Division of Cardiovascular Diseases

Echocardiography in Pediatric and Adult Congenital Heart Disease
THE CORNERSTONE OF CARDIAC IMAGING

October 8-11, 2015

Arizona Grand
8000 S. Arizona Grand Parkway
Phoenix, AZ 85044

Course Directors:
Patrick W. O’Leary, M.D., FACC, FASE
Frank Cetta, M.D., FACC, FASE

Register Online Today!
http://ce.mayo.edu/chd2015
COURSE DESCRIPTION
The 31st Annual Echocardiography in Pediatric and Adult Congenital Heart Disease Symposium will use a clinical case based format to highlight the use of echocardiography and other cardiac imaging techniques to recognize, understand, and manage patients with congenital heart disease. This four-day symposium is designed to provide a comprehensive understanding of the anatomy, clinical aspects, imaging, and management of patients with congenital heart disease. The symposium will have a distinguished faculty of pediatric and adult congenital cardiologists, sonographers, cardiac pathologists and cardiac surgeons with expertise in treatment, diagnosis, and management of patients with congenital heart disease. The symposium will consist of lectures, video examples, workshops, and panel discussions.

TEACHING MATERIALS/SYLLABUS
Attendees will be provided a link to obtain course materials on the internet and are welcome to bring a laptop or iPad during the learning sessions.

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

- Demonstrate enhanced knowledge of anatomy and physiology of common congenital cardiac conditions as well as the surgical/interventional procedures used to treat them
- Interpret 2-D echo/Doppler hemodynamics in the setting of congenital heart disease
- Recognize limitations of echocardiography and other imaging techniques
- Integrate the most up-to-date echocardiographic and multimodality imaging techniques into patient management

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.

INTENDED AUDIENCE
This course is designed for pediatric and adult cardiologists, surgeons, fellows in training, and cardiac sonographers. The emphasis is on echocardiography. Participants should have a good working knowledge of echocardiography.

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 21 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.

GRANTS AND EXHIBITS
At the time of this printing, a complete listing of commercial supporters (financial or in-kind) was not available. Appropriate acknowledgment will be given to all supporters at the time of the meeting.

Exhibits will be available for viewing at all scheduled breaks.

DATE AND LOCATION
The Echocardiography in Pediatric and Adult Congenital Heart Disease symposium will be held October 8-11, 2015. Course headquarters will be located at the Arizona Grand, 8000 South Arizona Grand Parkway, Phoenix, AZ 85044.

General Session: Kaibab/Lantana Ballroom
Exhibits/Breakfast/Breaks: Mesquite/Noble Ballroom
Reception: Oasis Pool
REGISTRATION
To register online, visit http://ce.mayo.edu/chd2015. The registration fee includes tuition, comprehensive on-line course syllabus, continental breakfasts, break refreshments, and reception. Although it is not Mayo Clinic 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. A letter of confirmation will be sent upon receipt of payment and completed registration. Please present the confirmation letter when checking in at the meeting registration desk.

For additional information, contact:
Cardiovascular Continuing Education
200 First Street SW/Gonda 6-138
Rochester, MN  55905
Website:  http://ce.mayo.edu/chd2015
E-mail:  cvcme@mayo.edu
Phone:  800-283-6296 or 507-266-6703
Fax:  507-266-7403

AIRPORT
Phoenix Sky Harbor International Airport (PHX) in Phoenix, Arizona is the recommended airport for arrival. The hotel is approximately 6 miles (15 minutes) from the Airport.

Phoenix, Arizona is a friendly city that greets thousands of visitors from around the world each year. The city is serviced by an international airport with multiple flights daily. Access to and from the airport is provided by taxi, shuttle service, and rental car.

Travel arrangements are the sole responsibility of the individual registrant.

CAR RENTAL
If you prefer to rent a car while on property, Enterprise Rent A Car is available on property. Please speak with the concierge to have this arranged.

LODGING ACCOMMODATIONS
The Arizona Grand is the only AAA Four Diamond/M&C Gold Key Award winning all-suite resort featuring expansive athletic club, spa, salon, 7-acre water park (open only on Saturday and Sunday), golf course (off property) and six unique dining venues.

Guest rooms have been reserved for attendees and their guests with special course rates at the Arizona Grand. In order to receive the special rate, reservations must be made before the room block is filled or before the expiration date of Tuesday, September 15, 2015 whichever comes first.

Reservations will be taken following this date based on space and rate availability. A special rate of $189 single/double has been negotiated for our group. Please call reservations at 877-800-4888 and identify yourself as a participant of the CHD Conference when making your reservation.

On-line reservations can be made at: https://bookings.ihotelier.com/Arizona-Grand-Resort-And-Spa/bookings.jsp?groupId=1333652&hotelId=77588

Check-in:  4:00 p.m.
Check-out:  12:00 p.m.
• High speed internet is complimentary in all guest rooms within our block of rooms.
• No resort fee.
• Complimentary self/valet parking.
• Complimentary access to the athletic club.
• Discount off published spa/salon pricing.

Lodging arrangements are the sole responsibility of the individual registrant.

Mayo Clinic Division of Cardiovascular Diseases 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.

PARKING
Complimentary self-parking and valet parking are available at the hotel.
WELCOME RECEPTION

Welcome Reception
Thursday, October 8, 2015 – 6:30-7:30 p.m.
Attendees and their guest(s) are cordially invited to join the course faculty for the Welcome Reception in the Oasis Pool. This casual reception welcomes you to Arizona, officially opens the course, and offers you the perfect opportunity to make connections with existing and new colleagues.

RECREATION/LEISURE ACTIVITIES/RESTAURANTS

Athletic club including yoga, pilates, spinning, Zumba, water aerobics, strength training and personal trainers. Mountain bikes are available through the concierge for a fee. Over 60 miles of trails for biking or hiking. In addition, there is a spa, oasis water park open Saturday/Sunday and golfing available off-property.

Additional information on visiting Arizona: http://www.arizonaguide.com/

Restaurants in the Hotel or Walking Distance: Lobby Grill (American Cuisine of all kinds), Lobby Bar (Wood-fired pizzas, burgers, and sandwiches, chicken wings and salads), Marketplace Café (Starbucks along with Grab and Go), Aunt Chilada’s (Mexican Fare), Rustler’s Rooste (Western Steakhouse with live music).

FACULTY

Course Directors
Patrick W. O’Leary, M.D., FACC, FASE
Professor of Pediatrics, Mayo Clinic; Consultant, Division of Pediatric Cardiology; Director Imaging and Outcomes Section of the Todd and Karen Wanek Family Program for Hypoplastic Left Heart Syndrome, Mayo Clinic, Rochester, MN

Frank Cetta, M.D., FACC, FASE
Professor of Pediatrics and Medicine, Mayo Clinic; Chair, Pediatric Cardiology Division; Consultant, Division of Cardiovascular Diseases and Pediatric Cardiology, Mayo Clinic, Rochester, MN

Mayo Faculty
Crystal R. Bonnichsen, M.D.
Assistant Professor of Medicine, Mayo Clinic; Consultant, Division of Cardiovascular Diseases and Internal Medicine, Mayo Clinic, Rochester, MN

Craig R. Cohen, M.D., FACC
Co-Director, Adult Congenital Cardiology, Mayo Clinic, Scottsdale, AZ; Medical Director, Arizona Pediatric Cardiology Consultants, Phoenix, AZ

William D. Edwards, M.D., FACC
Professor of Pathology (Emeritus), Mayo Clinic; Consultant, Division of Anatomic Pathology, Rochester, MN

Benjamin W. Eidem, M.D., FACC, FASE
Professor of Pediatrics and Medicine, Mayo Clinic; Consultant, Division of Cardiovascular Diseases and Pediatric Cardiology; Director, Pediatric & Fetal Echocardiography Laboratory; Co-Director, Cardiovascular Ultrasound Imaging and Hemodynamic Laboratory, Mayo Clinic, Rochester, MN

Donald J. Hagler, M.D., FACC
Professor of Pediatrics and Medicine, Mayo Clinic; Consultant, Division of Cardiovascular Diseases and Pediatric Cardiology, Mayo Clinic, Rochester, MN

Angela M. Kelle, M.D.
Senior Clinical Fellow, Division of Pediatric Cardiology; Assistant Professor of Pediatrics, Mayo Clinic, Rochester, MN

Rebecca (Becky) Lindquist, BS, R.D.C.S., FASE
Clinical Sonographer, Cardiovascular Ultrasound Imaging and Hemodynamic Laboratory; Head Research Sonographer, Congenital Echocardiography Research Laboratory, Mayo Clinic, Rochester, MN

– Faculty continued on next page.
General Information

Joseph J. Maleszewski, M.D., FACC, FCAP
Associate Professor of Pathology and Medicine, Mayo Clinic; Consultant, Divisions of Anatomic Pathology, Cardiovascular Diseases, and Molecular Genetics, Mayo Clinic, Rochester, MN

Bassem N. Mora, M.D.
Associate Professor of Surgery, Mayo Clinic; Senior Associate Consultant, Mayo Clinic; Consultant, Division of Cardiovascular Surgery, Mayo Clinic, Rochester, MN

Sabrina D. Phillips, M.D., FACC, FASE
Assistant Professor of Medicine, Mayo Clinic; Consultant, Division of Adult Cardiology, Mayo Clinic, Rochester, MN

Joseph T. Poterucha, D.O.
Senior Clinical Fellow, Division of Pediatric Cardiology; Assistant Professor of Medicine and Pediatrics, Mayo Clinic, Rochester, MN

Katie Prell, R.D.C.S.
Clinical Adult and Congenital Sonographer, Cardiovascular Ultrasound Imaging and Hemodynamic Laboratory, Mayo Clinic, Rochester, MN

Muhammad Y. Qureshi, MBBS
Assistant Professor of Pediatrics, Mayo Clinic; Associate Consultant, Division of Pediatric Cardiology, Mayo Clinic, Rochester, MN

Guest Faculty

Erik G. Ellsworth, M.D.
Assistant Director, Non-Invasive Cardiac Imaging, Phoenix Children’s Hospital, Phoenix, AZ; Arizona Pediatric Cardiology Consultants, Phoenix, AZ

Thomas R. Kimball, M.D.
Professor of Pediatrics, University of Cincinnati College of Medicine; Medical Director, Heart Institute, Cincinnati Children’s Hospital, Cincinnati, OH

John J. Nigro, M.D.
Co-director, Phoenix Children’s Heart Center - Division Chief, Cardiothoracic Surgery; Program Director, Heart Transplant - Pediatric & Adult Congenital Surgeon, Phoenix, AZ

Norman H. Silverman, M.D., D Sc (Med), FACC, FAHA, FASE
Professor of Pediatrics (Emeritus), Division of Pediatric Cardiology, Stanford University and University of California San Francisco, Honorary Professor of Pediatrics University of Cape Town

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.
Course Schedule

WEDNESDAY, OCTOBER 7, 2015
6:00-7:00 p.m. Early Registration

THURSDAY, OCTOBER 8, 2015
7:00 a.m. Registration and Continental Breakfast
7:45 a.m. Introduction and Welcome
  Dr. Patrick W. O’Leary

Introduction to Imaging in CHD
Moderator: Dr. Patrick W. O’Leary
8:00 a.m. A Systematic Approach to Echocardiography in CHD
  Dr. Frank Cetta
8:30 a.m. Image Orientation and Practical Tips for Scanning in Pediatric and Adult CHD
  Ms. Rebecca (Becky) Lindquist, RDCS
9:00 a.m. An Approach to Doppler Hemodynamics in CHD
  Dr. Patrick W. O’Leary
9:30 a.m. Stress Echo in CHD: When and How to Use It
  Dr. Thomas R. Kimball
10:00 a.m. Panel Discussion
  Drs. Cetta and Kimball and Ms. Lindquist, Dr. O’Leary, moderator
10:15 a.m. Refreshment Break

Case Studies in CHD I
Moderators: Drs. Frank Cetta and Bassem N. Mora
10:45 a.m. Cases in CHD I: Shunt Lesions (20 minute cases)
  • Anatomy of the Atrial and Ventricular Septal Defects
    Dr. William D. Edwards
  • Infant VSD
    Dr. Angela M. Kelle
  • Late Presenting VSD
    Dr. Crystal R. Bonnichsen
  • Secundum ASD
    Dr. Donald J. Hagler
12:05 p.m. Panel Discussion
  Drs. Edwards, Kelle, Bonnichsen, and Hagler; Drs. Cetta and Mora, moderators
12:15 p.m. Lunch – Paseo

Case Studies in CHD II: Shunt Lesions
Moderators: Drs. Frank Cetta and Bassem N. Mora
1:15 p.m. Case Studies in CHD II: Shunt Lesions (25 minute cases)
  • Anatomy Related to PDA, AP Window, AVSDs
    Dr. Joseph J. Maleszewski
  • PDA and AP Window
    Dr. Joseph T. Poterucha
  • Complete Atrioventricular Septal Defect
    Dr. Norman H. Silverman
  • Partial AVSD
    Dr. Sabrina D. Phillips
  • Sinus Venous ASD and Partial Anomalous Pulmonary Vein
    Dr. Muhammad Y. Qureshi
3:00 p.m. Panel Discussion
  Drs. Maleszewski, Poterucha, Silverman, Phillips, and Qureshi; Drs. Cetta and Mora, moderators
3:15 p.m. Refreshment Break
3:45 p.m. Echo/Surgical Case Consultations
  Case Presenters: Drs. Ellsworth, Hagler, and Phillips
  Moderator: Dr. O’Leary
  Surgical Consultants: Drs. Mora and Nigro
  Additional Panelists: Entire Echo Faculty
4:30 p.m. Echo Challenge Cases
  Moderator: Dr. Cetta
  Team Captains: Drs. Silverman and O’Leary
  Presenters: Drs. Eidem, Qureshi, Bonnichsen, Cetta, and Ms. Prell
6:00 p.m. Adjourn
6:30 p.m. Welcome Reception
  Oasis Poolside – Family Invited
FRIDAY, OCTOBER 9, 2015

7:00 a.m. Continental Breakfast

**Case Studies in CHD – III**
Moderators: Drs. Benjamin W. Eidem and Bassem N. Mora

7:30 a.m. Anatomic and Morphologic Features Related to VA Connection and Conotruncal Malformations
Dr. William D. Edwards

8:00 a.m. Case Studies: Tetralogy of Fallot
Dr. Norman H. Silverman

8:30 a.m. Case Studies: Complete Transposition
Dr. Thomas R. Kimball

9:00 a.m. Case Studies: DORV
Dr. Patrick W. O’Leary

9:30 a.m. Panel Discussion
Drs. Edwards, Silverman, Kimball, and O’Leary; Drs. Eidem and Mora, moderators

9:45 a.m. Refreshment Break

**Case Studies Involving the Adult with CHD**
Moderators: Drs. Crystal R. Bonnichsen and Bassem N. Mora

10:15 a.m. Anatomy Related to CCTGA and Complete TGA
Dr. Joseph J. Maleszewski

10:45 a.m. Congenitally Corrected TGA (Pre- and Postop)
Dr. Sabrina D. Phillips

11:15 a.m. Atrial Switch Operations for Complete TGA
Dr. Frank Cetta

11:45 a.m. Late Complication of the Arterial Switch Operation for Complete TGA
Dr. Benjamin W. Eidem

12:15 p.m. Panel Discussion
Drs. Maleszewski, Phillips, Cetta, and Eidem; Drs. Bonnichsen and Mora, moderators

12:30 p.m. Lunch
Paseo

1:30 p.m. Concurrent Workshops
(Select which you will attend)

- **Session A**
  Cardiac Murmurs – Defining the Cause
  Main Ballroom
  Faculty – Drs. Cetta, Hagler, Poterucha, and Kelle, and Ms. Lindquist

- **Session B**
  3-D Imaging: How to Use this Technology in CHD
  Ocotillo
  Faculty – Drs. Qureshi and Bonnichsen, and Ms. Prell

3:00 p.m. Adjourn

SATURDAY, OCTOBER 10, 2015

7:00 a.m. Continental Breakfast

**Case Studies in CHD IV**
Moderators: Drs. Frank Cetta and Bassem N. Mora

7:30 a.m. Anatomic and Morphologic Features of Ebstein Malformation and Complex CHD
Dr. Joseph J. Maleszewski

8:00 a.m. Case Studies: Ebstein Malformation
Dr. Patrick W. O’Leary

8:30 a.m. Case Studies: AV Valve Atresia
Dr. Thomas R. Kimball

9:00 a.m. Congenital Mitral Valve Anomalies
Dr. Norman H. Silverman

9:30 a.m. Panel Discussion
Drs. Maleszewski, O’Leary, Kimball, and Silverman; Drs. Cetta and Mora, moderators

9:45 a.m. Refreshment Break
Course Schedule

10:15 a.m.  Echo Challenge Cases
Moderator:  Dr. Eidem
Team Captains:  Drs. Kimball and Cetta
Presenters:  Drs. Kelle and Poterucha and Ms. Prell and Lindquist

11:15 a.m.  Echo/Surgical Case Consultations
Case Presenters:  Drs. Cohen, Bonnichsen and Qureshi
Moderator:  Dr. O’Leary
Surgical Consultants:  Drs. Mora and Nigro
Additional Panelists:  Entire Echo Faculty

12:00 p.m.  Adjourn

SUNDAY, OCTOBER 11, 2015

7:30 a.m.  Continental Breakfast

Case Studies in CHD V
Moderators:  Drs. Patrick W. O’Leary and Bassem N. Mora

8:00 a.m.  Anatomic and Morphologic Features Related to Postoperative CHD
Dr. William D. Edwards

8:30 a.m.  Case Studies:  Repaired Tetralogy of Fallot
Dr. Crystal R. Bonnichsen

9:00 a.m.  Case Studies – Rastelli Operation
Dr. Sabrina D. Phillips

10:00 a.m.  Panel Discussion
Drs. Edwards, Bonnichsen, and Phillips; Drs. O’Leary and Mora, moderators

10:15 a.m.  Cases of the Year
Case Presenters:  Drs. Kimball, Silverman, and O’Leary
Review Panelists:  Dr. Mora, Echo Faculty

11:00 a.m.  Adjourn
REGISTRATION

Registration is only available online at:
http://ce.mayo.edu/chd2015

Registration Fee:
Course Registration (MD, PhD, DO, PharmD)  $750.00
Course Registration (Residents, Sonographers, RN) $610.00

Mayo Clinic Division of Cardiovascular Diseases implemented an online conference registration system in January 2012. If this is your first time using the online system, you will need to create a profile. The attendee’s email address is required upon registration. A letter of confirmation and receipt will be forwarded to this email address upon receipt of submitted registration and payment. Present this letter when checking in at the meeting registration desk.

The registration fee includes tuition, electronic course syllabus, continental breakfasts, break refreshments, lunch, and reception.

Although it is not 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 6-138
Rochester, MN 55905
E-mail: cvcme@mayo.edu
Phone: 800-283-6296 or 507-266-6703
Website: http://ce.mayo.edu/chd2015

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 Division of Cardiovascular Diseases before Thursday, September 24, 2015 (fax#: 507-266-7403).
No refunds will be made on or after Thursday, September 24, 2015. Canceled registrations are non-transferable.

Division of Cardiovascular Diseases reserves the right to cancel or postpone any course due to unforeseen circumstances. In the unlikely event Division of Cardiovascular Diseases must cancel or postpone this course, Division of Cardiovascular Diseases 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.
REGISTER ONLINE TODAY!
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31st Annual
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REGISTER ONLINE NOW!

If you already received a copy of this brochure, please give this brochure to an interested colleague.

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