

## WHAT OUR ATTENDEES HAVE HAD TO SAY!

- "An excellent training course very focused, interactive and valuable for learners at all training levels, even for the ones without any prior imaging experience."
- "Great overview for cardiac CT, with a good mix of didactics, case assessments and live cases. Dr. Shapiro and Dr. Hees were very accessible and accommodating throughout the course."
- "Excellent. By far the best course I have attended. 5 days of non stop learning."
- "Excellent course. Highly recommend. Good didactics and review of cases. Small class size. Comprehensive review. Helps prepare you to read independently."
- "An excellent overview of the essentials of cardiac CT. Helpful lectures are accompanied by hands on practice with the CT software covering several cases of diverse pathology."
- "I immensely enjoyed the course along with Dr. Ed Shapiro, Dr. Paul Hees and additional colleagues. It is evident he clearly enjoys teaching the course and the institutions rich history. It is a must experience course."
- "This course is excellent. Perfect balance between practice and theory."
- "This was an amazing course for someone like myself in a very busy interventional practice. It was very comprehensive and I feel very comfortable in reading coronary arteriography and CT angio due to very comprehensive teaching session. The case samples were very good and Dr. Shapiro and rest of the team are simply amazing teachers who clearly enjoy what they do. Highly recommend this course to any one who may be interested in starting a program of their own or even improve their skills."
- "One of the best courses I have attended over my career spanning 22 years and counting. Amazing staff, well organized, excellent computer facilities, very knowledgeable speakers and of course excellent variety of cases."
- "Exceptional course. Lecturers doing an amazing job covering large amount of cardiac pathology with imaging that makes it easier to internalize the anatomy and disease. Essentially was like exceptional general cardiology review course. Dr. Shapiro is an exceptional story teller and teacher and makes learning very easy for something that initially appeared intimidating. Will recommend to my other colleagues."
- "Excellent and comprehensive course covering all aspects of cardiac CT. Passionate and expert faculty with a wealth of experience coupled with an enthusiasm and eagerness to teach. Excellent background to Baltimore and the history of the Johns Hopkins institutions which I particularly valued as an international attendee."
- "Best CT course. Extremely knowledgeable faculty with a wide variety of cases. Very hands on."
- "Fantastic course. Great cases. Well organized. Fun. Great value. Fantastic lectures. Very friendly teachers who teach in a welcoming environment."
- "Fantastic course. Great educational experience involving the introduction to physics of CT and reviewing interesting and common cases of cardiac CT."
- "Excellent course! Very helpful for beginners."
- "This was an outstanding course with an excellent mix of didactic + interactive sessions. Very useful for any level of CT knowledge. I will leave this course excited to pursue CTCA in daily practice."
- "Have been to the previous courses years ago and this course by far was both most educational and truly achieved the objective. The atmosphere fostered learning."
- "This is probably the best overall CME course I have ever taken – thank you."
- "Excellent experience. Integration of clinical scenarios into reading of scans really elevated the experience 'to the next level'."
- "Excellent course. Very impressive program. Dedication and commitment to teaching really shows! Thank you very much."
- "This course was zing compared to the ACC/CCT practicum and cost about the same, but gave you Level II requirements as opposed to Level I for the ACC course."
- "I've been going to courses for 25 years and this may be one of the best I have attended."
- Thank you for all the time and effort put into this course – it is greatly appreciated."
- "Excellent course. Will be my top recommended Cardiac CT Training for others interested in training."
- "Overall this was a well-organized, excellent targeted course. All instructors were great – available for questions, very open! Thanks."
- "Excellent course with level 3 readers with you at all times. It would be hard to imagine any course that is comparable to take a non experienced individual to such a good level of training in one week."
- "This is the best course I've ever attended. Thank you very much."
- "Excellent five day practicum, extremely well worth the cost!"
- "I truly enjoyed the program-training for CT has been one of the highlights of my career. Your program is well run and you should be proud of it."
- "I wanted to congratulate you all for the wonderful course that we had. I really enjoyed it. The material, coordination, and expertise was of great quality. What impressed me was the friendly, courteous, and patient attitude toward us. These characteristics define an excellent teaching institution. The food, the timing, and the coordinated didactic material were also impressive."
- "All of us were very satisfied and I had some fun comparing notes with my partner about his experience too. What a great program y'all have put together."
- "This ranks as the best post-graduate educational course I have ever attended."



**JOHNS HOPKINS**  
M E D I C I N E

Office of Continuing Medical Education  
720 Rutland Avenue / Turner, 20  
Baltimore, Maryland 21205-2195

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# Cardiac CT Practicum:

The Total Experience



DATED MATERIAL

**September 23, 2019–June 19, 2020**  
**Baltimore, Maryland**

Check out our mobile app CloudCME. **CloudCME**  
Organization Code: **HopkinsCME**  
[hopkinscme.cloud-cme.com/aph.aspx](http://hopkinscme.cloud-cme.com/aph.aspx)

CONTINUING MEDICAL EDUCATION

**Division of Cardiology**  
**Johns Hopkins Bayview Medical Center**  
*Presents*

# Cardiac CT Practicum:

## The Total Experience

### IMPORTANT REMINDER:

After mid 2020 one-week training courses will no longer satisfy criteria for cardiac CT board eligibility. For practicing physicians, the only pathway to eligibility will require a 2-month mini-fellowship. For fellows, 2 months of dedicated CT training will have to be accomplished within the fellowship. Case number requirements will also increase substantially. Please plan to secure your credentials before that time.

### The longest running Cardiac CT Training Course, 13 years!

#### Activity Directors:

Edward P. Shapiro, MD  
Armin A. Zadeh, MD, PhD

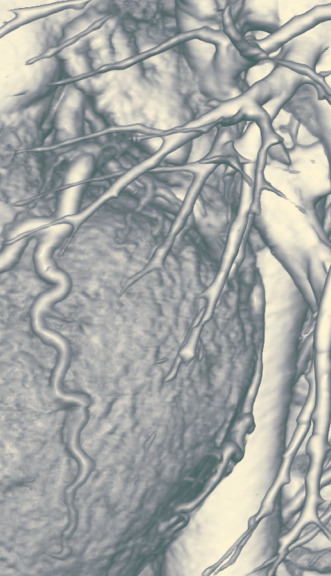
This activity has been approved for  
42 AMA PRA Category 1 Credits™.

#### INCLUDES

- Johns Hopkins quality #1
- Everything needed for board eligibility until mid 2020
- All requirements for Level II
- Case requirements for advancing to Level III
- Remote access to Johns Hopkins workstations for three months



**JOHNS HOPKINS**  
M E D I C I N E



# Cardiac CT Practicum: The Total Experience

## WHO SHOULD ATTEND

This activity is intended for physicians including cardiologists, radiologists, and nuclear specialists who are currently in practice or are in a fellowship, seeking Level II competency training. For those who have already qualified for Level II, this added experience will meet the case requirements for Level III.

## OBJECTIVES

After attending this activity, the participant will demonstrate the ability to:

- 1) Choose patients appropriate for this imaging modality.
- 2) Prepare patients to obtain optimal study results.
- 3) Optimize image reconstruction for cardiac analyses.
- 4) Use a 3D workstation to visualize all aspects of cardiac anatomy.
- 5) Assess extent of coronary atherosclerosis and evaluate LV function.

## DESCRIPTION

The activity is held approximately monthly at the Johns Hopkins Bayview Medical Center in Baltimore, Maryland, in a multimedia classroom constructed specifically for the learner's needs. This is a workstation-based training activity, designed to meet American College of Cardiology American Heart Association requirements. Each participant has their own workstation to use throughout the activity and receives personal attention and instruction by the activity faculty. A workstation which projects to the front of the room is used by instructors to demonstrate various aspects of CT interpretation. After receiving training on the use of the workstation, a library of cases selected to demonstrate the variety of pathology, which can be evaluated by CT (coronary disease, bypass grafts, stents, anomalies, cardiomyopathies, EP, pericardial disease, cardiac tumors and TAVR) is reviewed. A minimum of 100 cases are reviewed during the five days of the activity.

Twenty-one hours of didactic instruction are included through lectures and reading materials, which will cover topics of patient selection, preparation, radiation, contrast, cardiac anatomy, assessment of cardiac function, cardiac pathology, etc. Members of the Johns Hopkins faculty and guest faculty will present these topics. Participants will take a quiz to confirm understanding of these materials.

The requirement for observation of the acquisition of 50 studies is satisfied by utilizing a combination of onsite observation of approximately 25 studies supplemented by interactive observation of approximately 25 studies performed offsite and viewed by interactive video link. Participants will have the opportunity to ask questions during acquisition of the studies (i.e., patient selection, scanner protocols use of beta blockers and ivabradine) and to observe the steps in obtaining the scan by direct observation of the scanner console. The scans that were acquired during the week of the activity are anonymized and participants will interpret these studies on their own time following the five days of onsite training. After faculty review of the participants' interpretation of these 50 studies and the other elements of the activity, a certificate documenting completion of these studies will be issued.

## ACCREDITATION STATEMENT

The Johns Hopkins University School of Medicine is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.



## CREDIT DESIGNATION STATEMENT

The Johns Hopkins University School of Medicine designates this live activity for a maximum of 42 *AMA PRA Category 1 Credits™*. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

## OTHER CREDITS

### American Board of Internal Medicine's (ABIM) Maintenance of Certification (MOC) Program

Successful completion of this CME activity, which includes participation in the evaluation component, enables the participant to earn up to 42 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.



## POLICY ON SPEAKER AND PROVIDER DISCLOSURE

It is the policy of the Johns Hopkins School of Medicine that the speaker and provider globally disclose conflicts of interest. The Johns Hopkins University School of Medicine OCME has established policies that will identify and resolve conflicts of interest prior to this educational activity. Detailed disclosure will be made prior to presentation of the education.

## Lecture Topics

Overview Cardiac CT.....	Edward P.Shapiro, MD
10 Steps .....	Edward P.Shapiro, MD
Use of the 3D Workstation.....	Paul S. Hees, PhD
Post-Processing .....	Michael Blaha, MD, MPH
Non-Obstructive Plaque .....	Edward P.Shapiro, MD
IV Contrast .....	Jeffrey A. Brinker, MD
Coronary Calcium in Assessing Cardiovascular Risk.....	Michael Blaha, MD, MPH
Beta Blockers .....	Edward P.Shapiro, MD
Radiation .....	Mahadevappa Mahesh, PhD
CT vs Gold Standard .....	Armin A. Zadeh, MD, PhD
CT Artifacts.....	Irfan S. Shafique, MD
Stents and Bypass Grafts.....	Charles S.White, MD
Anomalous Coronaries .....	Edward P.Shapiro, MD
CT Viability and Perfusion.....	Albert C. Lardo, PhD
Non-Cardiac Findings.....	Irfan S. Shafique, MD
Coding and Reimbursement.....	Edward P.Shapiro, MD
Contrast and Dose Modulation.....	Armin A. Zadeh, MD
Emergency Room Applications.....	Charles S.White, MD
EP Applications.....	Armin A. Zadeh, MD, PhD
Appropriateness Criteria .....	Armin A. Zadeh, MD, PhD

*The Johns Hopkins School of Medicine takes responsibility for the content, quality and scientific integrity of this CME activity.*

*This schedule is subject to change.*

## Speakers

### ACTIVITY DIRECTOR

**Edward P. Shapiro, MD**  
Professor of Medicine

**Armin A. Zadeh, MD, PhD**  
Associate Professor of Medicine

### JOHNS HOPKINS SPEAKERS

**Michael Blaha, MD, MPH**  
Professor of Medicine

**Jeffrey A. Brinker, MD**  
Professor of Medicine

**Paul S. Hees, PhD**  
Lecturer in Medicine

**Albert C. Lardo, PhD**  
Adjunct Associate Professor  
Department of Cardiology and Biomedical Engineering

**Mahadevappa Mahesh, PhD**  
Professor of Radiology and Radiological Science  
Chief Physicist

### GUEST SPEAKERS

**Irfan S. Shafique, MD**  
Director, Dedicated Imaging  
Baltimore, Maryland

**Charles S. White, MD**  
Professor of Radiology  
University of Maryland School of Medicine  
Baltimore, Maryland

## OTHER IMPORTANT INFORMATION

There is a learning curve that must be overcome to master cardiac CT, and the amount of material to be covered is large. **Therefore, these days will be long (8:30 a.m. – 7:30 p.m. on Monday, Tuesday, and Thursday and 8:30 a.m. – 5:00 p.m. on Wednesday and Friday)**, and it is expected that participants will be present for the entire week. Breakfast and lunch will be provided on site. An evening event, which will include dinner, will be arranged on Wednesday during the course. These meals and events are included in the registration fee. A small office will be available for making and receiving phone calls, and sending and receiving emails and faxes, etc.



*Endorsed by the Society of Cardiovascular Computed Tomography, the professional society devoted exclusively to Cardiovascular CT.*

## General Information

### LOCATION

#### Johns Hopkins Bayview Medical Center

4940 Eastern Avenue, Baltimore, Maryland 21224

Conveniently located off Interstate 895, the Johns Hopkins Bayview Medical Center is the site of the meeting. Directions to campus parking will be sent with your confirmation notice, or visit our website to access this information [www.jhucardiact.org](http://www.jhucardiact.org). Handicapped parking is available. *Johns Hopkins is smoke-free.*

### REGISTRATION

The select dates below are available by appointment only. Registration is accepted on a first payment-received basis. Please call Susan Orr at (410) 550-0845 or e-mail [sorrl@jhmi.edu](mailto:sorrl@jhmi.edu) to check availability and make your reservation.

#### 2019

September 23-27      November 11-15  
October 14-18      December 9-13

#### 2020

January 13-17      April 13-17  
February 10-14      May 4-8 and May 18-22  
March 9-13      June 8-12 and June 15-19

### WHY THIS COURSE?

- The longest running course, with consistently excellent reviews from attendees
- The only university-based course currently available
- Johns Hopkins CME credits
- Continuous close supervision by and interaction with senior Johns Hopkins faculty
- All lectures by University faculty
- New CTA applications
- All prior students available for references
- One student per workstation
- Remote access to JHU workstation from your home or office for three months
- Special evening event

### SYLLABUS

All registrants will receive a binder with the slides and paper for note taking and a digital version of talks. This is included in the cost of your registration. A PDF of the slides is available upon request.

### HOW TO OBTAIN CREDIT

Post activity, an online evaluation will be available to attendees to evaluate the activity and individual presentations and to identify future educational needs. Upon completion of the evaluation, the learner must attest to the number of hours in attendance. Credits earned will be added to the learner's transcript and immediately available for print. **The last day to access the evaluation and attest to your credits is 45 days.**

An outcome survey will be sent to all physician attendees within two months post activity to assist us in determining what impact this activity had on the learner's practice.

### AMERICANS WITH DISABILITIES ACT

The Johns Hopkins School of Medicine fully complies with the legal requirements of the ADA and the rules and regulations thereof. *Please notify us if you have any special needs.*

### EMERGENCY CALLS

During the days of this activity only, direct emergency calls to Suzie Orr; (410) 550-0845. Messages will be posted for participants.

## FEES

Register Online: [hopkinscme.cloud-cme.com/aph.aspx](http://hopkinscme.cloud-cme.com/aph.aspx)

**Methods of Payment:** We require full payment prior to the start of the activity. On-site payments by credit card only. The registration fee includes instructional materials, continental breakfast, refreshment breaks, lunch and special dinner event.

### 2019–2020 Courses

Physicians .....	\$6,395
Residents*/Fellows*/Nurses/NPs/PAs/ Allied Health Professionals.....	\$3,247
*with verification of status	

You will receive a confirmation by e-mail. If you have not received it by **six calendar days out**, call (410) 502-9636 to confirm that you are registered. A transcript of attendance will be available upon attestation of your credit hours and submission of the post activity online evaluation.

The Johns Hopkins University reserves the right to cancel or postpone any activity due to unforeseen circumstances. In this event, the University will refund the registration fee but is not responsible for travel expenses. Additionally, we reserve the right to change the venue to a comparable venue. Under such circumstances registrants will be notified as soon as possible.

### LATE FEE AND REFUND POLICY

A \$50 late fee applies to registrations received after 5:00 p.m. ET on the **sixth calendar day prior to activity starting date**. A handling fee of \$50 will be deducted for cancellation. An additional fee may apply for cancellation of other events, including workshops and social activities. Refund requests must be received by fax or mail by the **sixth calendar day out**. No refunds will be made thereafter. Transfer of registration to another Johns Hopkins activity in lieu of cancellation is not possible.

### SOCIAL EVENT

A social event is planned for Wednesday evening. Details will be provided with your confirmation notice.

### HOTEL AND TRAVEL INFORMATION

Participants are responsible for making their own travel and lodging arrangements. A list of recommended hotels will be provided with your confirmation notice. **Please call Susan Orr at (410) 550-0845** for suggestions about hotels for the specific week that you are interested in, as clustering of participants may allow us to arrange complimentary transportation to and from Johns Hopkins Bayview Medical Center each day.

### TO REGISTER or FOR FURTHER INFORMATION

Register Online .....	<a href="http://hopkinscme.cloud-cme.com/aph.aspx">hopkinscme.cloud-cme.com/aph.aspx</a>
Register by Phone .....	(410) 502-9636
Register by Fax .....	(866) 510-7088
Confirmation/Certificates/Transcripts .....	(410) 502-9636
General Information .....	(410) 955-2959
E-mail the Office of CME.....	<a href="mailto:cmenet@jhmi.edu">cmenet@jhmi.edu</a>

Follow us on Twitter: [twitter.com/HopkinsCME](https://twitter.com/HopkinsCME)

Facebook: [facebook.com/HopkinsCME](https://facebook.com/HopkinsCME)

Check out our mobile app CloudCME.

Organization Code: **HopkinsCME**



For website and CloudCME mobile app technical difficulties, email:

[cmtechsupport@jhmi.edu](mailto:cmtechsupport@jhmi.edu)

Sponsoring Department Cardiology at Bayview Website:

[jhucardiact.org](http://jhucardiact.org)

For general information, please visit the activity webpage at:

[hopkinscme.cloud-cme.com/aph.aspx](http://hopkinscme.cloud-cme.com/aph.aspx)

**Cardiac CT Practicum: The Total Experience**

**September 23, 2019 – June 19, 2020**

**To Register:**

(after making a reservation with Susan Orr at 410-550-0845 or [sorr1@jhmi.edu](mailto:sorr1@jhmi.edu).)

**Online:** [hopkinscme.cloud-cme.com/aph.aspx](http://hopkinscme.cloud-cme.com/aph.aspx)

**By fax:** (866) 510-7088 **By phone:** (410) 502-9636

Or mail this form to the Johns Hopkins University, Office of Continuing Medical Education, 720 Rutland Avenue, Turner Room 20, Baltimore, Maryland 21205-2195. Include e-check or credit card information below.

**FULL PAYMENT IS REQUIRED PRIOR TO THE START OF ACTIVITY.**

I am a Johns Hopkins speaker for this activity. *Please type or print clearly*

Last Name		First Name		M.I.
Highest Degree	Primary Specialty		Hopkins Faculty/Staff Only –JHED ID	
For Physicians Only: NPI – 10 digits		State License #		State of License
ABIM #:		Birth Month:		Birth Day:
<input type="checkbox"/> I provide permission for my MOC completion information to be shared and transmitted to the Accreditation Council for Continuing Medical Education (AC-CME).				
Organization		Mailing Address		
City	State	ZIP + 4 Code	Country	
Daytime Telephone		Fax Number		
E-Mail (required)				

Check here if you wish to receive e-mail notices about upcoming CME activities.

I plan to stay at the \_\_\_\_\_ in \_\_\_\_\_ .  
name of hotel city, state

What do you hope to learn by attending this activity? \_\_\_\_\_

Please notify us if you have any special needs. \_\_\_\_\_

**Registration Fees: 2019-2020 Courses**

- Physicians ..... \$6,395
- Residents\*/Fellows\*/Nurses/NPs/PAs/Allied Health Professionals ..... \$3,247  
\*with verification of status

The registration fee includes instructional materials and food and beverage. For registrations received after 5:00 p.m. ET on the **sixth calendar day prior to activity starting date**, include a \$50 late fee.

**Total amount \$** \_\_\_\_\_

**Payment Type:**

JHU Faculty/Staff Only: If you are using your Tuition Remission Benefit or an ION budget, please upload your fully completed and approved form in the payment section of the online activity link above.

TR Form: [hr.jhu.edu/wp-content/uploads/2019/03/trffacandstaff.pdf](http://hr.jhu.edu/wp-content/uploads/2019/03/trffacandstaff.pdf)

ION Form: [hopkinscme.edu/migration/IonRequest.pdf](http://hopkinscme.edu/migration/IonRequest.pdf)

e-Check: Routing #: \_\_\_\_\_ Account #: \_\_\_\_\_

Credit Card:  VISA  MASTERCARD  DISCOVER  AMEX

Card # \_\_\_\_\_ Exp. Date \_\_\_\_\_

Billing Zip Code \_\_\_\_\_ Security Code \_\_\_\_\_

Name on Card \_\_\_\_\_

Signature and Date \_\_\_\_\_