



ECHO IN THE  
CITY OF RIVERS:

# Practical Review of Myocardial and Ischemic Heart Disease

**September 19-20, 2015**

Wyndham Grand Pittsburgh  
Pittsburgh, PA



**Course Directors:**

Barry L. Karon, M.D.

Merri L. Bremer, Ed.D., R.N., R.D.C.S.

Division of  
Cardiovascular Diseases

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*[ce.mayo.edu/echo3rivers](http://ce.mayo.edu/echo3rivers)*

## Course Description

The course is designed to provide the sonographer with a practical review of the current uses and limitations of two-dimensional echocardiography, Doppler and color flow imaging in the assessment of ischemic and myocardial disease. Recent advances in the field of echocardiography including the assessment of systolic and diastolic function, Doppler hemodynamics, stress echocardiography, ischemic and cardiomyopathic heart disease will be presented. The lectures will be illustrated with digital image presentations of clinical cases in echocardiography and time has been allowed for participants to ask questions as well as interact closely with the course faculty.

This succinct weekend course is designed so as to not unduly interfere with work schedules and to present the first half of a comprehensive adult echocardiography curriculum. The second half of the curriculum will be presented in Pittsburgh the following year and will focus on valvular disease anatomy and quantitative assessment, prosthetic valve assessment and dysfunction, endocarditis and the remaining aspects of adult echocardiography.

All of this educational activity may be applied toward the CME requirement for IAC – Echo accreditation.

## Intended Audience

The course is designed for cardiac sonographers, echo students, and physicians who wish to enhance their knowledge of the echocardiographic assessment of adult cardiac disease. Participants with a basic knowledge of echocardiographic techniques and applications will benefit most from this program.

## Course Learning Objectives

Upon conclusion of this program, participants should be able to:

- Discuss standard echocardiographic methods used to assess ischemic and myocardial disease
- Develop an integrated approach to echocardiographic assessment of systolic and diastolic ventricular function
- Discuss emerging applications of echocardiography

Attendance at this Mayo course does not indicate nor guarantee competence or proficiency in the performance of any procedures which may be discussed or taught in this course.

## Credit

Mayo Clinic College of Medicine is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

Mayo Clinic College of Medicine designates this live activity for a maximum of 14.75 *AMA PRA Category 1 Credits*<sup>™</sup>. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

## Other Health Care Professionals

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

## Date and Location

The program will be held **September 19-20, 2015** at the Wyndham Grand Pittsburgh. Pittsburgh is known as both “the Steel City” for its more than 300 steel-related businesses, and the City of Bridges” for its 446 bridges. Pittsburgh offers many different activities from the arts, sports and history.

## Lodging Accommodations

Guest rooms have been reserved for attendees and their guests with special course rates at Wyndham Grand Pittsburgh. In order to receive the special rate, reservations must be made before the room block is filled or before the expiration date of **August 26, 2015**, whichever comes first. Reservations will be taken following this date based on space and rate availability. Please identify yourself as a participant of the Mayo Clinic Echo Seminar conference when making your reservation.

**Wyndham Grand Pittsburgh Downtown**  
600 Commonwealth Place  
Pittsburgh, PA 15222  
\$159 single/double

**For Reservations Call:**  
**1-800-996-3426**

*Lodging arrangements are the sole responsibility of the individual registrant.*

Mayo Clinic is not responsible for expenses incurred by an individual who is not confirmed and for whom space is not available at the meeting. Costs incurred by the registrant such as airline or hotel fees or penalties are the responsibility of the registrant. Travel information is available on the meeting web site.

## Parking

Parking is available in hotel and city visitor ramps. The cost for parking is not included in the registration fee.

## Faculty

### Course Directors

*Merri L. Bremer, Ed.D., R.N., R.D.C.S., F.A.S.E.*  
*Barry L. Karon, M.D., F.A.C.C., F.A.S.E.*

### Mayo Faculty

*Joshua G. Fosland, B.S., R.D.C.S.*  
*Rekha Mankad, M.D., F.A.C.C.*  
*Sunil V. Mankad, M.D., F.A.C.C., F.A.S.E.*  
*Sally J. Miller, B.S., R.T.(R), R.D.C.S., F.A.S.E.*  
*Benjamin F. Wong, M.D.*

### Guest Faculty

*Beverly Gorman, R.D.C.S.*  
*Director of Accreditation*  
*Echocardiography - Intersocietal*  
*Accreditation Commission*

## Faculty Disclosure

As a provider accredited by ACCME, Mayo Clinic College of Medicine (Mayo School of Continuous Professional Development) must ensure balance, independence, objectivity and scientific rigor in its educational activities. Course director(s), planning committee, faculty, and all others who are in a position to control the content of this educational activity are required to disclose all relevant financial relationships with any commercial interest related to the subject matter of the educational activity. Safeguards against commercial bias have been put in place. Faculty also will disclose any off-label and/or investigational use of pharmaceuticals or instruments discussed in their presentation. Disclosure of this information will be published in course materials so those participants in the activity may formulate their own judgments regarding the presentation.

## Registration



Register online: [ce.mayo.edu/echo3rivers](http://ce.mayo.edu/echo3rivers)

Registration Fee: Course Registration \$425

### Special Registration Offer

Reduced Registration Fee for 2015 & 2016 Programs when registering for both programs at the same time.

**Echo in the City of Rivers:**

Practical Review of Myocardial and Ischemic Disease | September 19-20, 2015

Practical Review of Valvular Heart Disease 2016 | September 24-25, 2016

**Combined Registration Fee for 2015 and 2016 programs: \$680**

Savings of \$170 for both programs and 30.25 AMA PRA Category 1 Credits™ available. No refund after **Dec. 31, 2015** for the 2016 program. Cancellation fee of \$75 applied.

Registration is available online. The system will step you through the profile and login process. An email address is required upon registration. Please note your username and password for future use to access other course materials. A letter of confirmation will be forwarded to this address upon receipt of payment and submitted registration. Present this letter of confirmation when checking in at the meeting registration desk.

The registration fee includes tuition, electronic course syllabus, continental breakfasts, break refreshments, and lunches. Although it is not Mayo School of Continuous Professional Development (CPD) policy to limit the number of registrants for a course, conference room facilities may necessitate closing of enrollment; therefore, early registration is advised. Enrollment for this program is limited.

**For additional information, contact:**  
Cardiovascular Continuing Education  
200 First Street SW - Gonda 6  
Rochester, MN 55905

E-mail: [cvcme@mayo.edu](mailto:cvcme@mayo.edu)  
Phone: 800-283-6296  
Website: [ce.mayo.edu/cardiology](http://ce.mayo.edu/cardiology)

### Cancellation Policy

If you cancel your participation in this course, your registration fee, less a \$75 administrative fee, will be refunded when written notification is received by Mayo Cardiovascular CME before **September 4, 2015** ([cvcme@mayo.edu](mailto:cvcme@mayo.edu) or fax#: 507-538-0146). No refunds will be made on or after September 4, 2015. Canceled registrations are non-transferable. Mayo Cardiovascular CME reserves the right to cancel or postpone any course due to unforeseen circumstances. In the unlikely event Mayo Cardiovascular CME must cancel or postpone this course, Mayo Cardiovascular CME will refund the registration fee, but is not responsible for any related costs, charges, or expenses to participants, including fees assessed by airline/travel/lodging agencies.

### National Physician Payment Transparency Program

Mayo Clinic College of Medicine complies with the requirements of the National Physician Payment Transparency Program OPEN PAYMENTS (Physician Payments Sunshine Act).

# Program Schedule

## FRIDAY | September 18, 2015

- 7:00 p.m. Registration and Hands-on Scanning Session  
*Pre-registration requested at the time of registration.*
- 9:00 p.m. Adjourn

## SATURDAY | September 19, 2015

- 7:00 a.m. Registration  
Continental Breakfast
- 7:30 a.m. Welcome, Course Overview  
*Course Directors*

### Focus on Ventricular Function

- 7:45 a.m. Doppler Hemodynamic Assessment: Principles, Formulae, and Calculations  
*Barry L. Karon, M.D.*
- 8:15 a.m. Assessment of Left Ventricular Systolic Function: 2-D, 3-D, and Doppler Parameters  
*Benjamin F. Wong, M.D.*
- 8:45 a.m. Myocardial Strain Imaging  
*Rekha Mankad, M.D.*
- 9:15 a.m. Cases in Systolic Function/Strain Imaging  
*Benjamin F. Wong, M.D.*  
*Rekha Mankad, M.D.*
- 9:45 a.m. Questions & Answers  
*Drs. Karon, Wong & Mankad*
- 9:55 a.m. Refreshment Break
- 10:15 a.m. Echocardiographic Assessment of Right Ventricular Systolic Function: 2-D, M-Mode, and Doppler Parameters  
*Rekha Mankad, M.D.*
- 10:45 a.m. Echocardiographic Assessment of Diastolic Function  
*Merri L. Bremer, Ed.D., R.N., R.D.C.S.*
- 11:15 a.m. Cases in Diastolic Function/Heart Failure  
*Barry L. Karon, M.D.*
- 11:45 a.m. Questions & Answers  
*Drs. Mankad, Bremer & Karon*
- 12:00 p.m. Lunch

### Focus on Coronary Artery Disease

- 1:00 p.m. Coronary Artery Anatomy and Echocardiographic Assessment of Regional Wall Motion  
*Sally J. Miller, B.S., R.T.(R), R.D.C.S.*
- 1:25 p.m. Echo for Acute Myocardial Infarction and Mechanical Complications  
*Rekha Mankad, M.D.*

- 1:55 p.m. Case Presentation: Apical Ballooning  
*Merri L. Bremer, Ed.D., R.N., R.D.C.S.*
- 2:10 p.m. Echo Contrast Tips and Tricks  
*Joshua G. Fosland, B.S., R.D.C.S.*
- 2:40 p.m. Q & A  
*Faculty*
- 2:55 p.m. Refreshment Break
- 3:15 p.m. Ergonomics for Sonographers  
*Merri L. Bremer, Ed.D., R.N., R.D.C.S.*
- 3:45 p.m. Stress Echo Cases and Tips  
*Benjamin F. Wong, M.D.*  
*Joshua G. Fosland, B.S., R.D.C.S.*
- 4:30 p.m. Adjourn

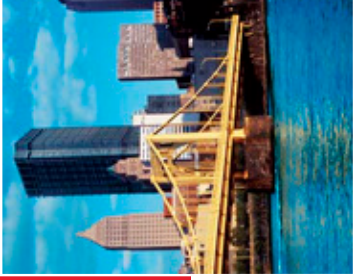
## SUNDAY | September 20, 2015

- 7:00 a.m. Continental Breakfast
- 7:30 a.m. Tips for Echo Lab Accreditation  
*Beverly Gorman, R.D.C.S.*

### Focus on Myocardial Disease

- 8:00 a.m. Restrictive Cardiomyopathy  
*Benjamin F. Wong, M.D.*
- 8:30 a.m. Hypertrophic Cardiomyopathy  
*Barry L. Karon, M.D.*
- 9:00 a.m. Dilated Cardiomyopathy and Cardiac Transplant  
*Sally J. Miller, B.S., R.T.(R), R.D.C.S.*
- 9:30 a.m. Questions & Answers  
*Drs. Wong, Karon & Ms. Miller*
- 9:40 a.m. Refreshment Break
- 10:00 a.m. Role of Echocardiography in Ventricular Assist Devices  
*Sunil V. Mankad, M.D.*
- 10:25 a.m. Potpourri of Echocardiography in Systematic Disease  
*Joshua G. Fosland, B.S., R.D.C.S.*
- 10:50 a.m. Echocardiography in Diseases of the Aorta  
*Sunil V. Mankad, M.D.*
- 11:15 a.m. Questions & Answers  
*Drs. Mankad, Mankad & Mr. Fosland*
- 11:30 a.m. Working Lunch
- 12:00 p.m. Echocardiographic Assessment of Pericardial Disease  
*Merri L. Bremer, Ed.D., R.N., R.D.C.S.*
- 12:30 p.m. Cardiac Masses: and Echo Pathology Correlation  
*Barry L. Karon, M.D.*
- 1:00 p.m. Illustrative and Interesting Cases  
*All Faculty*
- 2:00 p.m. Adjourn

**MAYO CLINIC**  
200 First Street SW  
Rochester, MN 55905



DIVISION OF CARDIOVASCULAR DISEASES

ECHO IN THE CITY OF RIVERS:

# Practical Review of Myocardial and Ischemic Heart Disease

**September 19-20, 2015**  
Wyndham Grand Pittsburgh • Pittsburgh, PA

## Course Highlights

- Doppler hemodynamics with emphasis on pitfalls and common errors
- Practical tips for cardiac imaging
- Reducing injury with ergonomic awareness
- Wall motion assessment and complications of myocardial infarction
- Echo in dilated cardiomyopathy, transplant, and LVAD
- Hypertrophic, restrictive, and infiltrative cardiomyopathies

## Special Registration Offer:

Sign-up for 2015 and 2016 programs concurrently for a complete regional program at a reduced registration.

Combined registration fee of \$680 for 2015/2016 Echo in the City of Rivers.

## Evening Scanning Session

Friday, September 18, 2015

7:00 - 9:00 p.m.

Pre-registration required at the time of registration.

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**PAID**  
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