



Mayo School of Continuous Professional Development

27th Annual

Echocardiographic Symposium at Vail

State-of-the-Art Review, Live Scanning, Clinical Decision-Making, and Multimodality Imaging

July 22-25, 2013

Early registration July 21, 2012 (5-6 p.m.)

Vail Marriott • Vail, Colorado

Program Directors:

George M. Gura, Jr., M.D., FACC

Fletcher A. Miller, Jr., M.D., FACC, FAHA, FASE

Program Co-Directors:

Frank Cetta, M.D., FACC, FASE

Grace Lin, M.D., FACC

Eric E. Williamson, M.D.

Faculty:

Christopher P. Appleton, M.D., FACC, FASE

Crystal R. Bonnichsen, M.D.

Daniel D. Borjeson, M.D., FAC

Benjamin W. Eidem, M.D., FACC, FASE

Lawrence W. Gaul, M.D., FACC

Catherine A. Harris, MA, RDCS

Jonathan N. Johnson, M.D.

Vuyisile T. Nkomo, M.D., MPH, FACC

Stephen (Steve) F. Tucker, RDCS

Phillip M. Young, M.D.



REGISTER TODAY!

<http://www.mayo.edu/cmel/cardiovascular-diseases-2013R013>

Program Schedule

All sessions will be held at Vail Marriott, 715 W. Lionshead Circle, Vail, CO 81657. Meeting room is in the Grand Ballroom on the lower level. Meeting site telephone: 970-476-4444/FAX: 970-476-1647.

Views expressed in this program are those of the individual speaker and do not necessarily reflect views of the Mayo Clinic.

Sunday, July 21, 2013

5:00-6:00 p.m. **Registration**
Grand Ballroom Foyer, Lower Level

Monday, July 22, 2013

6:30 a.m. **Registration – Continental Breakfast**

7:10 a.m. **Welcome and Introduction**
George M. Gura, Jr., M.D.

7:15 a.m. **Echo in Practice Pre-Test**
George M. Gura, Jr., M.D.

SYSTOLIC AND DIASTOLIC HEART FAILURE: ECHO/CT/MRI

Dr. George M. Gura, Jr., presiding

7:30 a.m. **Diastolic Heart Failure 2013: State-of-the-Art 2013**
Christopher P. Appleton, M.D.

7:55 a.m. **Dyspnea – Noninvasive Evaluation With Multimodality Imaging**
Grace Lin, M.D.

8:20 a.m. **Echocardiography In Congestive Heart Failure – Guide to Therapy. What the CHF Specialist Needs From the Echocardiogram.**
Daniel D. Borjeson, M.D.

8:45 a.m. **Cardiac Resynchronization Therapy and Devices for Congestive Heart Failure**
Grace Lin, M.D.

9:10 a.m. **Panel Discussion**
Drs. Appleton, Lin, and Borjeson; Dr. Gura, moderator

9:40 a.m. **Refreshment Break – Visit Exhibits**

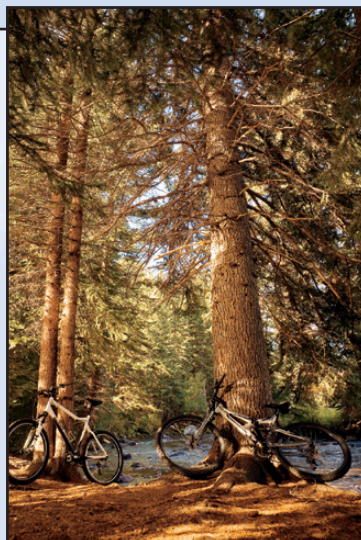
SYSTOLIC AND DIASTOLIC HEART FAILURE: ECHO/CT/MRI

Dr. George M. Gura, Jr. presiding

10:00 a.m. **Challenging Cases in Congestive Heart Failure. Use of Echo, CT, and MRI**
Grace Lin, M.D.

10:25 a.m. **Advanced Heart Failure. When to Refer for LVAD or Transplant and Use of Echo for Follow-up LVAD.**
Daniel D. Borjeson, M.D.

10:50 a.m. **Constriction vs. Restriction Cardiomyopathy**
Christopher P. Appleton, M.D.



Program Schedule

- 11:15 a.m. **MRI/CT for Pericardial Disease**
Phillip M. Young, M.D.
- 11:40 a.m. **Incremental Value of 3-D Echo**
Vuyisile T. Nkomo, M.D.
- 12:05 p.m. **Panel Discussion**
Drs. Lin, Borgeson, Appleton, Young, and Nkomo; Dr. Gura, moderator
- 12:30 p.m. **Afternoon Free – See You at the Afternoon Workshop!**
- 4:00 p.m. **WORKSHOP**
Hemodynamic Workshop (Systolic and Diastolic)
Drs. Lin and Appleton
Live Demonstrations – Strain and Diastolic Function
Cathryn A. Harris, RDCS, and Stephen (Steve) F. Tucker, RDCS
- 6:00 p.m. **Adjourn**
- 6:00-7:00 p.m. **Welcome Reception**
Ballroom Foyer
Attendees and their guests invited.

Tuesday, July 23, 2013

- 7:00 a.m. Continental Breakfast

MYOCARDIAL

Dr. Christopher P. Appleton, presiding

- 7:30 a.m. **Nonischemic Cardiomyopathy – Hypertrophic, Hypertensive, and Infiltrative. When is LV Outflow Tract Gradient Not Due to HOCM?**
Christopher P. Appleton, M.D.
- 7:55 a.m. **MRI for Nonischemic Cardiomyopathy**
Eric E. Williamson, M.D.
- 8:20 a.m. **Role of Echocardiography Acute Coronary Syndromes Including Role of Echocardiography for Apical Balloon Syndrome**
Vuyisile T. Nkomo, M.D.
- 8:45 a.m. **CT and MRI for Ischemic Myocardial Disease**
Eric E. Williamson, M.D.
- 9:10 a.m. **Adult Congenital Heart Disease in 2013 – Role of Echocardiography in Clinical Decision Making**
Frank Cetta, M.D.
- 9:40 a.m. **Panel Discussion**
Drs. Williamson, Nkomo, and Cetta; Dr. Appleton, moderator
- 10:00 a.m. **Refreshment Break – Visit Exhibits**

CONGENITAL HEART DISEASE

Dr. Frank Cetta, presiding

- 10:30 a.m. **Pregnancy in Adults With Congenital Heart Disease – Relative vs Absolute Contraindications**
Crystal R. Bonnicksen, M.D.
- 10:55 a.m. **Ascending Aortic Aneurysmal Disease Including Coarctation. Multimodality Imaging – CT, MRI, Echo**
Eric E. Williamson, M.D.

Program Schedule



- 11:20 a.m. **Catheter Based Intervention in Adult Congenital Heart Disease (ACHD)**
Frank Cetta, M.D.
- 11:55 a.m. **Role of Imaging in Evaluation of Rejection in Pediatric and Adult Congenital Heart Disease. Experience with Cardiac Transplantation.**
Jonathan N. Johnson, M.D.
- 12:10 p.m. **Coronary Artery Anomalies – Echo, CT, and MRI**
Benjamin W. Eidem, M.D. and Eric E. Williamson, M.D.
- 12:30 p.m. **Afternoon Free – See You at the Afternoon Workshop!**

SONOGRAPHER WORKSHOP

- 3:00 p.m. **Sonographer Workshop – Demonstration and Hands-on Opportunity for Sonographers**
Cathryn A. Harris, RDCS, and Stephen (Steve) F. Tucker, RDCS

WORKSHOP ON CONGENITAL HEART DISEASE

Dr. Frank Cetta, presiding

- 4:00 p.m. **Timing of Pulmonary Valve Replacement for Patients With Tetralogy**
Crystal R. Bonnicksen, M.D.
- 4:20 p.m. **Assessment of Ventricular Function in Adult Congenital Heart Disease**
Jonathan N. Johnson, M.D.
- 4:40 p.m. **Sudden Death Screening in Young Adults**
Benjamin W. Eidem, M.D.
- 5:10 p.m. **Novel Management Strategies for Ebstein Anomaly**
Frank Cetta, M.D.
- 5:30 p.m. **CT & MRI in Congenital Heart Disease**
Phillip M. Young, M.D.
- 6:00 p.m. **Panel Discussion**
Drs. Bonnicksen, Johnson, Eidem, and Young; Dr. Cetta, moderator
- 6:30 p.m. **Adjourn**

Wednesday, July 24, 2013

- 7:00 a.m. **Continental Breakfast**

VALVULAR HEART DISEASE

Dr. Fletcher A. Miller, Jr., presiding

- 7:30 a.m. **Echocardiographic Caveats in Evaluation of Clinical Cases of Aortic Stenosis and Mitral Stenosis. Causes of Mismatch of Gradient and Area.**
Fletcher A. Miller, Jr., M.D.
- 7:55 a.m. **Aortic Regurgitation Assessment and Optimal Timing of Surgery Including Asymptomatic Patients. Will Drugs Delay Surgery? Role of AV Repair.**
Vuyisile T. Nkomo, M.D.
- 8:20 a.m. **Mitral Regurgitation: Hemodynamic Cases – Is the Short Form of PISA Reliable?**
Daniel D. Borgeson, M.D.

Program Schedule

- 8:45 a.m. **Guidelines for Surgery for Mitral Valve Regurgitation: Conventional Robotic Approaches**
Fletcher A. Miller, Jr., M.D.
- 9:10 a.m. **Transcatheter Aortic Valve Dysfunction – Transcatheter Aortic Valve Implantation (TAVI). Value of Echo.**
Vuyisile T. Nkomo, M.D.
- 9:35 a.m. **Panel Discussion**
Drs. Nkomo and Borgeson; Dr. Miller, moderator
- 10:00 a.m. **Refreshment Break – Visit Exhibits**

POTPOURRI OF INTERESTING CASE STUDIES

Dr. George M. Gura, Jr., presiding

- 10:30 a.m. **Clinical Cases in Common Systemic Diseases With Multimodality Imaging**
Christopher P. Appleton, M.D.
- 10:55 a.m. **Challenging Cases in Congenital Heart Disease**
Jonathan N. Johnson, M.D.
- 11:20 a.m. **Cases of Prosthetic Valve Dysfunction**
Fletcher A. Miller, Jr., M.D.
- 11:45 a.m. **Assessment of Chest Pain Using CTA**
Eric E. Williamson, M.D.
- 12:05 p.m. **Panel Discussion**
Drs. Appleton, Johnson, Miller, and Williamson; Dr. Gura, moderator
- 12:30 p.m. **Afternoon Free – See You at the Afternoon Workshop!**

LIVE CASE SCANNING WORKSHOP

- 3:30 p.m. **Live Case Demonstrations**
Drs. Fletcher A. Miller, Jr. and Lawrence Gaul, and Ms. Harris and Mr. Tucker
- 5:00 p.m. **Adjourn**

Thursday, July 25, 2013

- 7:30 a.m. **Continental Breakfast**

NEWER TECHNOLOGY AND CLINICAL CASES

Dr. Fletcher A. Miller, Jr., presiding

- 8:00 a.m. **Post-Test**
Fletcher A. Miller, Jr., M.D.
- 8:30 a.m. **More Adult Congenital Heart Disease Cases With Echo and MRI**
Drs. Crystal R. Bonnicksen, Benjamin W. Eidem, and Phillip M. Young
- 8:45 a.m. **Interesting Cases of Myopericardial Diseases Including Strain Cases**
Fletcher A. Miller, Jr., M.D.
- 9:30 a.m. **Final Take Home Points from All Faculty**
All Faculty
- 10:00 a.m. **Challenging Clinical Cases from Mayo Clinic**
Drs. Christopher P. Appleton, Jonathan N. Johnson, Fletcher A. Miller, Jr., Vuyisile T. Nkomo, and Phillip M. Young
- 11:00 a.m. **Adjourn**

REGISTRATION

Register online:

<http://www.mayo.edu/cme/cardiovascular-diseases-2013R013>

Registration Fee:

Course Registration (MD, PhD, DO)	\$760.00
Course Registration (Fellows, Sonographers, RN)	\$525.00
Course Registration One Day Fee (one day attendance only)	\$250.00

Mayo Clinic Division of Cardiology has recently implemented an online conference registration system. If this is your first time using the online system, you will need to create a profile and login account.

Register by entering the url:

<http://www.mayo.edu/cme/cardiovascular-diseases-2013R013>

and click on Register Now. The system will guide you through the profile and login process. An e-mail address is required upon registration. 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, on-line course syllabus, continental breakfasts, break refreshments, and reception. 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 6-472
Rochester, MN 55905

E-mail: cvcme@mayo.edu

Phone: 800-283-6296 or 507-266-6703

Website: *www.mayo.edu/cme/cardiovascular-diseases-2013R013*



General Information

Course Description

This symposium is an intensive and comprehensive review of state-of-the-art echocardiography to a wide variety of cardiovascular disorders and will have an emphasis on introduction of new technologies and how to use echocardiographic information for the care of our patients. Special emphasis will be on integration of Echo, CT, and MRI and their incremental value in clinical cardiology. The central location and presentation schedule are intended to allow the participants to balance the educational aspects of the program with a summertime family vacation in the beautiful Rocky Mountains. This symposium will stress the integration of all echocardiography techniques into the comprehensive ultrasound examination. Particular emphasis will include new technologies, Doppler hemodynamics, tissue Doppler, diastology, transesophageal echocardiography, and heart failure (myocardial and pericardial disease) and adult congenital heart disease.

Unique to this course is live scanning of patients with various CV disorders, which will be coordinated with Dr. Lawrence W. Gaul of the Vail Clinic. This session will emphasize the importance of comprehensive echocardiographic acquisition and management decision based on echocardiographic data.

There will be ample time each afternoon for the participant to enjoy a multitude of summertime activities in this picturesque and relaxing environment.

Teaching Material/Syllabus

Attendees will be provided a link for electronic syllabus.

Intended Audience

This conference is specifically designed for adult and congenital cardiovascular specialists, internists, anesthesiologists, critical care physicians, surgeons, anesthesiologists, and sonographers interested in the clinical application of echocardiography.

Course Learning Objectives

Upon completion of this program, attendees should be able to:

- distinguish the difference between new technologies of cardiac ultrasound including 3-D, tissue Doppler imaging, strain, and strain rate imaging;
- integrate routine calculations of intracardiac pressures and valve areas;
- integrate information from two-dimensional, spectral Doppler, color flow and tissue Doppler echocardiography for diagnosis and management of a wide variety of clinical cardiovascular problems, including diastolic function;
- integrate information from supportive imaging modalities, such as cardiac MRI and cardiac CT, to supplement diagnostic information obtained using echocardiography;
- summarize clinical cases, using the application of echocardiography.

Registration

Registrations are accepted online at <http://www.mayo.edu/cme/cardiovascular-diseases-2013R013>. The registration fee includes tuition, comprehensive course electronic syllabus, continental breakfasts, break refreshments, and reception. Although it is not Mayo School of Continuous Professional Development's 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 on-line registration form. Please present the confirmation letter when checking in at the meeting registration desk.

For additional information, contact:
Mayo Clinic Cardiovascular Diseases
200 1st Street SW/GO6-472
Rochester, MN 55905

Website: <http://www.mayo.edu/cme/cardiovascular-diseases-2013R013>

E-mail: cvcme@mayo.edu

Phone: 800-283-6296 or 507-266-6703

Fax: 507-266-7403

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 School before Monday, July 8, 2013, (cvcme@mayo.edu or fax#: 507-266-7403). No refunds will be made on or after Monday, July 8, 2013. Canceled registrations are non-transferable.

Mayo School of Continuous Professional Development reserves the right to cancel or postpone any course due to unforeseen circumstances. In the unlikely event Mayo School of Continuous Professional Development must cancel or postpone this course, Mayo School of Continuous Professional Development 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.

Credit

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

College of Medicine, Mayo Clinic, designates this live activity for a maximum of 24 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.

Location

There are few places as beautiful and picturesque as the Rocky Mountains in the summertime. Vail is a unique family vacation spot and is safe and beautiful, as well as healthy, with numerous activities available. No matter what the age differences, there are hiking trails that range from very easy to difficult, museums, evening concerts in the Gerald R. Ford Amphitheater, the Vail Nature Center, and fishing trips in which children can attend.

Make sure you go up the gondola. The ride is beautiful and free in the evenings after the slopes close. Another nice summer drive is over Shrine Pass to Redcliff. This road is a little rough, but the wildflowers don't get much better anywhere. The wilderness around Vail goes unappreciated. Rock Climbing in Vail is becoming increasingly popular, and with easy access to #1 rated professional mountain guides in Vail, this should be on everyone's tick list.

Vail offers visitors several types of outdoor sports and activities. The Vail Valley is crisscrossed by miles out mountain bike single-track that links the valley floor with the high alpine terrain above tree line. Those who are not traveling with their own bikes can rent them at the hotel or take one of their guided bike tours. Additional summertime outdoor activities include fly fishing, golfing, hiking, rafting, kayaking, hiking, jeep tours, and horseback riding at the 4-Eagle Ranch. The 4-Eagle Ranch offers a wide variety of fun family activities centered around a real Western Ranch, including horseback rides, cattle round-ups and Western nights with dinner and a Wild West show.

Lodging Accommodations

To secure your room at Vail Marriott, please call 877-622-3140 or 970-476-4444 and state that you will be attending Echo Summer program.

In addition, you can book your room on-line at: <https://resweb.passkey.com/go/echo2013>

The room rate is \$184 single/double a night. Contact the Marriott to receive pricing on condominiums which are also available. When you make your reservation, please be sure to ask about any additional fees, early departure fees, or cancellation penalties. This is a busy time in Vail, and if you intend to extend your stay or arrive early to include a family vacation, we would recommend early registration to secure the room arrangements. Hotel reservations must be made on or before Friday, June 21, 2013. All reservation requests will require a credit card guarantee. All reservations require a two night, non-refundable deposit. If reservation is cancelled within 30 days prior to arrival, individual will forfeit the deposit for all nights reserved. All no-shows are considered guaranteed bookings and will be charged two nights' room and tax. Any early departures will forfeit all remaining room night's room and tax charges.

Transportation

Vail is two hours from Denver and can be easily reached by van or limousine service. Private transportation is usually not necessary in Vail as a free bus transportation system is operated by Vail Associates throughout the Vail Valley and extends to the Beaver Creek area.

Special discounted transportation through Colorado Mountain Express has been arranged. To make your reservation, please call 800-525-6363 and ask for the special ECHO rate.

Welcome Reception

Monday, July 22, 2013 – 6:00-7:00 P.M.

Attendees and their guest(s) are cordially invited to join the course faculty for the Welcome Reception on Monday, July 22, 2013. This casual reception welcomes you to Vail, Colorado, officially opens the course, and offers you the perfect opportunity to make connections with existing and new colleagues.

Educational Grants

This activity is supported in part by unrestricted educational grants from various commercial firms. At the time of printing, a complete list of supporters was not available. Appropriate acknowledgement of support will be provided at the time of the activity.

Faculty

Course Directors

George M. Gura, Jr., M.D., FACC
Associate Professor of Medicine, Mayo Clinic; Consultant, Division of Cardiovascular Diseases and Internal Medicine, Mayo Clinic, Rochester, MN

Fletcher A. Miller, Jr., M.D., FACC, FASE, FAHA
Professor of Medicine, Mayo Clinic; Consultant, Division of Cardiovascular Diseases and Internal Medicine; and Past Director, Cardiovascular Ultrasound Imaging and Hemodynamic Laboratory, Mayo Clinic, Rochester, MN

Mayo Faculty

Christopher P. Appleton, M.D., FACC, FASE
Professor of Medicine, Mayo Clinic; Consultant, Division of Cardiovascular Diseases and Internal Medicine, Mayo Clinic, Scottsdale, AZ

Crystal R. Bonnicksen, M.D.
Associate Consultant, Division of Cardiovascular Diseases and Internal Medicine, Mayo Clinic, Rochester, MN

Daniel D. Borgeson, M.D., FACC
Assistant Professor of Medicine, Mayo Clinic; Consultant, Division of Cardiovascular Diseases and Internal Medicine; Director, Mayo School of Health Sciences Echocardiography Program, 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

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, Mayo Clinic Echocardiographic Laboratory, Mayo Clinic, Rochester, MN

Catherine A. Harris, MA, RDCS
Sonographer Supervisor, Cardiovascular Ultrasound Imaging and Hemodynamic Laboratory, Mayo Clinic, Rochester, MN

Jonathan N. Johnson, M.D.
Assistant Professor of Pediatrics, Senior Associate Consultant, Division of Pediatric Cardiology, Mayo Clinic, Rochester, MN

Grace Lin, M.D., FACC
Assistant Professor of Medicine, Mayo Clinic; Consultant, Division of Cardiovascular Diseases and Internal Medicine; Director, Heart Failure Clinic, Mayo Clinic, Rochester, MN

Vuyisile T. Nkomo, M.D., MPH, FACC
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Stephen (Steve) F. Tucker, RDCS
Sonographer, Cardiovascular Ultrasound Imaging and Hemodynamic Laboratory, Mayo Clinic, Rochester, MN

Eric E. Williamson, M.D.
Associate Professor of Radiology, Mayo Clinic; Consultant, Department of Radiology, Mayo Clinic, Rochester, MN

Phillip M. Young, M.D.
Assistant Professor of Radiology, Mayo Clinic; Consultant, Department of Radiology, Mayo Clinic, Rochester, MN

Guest Faculty

Lawrence W. Gaul, M.D., FACC
Medical Director, ICU Vail Valley Medical Center, Vail, CO

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Rochester, MN 55905

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*State-of-the-Art Review, Live
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July 22-25, 2013

**Vail Marriott
Vail, Colorado**

REGISTER NOW!

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

