ECHO IN THE CITY OF RIVERS: Practical Review of Valvular Heart Disease
September 24-25, 2016
Wyndham Grand Pittsburgh
Pittsburgh, PA

Division of Cardiovascular Diseases

Course Directors
Barry L. Karon, M.D., F.A.C.C., F.A.H.A., F.A.S.E.

Mayo Faculty
Joshua G. Fosland, 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.

Course Highlights
- Doppler hemodynamics with emphasis on pitfalls and common errors
- Practical tips for cardiac imaging
- Reducing injury with ergonomic awareness
- Echocardiographic assessment in valvular disease
- Echocardiographic assessment during valvular intervention

ce.mayo.edu/cardiovascular-diseases
Course Description

The course is designed to provide a practical review of the current uses and limitations of two-dimensional echocardiography, Doppler and color flow imaging in the assessment of valvular heart disease. The program will focus on valvular disease anatomy and quantitative assessment, prosthetic valve assessment and dysfunction, endocarditis and other aspects of adult echocardiography. 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.

All of a portion of this educational activity may meet the CME requirements for IAC Echocardiography accreditation.

Intended Audience

The course is designed for cardiac sonographers, echo students, fellows in training, 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 valvular heart disease
• Develop an integrated approach to the Doppler assessment of valvular stenosis and valvular regurgitation
• Discuss emerging applications of echocardiography in the evaluation of native and prosthetic valve dysfunction

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 13 AMA PRA Category 1 Credits™. 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.

Attendees should ensure in advance that their credentialing or licensing organization accepts AMA PRA Category 1 Credits™ from the sponsor of this activity.

Date and Location

The program will be held September 24-25, 2016 at the Wyndam 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 involving 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 September 1, 2016, 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 when making your reservation.

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

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

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Benjamin F. Wong, M.D.

Guest Faculty
Beverly Gorman, R.D.C.S.
Senior 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/cardiology
Registration Fee: $425

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 the Division of Cardiovascular Diseases 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
Phone: 800-283-6296
Website: 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 Clinic Cardiovascular CME before September 9, 2016 (cvcme@mayo.edu or 800-283-6296). No refunds will be made on or after September 9, 2016.

Canceled registrations are non-transferable. Mayo Clinic Cardiovascular CME reserves the right to cancel or postpone any course due to unforeseen circumstances. In the unlikely event Mayo Clinic Cardiovascular CME must cancel or postpone this course, Mayo Clinic 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

**SATURDAY | September 24, 2016**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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</thead>
<tbody>
<tr>
<td>7:00 a.m.</td>
<td>Registration and Continental Breakfast</td>
</tr>
<tr>
<td>7:30 a.m.</td>
<td>Welcome, Course Overview and Orientation to the Audience Response System</td>
</tr>
<tr>
<td>7:45 a.m.</td>
<td><strong>FOCUS ON VENTRICULAR FUNCTION</strong></td>
</tr>
<tr>
<td>7:45 a.m.</td>
<td>Doppler Hemodynamic Assessment: Principles, Formulae, and Calculations</td>
</tr>
<tr>
<td>8:15 a.m.</td>
<td>Assessment of Left Ventricular Systolic Function: 2-D, 3-D, and Doppler Parameters</td>
</tr>
<tr>
<td>8:45 a.m.</td>
<td>Echocardiographic Assessment of Right Heart Pressures and Right Ventricular Function</td>
</tr>
<tr>
<td>9:15 a.m.</td>
<td>Strain Imaging for Assessment of Right and Left Ventricular Function</td>
</tr>
<tr>
<td>9:45 a.m.</td>
<td>Questions and Answers Faculty</td>
</tr>
<tr>
<td>9:55 a.m.</td>
<td>Refreshment Break</td>
</tr>
<tr>
<td>10:15 a.m.</td>
<td>Echocardiographic Assessment of Diastolic Function</td>
</tr>
<tr>
<td>10:45 a.m.</td>
<td>Cases in Left and Right Ventricular Function in Patients With Valvular Disease</td>
</tr>
<tr>
<td>11:15 a.m.</td>
<td>Morning Stretch! Ergonomics for Sonographers</td>
</tr>
<tr>
<td>11:45 a.m.</td>
<td>Questions and Answers Faculty</td>
</tr>
<tr>
<td>12:00 p.m.</td>
<td>Lunch</td>
</tr>
</tbody>
</table>

**FOCUS ON VALVULAR FUNCTION**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>2:30 p.m.</td>
<td>Stress Echo for Valvular Stenosis (Including MS, Low-Output AS)</td>
</tr>
<tr>
<td>3:00 p.m.</td>
<td>Questions and Answers Faculty</td>
</tr>
<tr>
<td>3:10 p.m.</td>
<td>Refreshment Break</td>
</tr>
<tr>
<td>3:30 p.m.</td>
<td>Echo Assessment of Tricuspid and Pulmonic Valve Disease</td>
</tr>
<tr>
<td>4:00 p.m.</td>
<td>Tips for Echo Lab Accreditation</td>
</tr>
<tr>
<td>4:30 p.m.</td>
<td>Adjourn</td>
</tr>
</tbody>
</table>

**SUNDAY | September 25, 2016**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:00 a.m.</td>
<td>Continental Breakfast</td>
</tr>
<tr>
<td>7:30 a.m.</td>
<td><strong>FOCUS ON VALVULAR REGURGITATION AND PROSTHESES</strong></td>
</tr>
<tr>
<td>7:30 a.m.</td>
<td>Echo Pathology of Mitral and Aortic Regurgitation</td>
</tr>
<tr>
<td>8:00 a.m.</td>
<td>Echocardiographic Assessment of Mitral and Aortic Regurgitation: 2-D, M-Mode, and Doppler Parameters</td>
</tr>
<tr>
<td>8:30 a.m.</td>
<td>Quantitative Assessment of Valvular Regurgitation by PISA and Continuity Methods</td>
</tr>
<tr>
<td>9:00 a.m.</td>
<td>Cases in Valvular Regurgitation</td>
</tr>
<tr>
<td>9:30 a.m.</td>
<td>Questions and Answers Faculty</td>
</tr>
<tr>
<td>9:40 a.m.</td>
<td>Refreshment Break</td>
</tr>
<tr>
<td>10:00 a.m.</td>
<td>Prosthetic Valves: Assessment of Normal Prosthetic Function and Dysfunction</td>
</tr>
<tr>
<td>10:30 a.m.</td>
<td>Interventional Echocardiography for Mitral Valve Disease</td>
</tr>
<tr>
<td>11:00 a.m.</td>
<td>Prosthesis-Patient Mismatch</td>
</tr>
<tr>
<td>11:20 a.m.</td>
<td>Questions and Answers Faculty</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>Lunch (box lunch)</td>
</tr>
<tr>
<td>12:00 p.m.</td>
<td>Cases in Endocarditis</td>
</tr>
<tr>
<td>12:30 p.m.</td>
<td>Interventional Echocardiography for Aortic Valve Disease</td>
</tr>
<tr>
<td>1:00 p.m.</td>
<td>Illustrative and Interesting Cases</td>
</tr>
<tr>
<td>2:00 p.m.</td>
<td>Adjourn</td>
</tr>
</tbody>
</table>

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### Notes:

- **Stress Echo for Valvular Stenosis**: This refers to the assessment of valvular stenosis using stress echocardiography.
- **Questions and Answers**: These sessions are for audience engagement and clarification.
- **Refreshment Breaks**: Provided to allow attendees to rest and refresh during the conference.
- **Prosthetic Valves**: The assessment of normal prosthetic function and dysfunction.
- **Interventional Echocardiography**: Techniques for evaluating and treating valvular diseases.
- **Prosthesis-Patient Mismatch**: Examination of the relationship between the patient and the prosthetic valve.
- **Illustrative and Interesting Cases**: These are cases that are particularly noteworthy or instructive.

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**SCHEDULE**

**SATURDAY**

- Registration and Continental Breakfast
- Welcome, Course Overview and Orientation to the Audience Response System
- FOCUS ON VENTRICULAR FUNCTION:
  - Doppler Hemodynamic Assessment: Principles, Formulae, and Calculations
  - Assessment of Left Ventricular Systolic Function: 2-D, 3-D, and Doppler Parameters
  - Echocardiographic Assessment of Right Heart Pressures and Right Ventricular Function
  - Strain Imaging for Assessment of Right and Left Ventricular Function
- Questions and Answers Faculty
- Refreshment Break
- Echocardiographic Assessment of Diastolic Function
- Cases in Left and Right Ventricular Function in Patients With Valvular Disease
- Morning Stretch! Ergonomics for Sonographers
- Questions and Answers Faculty
- Lunch

**SUNDAY**

- Continental Breakfast
- FOCUS ON VALVULAR REGURGITATION AND PROSTHESES:
  - Echo Pathology of Mitral and Aortic Regurgitation
  - Echocardiographic Assessment of Mitral and Aortic Regurgitation: 2-D, M-Mode, and Doppler Parameters
  - Quantitative Assessment of Valvular Regurgitation by PISA and Continuity Methods
  - Cases in Valvular Regurgitation
  - Questions and Answers Faculty
  - Refreshment Break
  - Prosthetic Valves: Assessment of Normal Prosthetic Function and Dysfunction
  - Interventional Echocardiography for Mitral Valve Disease
  - Prosthesis-Patient Mismatch
  - Questions and Answers Faculty
  - Lunch (box lunch)
  - Cases in Endocarditis
  - Interventional Echocardiography for Aortic Valve Disease
  - Illustrative and Interesting Cases All Faculty
  - Adjourn
DIVISION OF CARDIOVASCULAR DISEASES

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Practical Review of Valvular Heart Disease

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Wyndham Grand Pittsburgh
Pittsburgh, PA

MAYO CLINIC
200 First Street SW / GO6-138
Rochester, MN 55905

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