 5:00 pm** **Concluding Remarks**
Ehtisham Mahmud, MD

PROGRAM AGENDA

SATURDAY, AUGUST 28, 2021

- 7:15 am** **BREAKFAST AND REGISTRATION**
Pacifica Ballroom
- 7:55 am** **Welcome and Introduction**
Ehtisham Mahmud, MD

STRUCTURAL HEART INTERVENTIONS I: CASE-BASED MANAGEMENT

Moderator: *Ehtisham Mahmud, MD*

- 8:00 am** **KEYNOTE LECTURE 3:**
Structural Heart Interventions: Shared Decision Making
Megan Coylewright, MD
- 8:20 am** **Percutaneous Pulmonic Valve Replacement?**
Howaida El-Said, MD, PhD

- 8:30 am** **Percutaneously Repairing the AV Valves in Congenital Heart Disease**
Laith Alshawabkeh, MD
- 8:40 am** **Balloon Pulmonary Angioplasty for CTEPH: Another Way to Assist the Right Ventricle**
Ehtisham Mahmud, MD
- 8:50 am** **Q&A / Discussion**
- 9:10 am** **Percutaneous Mitral Valve Repair: COAPT Has Changed the Paradigm**
Megan Coylewright, MD
- 9:20 am** **Percutaneous Repair of the Tricuspid and Mitral Valve: New Directions**
Ori Ben-Yehuda, MD
- 9:30 am** **PFO Closure: Use ICE and Conscious Sedation**
Mitul P. Patel, MD
- 9:40 am** **Atrial Septal Defect: Use TEE and General Anesthesia**
Howaida El-Said, MD, PhD
- 9:50 am** **Q&A / Discussion**
- 10:10 am** **BREAK / VISIT EXHIBITS**

STRUCTURAL HEART INTERVENTIONS II: CASE-BASED MANAGEMENT

Moderator: *Megan Coylewright, MD*

- 10:30 am** **KEYNOTE LECTURE # 4:**
Transcatheter Aortic Valve Replacement: Will SAVR Survive?
Raj Makkar, MD
- 10:50 am** **TAVR Unload: Rationale and Early Experience**
Ori Ben-Yehuda, MD
- 11:00 am** **Cerebral Embolic Protection During TAVR: All or Selective?**
Giora Weisz, MD
- 11:10 am** **Same-Day Discharge After TAVR: What's Holding Us Back?**
Rajiv Jauhar, MD
- 11:20 am** **Left Atrial Appendage Occlusion: Status in 2021**
Jonathan C. Hsu, MD
- 11:30 am** **Q&A / Discussion**
- 12:00 pm** **LUNCH / VISIT EXHIBITS**

INTERVENTIONAL PHARMACOTHERAPY: CASE-BASED MANAGEMENT

Moderator: *Mitul P. Patel, MD*

- 1:00 pm** **Bivalirudin Saves Lives Regardless of Access Site**
Lawrence Ang, MD

- 1:10 pm** **Forget Preload: Intravenous ADP Antagonist for PCI**
Mitul P. Patel, MD
- 1:20 pm** **Anticoagulation and Antiplatelet Strategies After TAVR**
Raj Makkar, MD
- 1:30 pm** **Q&A / Discussion**
- 1:40 pm** **Duration of Oral Antiplatelet Therapy After Complex PCI**
William Penny, MD
- 1:50 pm** **Anticoagulation After Transcatheter Mitral Valve Replacement**
Ori Ben-Yehuda, MD
- 2:00 pm** **DOACs and Thienopyridines in the Management of ACS**
Belal Al-Khiami, MD
- 2:10 pm** **Q&A / Discussion**
- 2:20 pm** **Interventional Approach to Complex PAD**
Daniel Walters, MD
- 2:30 pm** **Radial Approach to Peripheral Interventions**
Mitul P. Patel, MD
- 2:40 pm** **Carotid Stenting for Stroke Prevention**
Ehtisham Mahmud, MD
- 2:50 pm** **Q&A / Discussion**
- 3:00 pm** **Concluding Remarks**
Ehtisham Mahmud, MD

PLANNING COMMITTEE & FACULTY / PRESENTER LIST

Course Director, UC San Diego Health, La Jolla, CA

Ehtisham Mahmud, MD, FACC, MSCAI

Edith and William Perlman Chair in Cardiology
Professor and Division Chief, Cardiovascular Medicine
Director, Sulpizio Cardiovascular Center-Medicine

Planning Committee, UC San Diego Health, La Jolla, CA

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Clinical Professor of Medicine
Director of Endovascular Interventions,
Cardiovascular Institute

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Director, Interventional Cardiology Fellowship
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Director, Adult Congenital Heart Program

Thao Duong, MD

Interventional Cardiology Fellow

Howaida El-Said, MD, PhD, FACC

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Adult Congenital Heart Certified
Director, Cardiac Cath Lab
UCSD/Rady Children's Hospital

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Associate Professor of Medicine
Electrophysiology

Alex Khalessi, MD, MBA

Chair, Department of Neurological Surgery
Professor of Neurological Surgery, Radiology
and Neurosciences

Rodrigo Mendirichaga, MD

Interventional Cardiology Fellow

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San Diego VA Medical Center

Daniel Walters, MD

Assistant Clinical Professor, Interventional
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Guest Faculty

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Disclosure Summary

It is the policy of the University of California San Diego School of Medicine to ensure balance, independence, objectivity and scientific rigor. All persons involved in the selection, development and presentation of content are required to disclose any real or apparent conflicts of interest. All conflicts of interest will be resolved prior to an educational activity being delivered to learners through one of the following mechanisms 1) altering the financial relationship with the commercial interest, 2) altering the individual's control over CME content about the products or services of the commercial interest, and/or 3) validating the activity content through independent peer review. All persons are also required to disclose any discussions of off label/unapproved uses of drugs or devices. Persons who refuse or fail to disclose are disqualified from participating in the CME activity. Participants will be asked to evaluate whether the speaker's outside interests reflect a possible bias in the planning or presentation of the activity. This information is used to plan future activities.

Faculty Name	Name of Commercial Interest	Nature of Relevant Relationship
Eric Adler, MD	Abbott, Rescue Therapeutics	Advisor
	Abiomed	Speaker's Bureau
	Abiomed, Cytokinetics, Medtronic	Consultant

Eric Adler, MD (Continued)	Rocket, Lexeo, Rescue Therapeutics	Institutional Research Funding / Investigator Role
	Rocket, Lexeo	Receipt of Intellectual Property Rights/Patent Holder
	Lexeo	Researcher, Independent Contractor/ Contracted Research, Royalties, Stock Interest
Ziad A. Ali, MD, DPhil	Abbott, Cardiovascular Systems Inc.	Researcher
	Amgen, Boston Scientific	Advisor
	Astra Zeneca	Speaker's Bureau
	Shockwave Medical	Stock Interest
Lawrence Ang, MD	OpSens Medical	Other - Honorarium
Aditya Bharadwaj, MD	Abiomed, Cardiovascular Solutions Inc.	Consultant
	Abiomed	Speaker's Bureau, Institutional Research Funding / Investigator Role
	Cardiovascular Solutions Inc.	Advisor
Megan Coylewright, MD	Abbott	Advisor
	Alleviant	Researcher
	Edwards Lifesciences, Boston Scientific	Independent Contractor / Contracted Research
Jonathan Hsu, MD, MAS	Abbott, Biotronik, Biosense-Webster, Boston Scientific, Medtronic, Janssen Pharmaceuticals, Zoll Medical	Consultant
	Acutus Medical, Vektor Medical	Stock Interest
	Biosense-Webster, Biotronik, Bristol-Myers Squibb, Pfizer	Researcher
Alexander A. Khalessi, MD, MBA	Cerenovus (Johnson & Johnson), Medtronic	Advisor
	Cerenovus (Johnson & Johnson), Ospitek	Consultant
	Ospitek	Stock Interest

Ehtisham Mahmud, MD	Abbott Vascular, Corindus, CSI	Institutional Research Funding / Investigator Role
	Abiomed, Medtronic	Consultant
Raj Makkar, MD	Abbott, Edward Lifesciences	Institutional Research Funding / Investigator Role
	Cedars-Sinai Medical Center	Employment
	Cordis, Medtronic	Consultant
Mitul P. Patel, MD	Abbott Vascular, Chiesi, Medtronic	Advisor, Consultant
	Abiomed, Boston Scientific	Institutional Research Funding / Investigator Role
	Cardiovascular Systems Inc., Terumo	Consultant
Ryan Reeves, MD	Avicena	Consultant
Giora Weisz, MD	Corindus, Cuspa, Intratech, Microbot	Advisor, Stock Interest
	Filterlex	Stock Interest, Ownership Interest
	Trisol	Consultant, Stock Interest

The following have no relevant financial relationships to disclose:

- Belal Al-Khiami, MD
- Laith Alshawabkeh, MD, MSCI
- Ori Ben-Yehuda, MD
- Thao Duong, MD
- Howaida El-Said, MD, PhD
- Timothy Henry, MD
- Rajiv Jauhar, MD
- Rodrigo Mendirichaga, MD
- William Penny, MD
- Daniel Walters, MD

The CME staff, meeting planners, planning committee and CME committee reviewers do not have any relevant financial relationships to disclose.

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Accreditation Statement

This activity has been planned and implemented in the accordance with the accreditation requirements and policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint providership of the University of California San Diego School of Medicine and Gaffney Events. The University of California San Diego School of Medicine is accredited by the ACCME to provide continuing medical education for physicians.

Physician Continuing Education

The University of California San Diego School of Medicine designates this live activity for a maximum of **13.50 AMA PRA Category 1 Credits™**. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Credit for Nurses

For the purpose of recertification, the American Nurses Credentialing Center accepts AMA PRA Category 1 Credits™ issued by organizations accredited by the ACCME. Nurses who attend an activity certified for Category 1 credit can complete the continuing education hours section of the ANCC Professional Development Record to document the courses attended and the hours obtained.

PARTICIPATION REQUIREMENTS AND OBTAINING CREDIT CERTIFICATE

1. Review the Course Syllabus (www.SDInterventions.com/accreditation) prior to engaging in this CME activity.
2. Check-in at Registration Desk, pick-up badge and scan each day to record attendance.
3. Attend accredited sessions.
4. Complete the *Course Evaluation Survey* following the conclusion of this activity to claim credit.
5. The survey will be available beginning Sunday, August 29, 2021
Login to: https://www.surveymonkey.com/r/SDCI_2021 or scan the **QR code** below.
6. After completing the survey, your certificate will be emailed to you within 10 days.
7. If you have any questions, contact cme@gaffneyevents.com.



Cultural and Linguistic Competency

California Assembly Bill 1195 requires continuing medical education activities with patient care components to include curriculum in the subjects of cultural and linguistic competency. It is the intent of the bill, which went into effect on July 1, 2006, to encourage physicians and surgeons, CME providers in the state of California, and the Accreditation Council for Continuing Medical Education to meet the cultural and linguistic concerns of a diverse patient population through appropriate professional development. The planners, speakers and authors of this CME activity have been encouraged to address issues relevant in their topic area. In addition, a variety of resources are available that address cultural and linguistic competency, some of which are included in your syllabus or handout materials. Additional resources and information about AB1195 can be found on our website at <http://cme.ucsd.edu>

EXHIBITOR ACKNOWLEDGEMENT

We would like to acknowledge the following companies and organizations for exhibiting at this conference.

<i>Abbott</i>	<i>Siemens Healthineers</i>	<i>Penumbra, Inc</i>
<i>Abiomed, Inc</i>	<i>(Corindus Vascular Robotics)</i>	<i>Shockwave Medical</i>
<i>BIOTRONIK</i>	<i>Edwards Lifesciences</i>	<i>Terumo</i>
<i>Boston Scientific Corporation</i>	<i>Medtronic</i>	<i>Zoll Medical</i>
<i>Chiesi, USA</i>	<i>Philips Image Guided Therapy</i>	
	<i>Devices</i>	

Thank you for your participation in the San Diego Cardiovascular Interventions Symposium. We look forward to your feedback in the Speaker and Course Evaluation Survey and hope to see you again next year!

*Please check the symposium website at **www.SDInterventions.com** in the coming months for the announcement of the 2022 date and location.*

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