Basic to Advanced Echocardiography:
From the Blue Ridge Mountains of Asheville

MAY 8-11, 2013
The Grove Park Inn • Asheville, NC

Register Today!
http://www.mayo.edu/cme/cardiovascular-diseases-2013R149

IN COLLABORATION WITH: Wake Forest Baptist Health – Heart & Vascular Center

Course Directors:
- Fletcher A. Miller, Jr., M.D., FACC, FAHA, FASE
- Roger L. Click, M.D., Ph.D., FACC
- Pamela R. Burgess, RDMS, RVT, FASE
Course Description

This course will begin with basic concepts, including physics of ultrasound, Doppler and contrast. We will then discuss a broad range of disease states for which echocardiography is useful, including ischemic heart disease, valvular heart disease, pericardial disease, and cardiomyopathies. The presentations will include basic concepts as well as advanced techniques including 3-D/4-D imaging and strain imaging. Throughout the course many cases will be presented.

Unique Features:
- Faculty members are clinical sonographers and echocardiologists.
- Easy access to faculty members during the entire conference.
- Workshops that encourage audience questions/participation.
- Optional afternoon on pediatric/adult congenital echocardiography.
- Optional evening session on lab accreditation (ICAE).
- Presentations involving multimodality imaging.

Course Learning Objectives

Upon conclusion of this program, participants should be able to:
- Apply Doppler principles and hemodynamics to the assessment of valvular heart disease, including systematic assessment of prosthetic valves
- Use 2-D, Doppler strain methods to assess myocardial function
- Illustrate the appropriate use of echo Doppler in myocardial and pericardial disease
- Recognize the utility of echocardiography TEE including 3-D in the interventional practice
- Integrate the application of echocardiography in heart failure and the treatment
- Recognize clinical applications of stress 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.

Intended Audience

This course is intended for adult cardiologists, cardiology fellows, surgeons, anesthesiologists, and cardiac sonographers who have basic experience and knowledge of echocardiography. This course is designed to further advance their experience in clinical application of echocardiography.

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 22.25 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 breakfast and breaks.

Date and Location

The Basic to Advanced Echocardiography course will be held May 8-11, 2013. Course headquarters will be located at The Grove Park Inn, 290 Macon Avenue, Asheville, NC 28804. Phone: 828-252-2711. Fax: 828-252-7053.

All indoor sessions will be held on the 8th floor of the hotel.
General Session: Grand Ballroom A, Vanderbilt Wing, 8th Floor
Exhibits/Breaks/Breakfast: Grand Ballroom Prefunction
Reception: Skyline Room, Mountainview Terrace, Sammons Wing, 8th Floor

Registration

To register online, visit http://www.mayo.edu/cme/cardiovascular-diseases-2013R149. The registration fee includes tuition, comprehensive course syllabus, continental breakfasts, break refreshments, lunch, and welcome 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. A letter of confirmation will be sent upon receipt of payment and completed registration form on-line. 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: www.mayo.edu/cme/cardiovascular-diseases-2013R149
E-mail: cvcme@mayo.edu
Phone: 800-283-6296 or 507-266-6703
Fax: 507-266-7403

Travel/Airport

Asheville Regional Airport (AVL) is the recommended airport for arrival. Taxi or rental car is recommended mode of transportation from the airport. The hotel is located approximately 20 minutes from the airport.

Driving directions from the airport:
• Take I-240 into Asheville.
• Take Exit 5B/Charlotte Street
• From I-240 East, turn left on Charlotte Street
• From I-240 West, turn right on Charlotte Street.
• Proceed north on Charlotte Street for approximately 0.7 miles.
• Turn right on Macon Avenue and continue for 0.8 miles.
• The Grove Park Inn entrance will be on your left.

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

Nestled in the Blue Ridge Mountains, just beyond Asheville downtown, The Grove Park Inn is a sanctuary for the soul. Enchanting mountain vistas, lush green fairways, warm Southern charm, and passionate hospitality make The Grove Park Inn an oasis for family vacations. The Grove Park Inn is two miles from downtown Asheville, North Carolina. The hotel is located a short drive to the Biltmore Estate, Blue Ridge Parkway, North Carolina Arboretum, and Great Smoky Mountains National Park.

Downtown Asheville is a vibrant and historic district with colorful sights, historic buildings and spectacular Art Deco architecture. Explore the charming streets with a collection of restaurants, art galleries, quaint bookstores, eclectic shops, trendy coffee houses, and live music venues.

Located three miles from The Grove Park Inn, the Blue Ridge Parkway is named America’s favorite drive and connects the Great Smoky Mountains National Park to Shenandoah National Park in Virginia. Enjoy stunning vistas of mountains, meadows, old farms, and diverse flora and fauna. Discover miles of hiking trails, picnic areas, and scenic overlooks.

To secure your room at The Grove Park Inn, please call 800-438-5800 or 828-252-2711 and state that you will be attending the ECHO program. The room rate is $215 single/double. Note, the resort fee has been waived for this group event. The resort fee includes: local calling, in-room high speed internet access, entrance to fitness center, in-room coffee/tea, and newspaper available upon request.

The room block is scheduled to be held until Saturday, April 6, 2013 but may be sold out before this date. Therefore, we advise you to register for the program and reserve your lodging as soon as possible.

Check-in: 4:00 p.m.  
Check-out: 11:00 a.m.

We encourage participation by all individuals. If you have a disability, advance notification of any special needs will help us better serve you.

For further information regarding the area and its attractions, please refer to:  

Lodging arrangements are the sole responsibility of the individual registrant.

Mayo School of CPD 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 parking outdoors is available at the hotel.
Social Programs

Welcome Reception – Wednesday, May 8, 2013 – 6:30-7:30 p.m.
Attendees and their guest(s) are cordially invited to join the course faculty for the Welcome Reception on Wednesday, May 8. This casual reception welcomes you to Asheville, officially opens the course, and offers you the perfect opportunity to make connections with existing and new colleagues.

Recreation/Leisure Activities

The hotel concierge will be pleased to assist with any tours.
Biltmore Estate – Discount vouchers will be provided.
Golfing
Harrah’s Cherokee Casino
Natahala Outdoor Center including river rafting, kayak and canoe trips, mountain biking, hiking, fly fishing, zip lines, climbing and fishing adventures.
Blue Ridge Parkway
Great Smoky Mountain National Park
Great Smoky Mountain Railroad Excursions
Star Watch Night Vision Tours
Grandfather Mountain State Park
North Carolina Arboretum

Next Year’s Dates

Next year’s course will be held at Savannah Marriott Riverfront. Conference dates are May 14-17, 2014. A location you will not want to miss!

Faculty

Course Directors

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

Roger L. Click, M.D., Ph.D., FACC
Associate Professor of Medicine, Mayo Clinic; Consultant, Division of Cardiovascular Diseases and Internal Medicine, Mayo Clinic, Rochester, MN

Pamela R. Burgess, RDCS, RDMS, RVT, FASE
Clinical Manager, Cardiac Ultrasound and Stress Testing Lab, Wake Forest Baptist Health, Winston-Salem, NC

Mayo Faculty

Naser M. Ammash, M.D., FACC
Professor of Medicine, Mayo Clinic; Consultant, Division of Cardiovascular Diseases and Internal Medicine; and Co-Director, Cardiovascular Ultrasound Imaging and Hemodynamic Laboratory, Mayo Clinic, Rochester, MN

Joseph L. Blackshear, M.D., FACC, FAHA
Professor of Medicine, Mayo Clinic; Chair of the Cardiovascular Research Committee; and Consultant, Division of Cardiovascular Diseases and Internal Medicine, Mayo Clinic, Jacksonville, FL

Lori A. Blauwet, M.D., FACC
Assistant Professor of Medicine, Mayo Clinic; Consultant, Division of Cardiovascular Diseases and Internal Medicine, Mayo Clinic, Rochester, MN
Crystal R. Bonnichsen, M.D.
Instructor in Medicine, Mayo Clinic; 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, Mayo Clinic, Rochester, MN

Harold M. Burkhart, M.D.
Professor of Surgery, Mayo Clinic; Consultant, Thoracic and Cardiovascular Surgery, 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

Lyle D. Joyce, M.D., Ph.D.
Professor of Surgery, Mayo Clinic; Consultant, Cardiovascular Surgery, Mayo Clinic, Rochester, MN

Gavan C. Kane, M.D., Ph.D., FASE, FCCP
Assistant Professor of Medicine, Mayo Clinic; Co-Director, Cardiovascular Ultrasound Imaging and Hemodynamic Laboratory; Consultant, Division of Cardiovascular Diseases and Internal Medicine, Mayo Clinic, Rochester, MN

Barry L. Karon, M.D., FACC, FASE
Assistant Professor of Medicine, Mayo Clinic; Consultant, Division of Cardiovascular Diseases and Internal Medicine, Mayo Clinic, Rochester, MN

Carolyn Landolfo, M.D., FACC
Associate Professor of Medicine Mayo Clinic; Director, Adult Echocardiography Laboratory; and Consultant, Division of Cardiovascular Diseases and Internal Medicine, Mayo Clinic, Jacksonville, FL

Brian P. Shapiro, M.D.
Assistant Professor of Medicine and Radiology, Mayo Clinic; Consultant, Division of Cardiovascular Diseases and Internal Medicine, Mayo Clinic, Jacksonville, FL

Jennifer A. Warnsbecker, RDCS
Clinical Sonographer, Cardiovascular Ultrasound Imaging and Hemodynamic Laboratory, Mayo Clinic, Rochester, MN

Guest Faculty

Susan Hamrick, RDCS, RVT, RDMS, AASRT
Sonographer/ICAEL Reviewer, Clemmons, NC

Frederick W. Kremkau, Ph.D., FAIUM, FASA
Past President, American Institute of Ultrasound in Medicine; Professor and Director, Program for Medical Ultrasound, Wake Forest University School of Medicine, Winston-Salem, NC

Vinay Thohan, M.D., FACC, FASE
Professor of Medicine, Director of Advanced Cardiac Care and Heart Transplant Program, Wake Forest University School of Medicine, Winston-Salem, NC

Faculty Disclosure

As a provider accredited by ACCME, College of Medicine, Mayo Clinic (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.
Wednesday, May 8, 2013

7:00 a.m.  Registration and Continental Breakfast  
Grand Ballroom Preflection, Vanderbilt Wing, 8th Floor

7:45 a.m.  Welcome  
Drs. Miller and Click, and Ms. Burgess

FUNDAMENTALS

Dr. Roger L. Click, presiding

8:00 a.m.  Echo in Practice: Pre-Test  
Roger L. Click, M.D., Ph.D.

8:30 a.m.  Imaging Physics and Artifacts Including 3-D  
Frederick W. Kremkau, Ph.D.

9:30 a.m.  LV Volumes and Systolic Function Including Use of 3-D  
Carolyn Landolfo, M.D.

10:00 a.m.  Refreshment Break

10:30 a.m.  Doppler Physics  
Frederick W. Kremkau, Ph.D.

11:00 a.m.  LV Diastolic  
Fletcher A. Miller, Jr., M.D.

11:30 a.m.  RV Function  
Gavan C. Kane, M.D., Ph.D.

12:00 p.m.  Lunch – Grand Ballroom B

Dr. Fletcher A. Miller, Jr., presiding

1:30 p.m.  Strain Physics  
Frederick W. Kremkau, Ph.D.

2:00 p.m.  Strain for LV/RV Function  
Vinay Thohan, M.D.

2:30 p.m.  Aortic Stenosis/Mitral Stenosis  
Joseph L. Blackshear, M.D.

3:00 p.m.  Refreshment Break

3:30 p.m.  Aortic Stenosis/Mitral Stenosis: Surgical Management  
Lyle D. Joyce, M.D., Ph.D.

3:55 p.m.  AR/MR  
Barry L. Karon, M.D.

4:30 p.m.  AR/MR: Surgical Management  
Lyle D. Joyce, M.D., Ph.D.

4:55 p.m.  Right-Sided Valves  
Naser M. Ammash, M.D.

5:15 p.m.  Aortic Prosthesis  
Fletcher A. Miller, Jr., M.D.
Thursday, May 9, 2013

7:30 a.m.   Continental Breakfast

ISCHEMIC HEART DISEASE/AORTIC DISEASE  
*Dr. Roger L. Click, presiding*

8:00 a.m.   Contrast Physics  
*Frederick W. Kremkau, Ph.D.*

8:30 a.m.   Stress Echo Basics  
*Pamela R. Burgess, RDCS*

9:00 a.m.   Stress Cases  
*Joseph L. Blackshear, M.D.*

9:30 a.m.   Refreshment Break

10:00 a.m.  More Stress Cases  
*Dr. Click and Ms. Hamrick*

10:30 a.m.  Echo for Acute Coronary Syndromes  
*Roger L. Click, M.D., Ph.D.*

11:00 a.m.  Echo for Acute Aortic Syndromes  
*Daniel D. Borgeson, M.D.*

11:30 a.m.  Interventional Echo  
*Naser M. Ammash, M.D.*

12:00 p.m.  Panel Discussion  
*Drs. Kremkau, Borgeson, Ammash, and Ms. Burgess and Ms. Hamrick; Dr. Click, moderator*

12:15 p.m.  Adjourn for the Afternoon

Friday, May 10, 2013

7:30 a.m.   Continental Breakfast

CARDIOMYOPATHY/HEART FAILURE  
*Dr. Fletcher A. Miller, Jr., presiding*

8:00 a.m.   Dilated Cardiomyopathy/Myocarditis/Post-Partum Cardiomyopathy  
*Lori A. Blauwet, M.D.*

8:30 a.m.   Hypertrophic Cardiomyopathy  
*Drs. Click and Shapiro*
Program Schedule

9:00 a.m.  Infiltrative Cardiomyopathies With Case Studies
Jennifer Warmsbecker, RDCS

9:30 a.m.  Echo for Patients With Heart Failure
Vinay Thohan, M.D.

10:00 a.m. Refreshment Break

10:30 a.m.  Echo for Pulmonary Hypertension
Gavan C. Kane, M.D., Ph.D.

11:00 a.m.  Echo for Transplant/VAD
Daniel D. Borgeson, M.D.

11:30 a.m.  Cardiac Constriction
Barry L. Karon, M.D.

12:00 p.m.  Panel Discussion
Drs. Kane, Borgeson, and Karon; Dr. Miller, moderator

12:15 p.m.  Lunch – Grand Ballroom B

1:30 p.m.  Heart Failure With Preserved Ejection Fraction
Barry L. Karon, M.D.

2:00 p.m.  Heart Failure Cases With Multimodality Imaging
Brian P. Shapiro, M.D.

2:30-5:30 p.m.  Two Concurrent Breakouts

CONGENITAL ECHO
LOCATION: Coolidge Ballroom – 8th Floor

2:30 p.m.  Echocardiographic Evaluation of Congenital Heart Disease in the Adult – An Overview of the Simple to the Complex Lesions
Naser M. Ammash, M.D.

3:00 p.m.  Novel Imaging Strategies in Adults With Congenital Heart Disease – Cardiac MR & CT
Crystal R. Bonnichsen, M.D.

3:30 p.m.  State-of-the-Art Surgical Approaches to Congenital Heart Disease – What’s New in 2013
Harold M. Burkhart, M.D.

4:00 p.m.  Congenital Aortopathies – Non-Invasive Evaluation Strategies
Crystal R. Bonnichsen, M.D.

4:30 p.m.  Evaluation of Ventricular Function in Congenital Heart Disease – 2-D, Tissue Doppler, Strain and Beyond
Benjamin W. Eidem, M.D.

5:00 p.m.  Great Cases in Congenital Heart Disease
Drs. Ammash, Bonnichsen, Burkhart, and Eidem

5:30 p.m.  Adjourn
LAB ACCREDITATION / EXTRACARDIAC STRUCTURES / HEMODYNAMICS / PISA
LOCATION: Main Ballroom
Dr. Fletcher A. Miller, Jr., presiding

2:30 p.m.   Echo Lab IAC Accreditation
            Ms. Hamrick and Ms. Burgess

3:00 p.m.   Off-Axis Views and Extracardiac Structures
            Pamela R. Burgess, RDCS

3:45 p.m.   Hemodynamics: Stenotic Lesions
            Drs. Miller and Landolfo

4:30 p.m.   PISA Basics
            Susan Hamrick, RDCS

4:45 p.m.   Hemodynamics: Regurgitant Lesions
            Drs. Miller and Landolfo

5:30 p.m.   Adjourn

Saturday, May 11, 2013

7:30 a.m.   Continental Breakfast

SPECIAL TOPICS AND INTERESTING CASES
Dr. Fletcher A. Miller, Jr., presiding

8:00 a.m.   Cardiac Masses
            Drs. Miller and Click

8:30 a.m.   Cardiac CT/MRI: For Which Clinical Situations Are These the
            Preferred Modality?
            Brian P. Shapiro, M.D.

9:00 a.m.   Post-Test
            Roger L. Click, M.D., Ph.D.

9:30 a.m.   Interesting Cases With Audience Interaction (10 minutes each)
            Drs. Blackshear, Landolfo, and Thohan

10:00 a.m.  Interesting Cases With Audience Interaction (10 minutes each)
            Drs. Blauwet, Borgeson, and Kane

10:30 a.m.  Interesting Cases With Audience Interaction (10 minutes each)
            Fletcher A. Miller, Jr., M.D.

11:00 a.m.  Adjourn
Registration Fee:
Course Registration (MD, PhD, DO, PharmD)  $725.00
Course Registration (Fellows in Training, Sono, RN)  $550.00
One-Day Registration Fee  $300.00
(note, this fee is good for only one day of the program)

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-2013R149
and click on Register Now. The system will step 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, electronic course syllabus, continental breakfasts, break refreshments, lunch, 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-2013R149

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 of CPD before Wednesday, April 24, 2013 (cvcme@mayo.edu or fax#: 507-266-7403). No refunds will be made on or after Wednesday, April 24, 2013. Canceled registrations are non-transferable.

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

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