Jointly Sponsored By
Washington University School of Medicine Continuing Medical Education
and the Oklahoma Heart Foundation
Tel. 314-362-6891 Fax 314-362-1087 To register visit our websites at
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Washington University in St. Louis
School of Medicine

and

Oklahoma Heart Foundation

Summit at the Arch
10th Annual CMR Training Course
March 4-7, 2008

Tuesday - Friday
Eric P. Newman Education Center
Washington University Medical Center, St. Louis

Longest-continuously operating CARDIAC MR Symposium

1.5T and 3T CMR
Hands-On Training
Plus CT Imaging

Course Chairs
Samuel A. Wickline, MD, FACC
Edward T. Martin, MD, FACC
Mary P. Watkins, RT (MR)

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COURSE OBJECTIVES
This course is designed for cardiologists, radiologists, technologists, nurses, and sonographers interested in obtaining knowledge of the principles of cardiovascular MR and its implementation in a clinical environment. The intended result of this activity is increased knowledge and with completion of the two-day lecture course, the attendee should be able to:

- Acquire a generalized knowledge of Cardiovascular MR and CT imaging techniques.
- Utilize the techniques of CMR to evaluate congenital heart disease, coronary disease and myocardium viability.
- Demonstrate familiarity with and ability to perform a basic cardiac MR function exam.
- Assess basic imaging protocols for most common referrals.

Additionally, with completion of the four-day lecture course including hands-on training, the attendee should be able to:

- Demonstrate familiarity with and ability to perform basic CT angiography.
- Employ the techniques of CMR for flow assessment in the aortic and mitral valves.

ACCREDITATION
This activity has been planned and implemented in accordance with the Essentials and Standards of the Accreditation Council for Continuing Medical Education through the joint sponsorship of Washington University School of Medicine, Continuing Medical Education and the Oklahoma Heart Foundation, Inc. Washington University is accredited by the ACCME to provide continuing medical education for physicians.

CREDIT
AMA: Washington University designates this educational activity for a maximum of 29 (14 lectures only) AMA PRA Category 1 Credits™. Physicians should only claim credit commensurate with the extent of their participation in the activity.

ASRT: The American Society of Radiologic Technologist approval is pending. The 2007 Course was ASRT approved for a maximum of 25.5 CE credits.

Disclosure Policy
It is the policy of Washington University School of Medicine, Continuing Medical Education, to ensure balance, independence, objectivity and scientific rigor in all its educational activities. All faculty participating in this activity are expected to disclose to the audience any financial interest or other relationship he/she has with the manufacturer(s) of any commercial product(s) discussed in an educational presentation.
GUEST FACULTY

Andrew Arai, MD, Investigator, Laboratory of Cardiac Energetics
National Heart, Lung and Blood Insititute, National Institutes of Health
Bethesda, Maryland

David Bluemke, MD, PhD, MsB, Associate Professor of Radiology
Clinical Director of MRI, Department of Radiology
Johns Hopkins Medical School, Baltimore, Maryland

Scott D. Flamm, MD, Director, MRI and Cardiovascular MRI Research
St. Luke’s Episcopal Hospital home of the Texas Heart Institute
Houston, Texas

Mark A. Fogel, MD, Associate Professor of Cardiology and of Radiology
The University of Pennsylvania School of Medicine
Director of Cardiac MRI, The Children’s Hospital of Philadelphia
Philadelphia, Pennsylvania

Edward T. Martin, MD, FACC, Clinical Associate Professor of Medicine
University of Oklahoma College of Medicine
Director of the MRI Center at Oklahoma Heart Institute, Tulsa, Oklahoma

Reza Razavi, MD Professor of Paediatric Cardiovascular Science
Head of Division of Imaging Sciences
King’s College London, University of London, England

Matthias Stuber, PhD, Associate Professor of Radiology
Johns Hopkins University Medical School, Baltimore, Maryland

WASHINGTON UNIVERSITY SCHOOL OF MEDICINE
ACTIVITY FACULTY

Shelton Caruthers, PhD, MR Clinical Scientist, Philips Medical Systems
Associate Director of Cardiovascular Magnetic Resonance Laboratories
Adjunct Instructor of Biomedical Engineering

Lynn Coulter, RN, Project Manager
Cardiovascular Magnetic Resonance Laboratories

Tamara Donahue, RN, BSN, Cardiovascular Research Nurse Coordinator
Cardiovascular Magnetic Resonance Laboratories

Sandor Kovacs, PhD, MD, Professor of Medicine
Adjunct Professor of Physics

Gregory Lanza, PhD, MD, Associate Professor of Medicine and Bio-Medical Engineering

Kamilla McGhee, BS, Research Assistant
Cardiovascular Magnetic Resonance Laboratories

Mary P. Watkins, RT (MR) (R), Cardiovascular MR Technologist
Cardiovascular Magnetic Resonance Laboratories

Samuel A. Wickline, MD, FACC
Professor of Medicine, Physics, Biomedical Engineering, and Cell Biology and Physiology
Co-Director of the Cardiovascular Division

Todd Williams, RT (MR) (R), Cardiovascular MR Technologist
Cardiovascular Magnetic Resonance Laboratories

Patrick Winter, PhD, Research Instructor in Medicine
Cardiovascular Magnetic Resonance Laboratories
TUESDAY, MARCH 4 - LECTURE SERIES I
Eric P. Newman Education Center (EPNEC), 320 S. Euclid Ave.

7:30am  Registration & Continental Breakfast
8:00 Welcome & Introduction
8:15 Basic Physics of CMR I - Shelton Caruthers, PhD
9:00 CMR Patient Safety - Recent Update - Todd Williams, RT (MR) (R)
9:30 CMR Basic Anatomy & Function Protocol
   Mary P. Watkins, RT (MR) (R)
10:00 Refreshment Break
10:15 Valves & Flow - Samuel A. Wickline, MD, FACC
11:00 MRA of the Peripheral Vasculature, Aorta & Pulmonary
   Edward T. Martin, MD, FACC
11:45 Luncheon (to be provided)
1:00pm MR Coronary Imaging - Matthias Stuber, PhD
1:45 Cardiomyopathies and RVD - David Bluemke, MD, PhD, MsB
2:15 Diastolic Function - Sandor Kovacs, PhD, MD
3:00 Refreshment Break
3:15 Personalized Medicine and MRI - Gregory Lanza, PhD, MD
4:00 Case Studies - Faculty
5:00 Welcome Reception & Marketplace Exhibition
7:00 Adjourn

WEDNESDAY, MARCH 5 - LECTURE SERIES II
Eric P. Newman Education Center (EPNEC), 320 S. Euclid Ave.

7:30am Continental Breakfast
8:00 Basic Physics of CMR II - Patrick Winter, PhD
8:45 Setting Up a Clinical CMR Practice - Edward T. Martin, MD, FACC
9:15 Pediatric/Congenital CMR - Mark A. Fogel, MD
10:00 Refreshment Break
10:15 3T CMR Applications: Pitfalls & Solutions - Matthias Stuber, PhD
11:00 Myocardial Perfusion and Viability - Scott D. Flamm, MD
11:45 CMR Technology - Software & Hardware
12:15pm Luncheon & Marketplace
2:00 Interventional MRI - Reza Rezavi, M.D.
2:45 Application of CMR in Acute Chest Pain - Andrew Arai, MD
3:30 Refreshment Break
3:45 MR or CT, Which One Should I Select? Compare and Contrast
   David Bluemke, MD, PhD, MsB
4:45 Case Studies
5:30 Adjourn
THURSDAY, MARCH 6 - HANDS-ON LABS SESSION I
CORTEX Building, 4320 Forest Park

7:30am  Continental Breakfast
8:00  Group I: Presentation & Demonstration of ECG/VCG Setup + Basic Functional
      Group II: Basic CMR Functional Study
      Group III: Basic Cardiac CT Scanning
10:00  Refreshment Break
10:15  Group II: Presentation & Demonstration of ECG/VCG Setup + Basic Functional
      Group III: Basic CMR Functional Study
      Group I: Basic Cardiac CT Scanning
12:15pm  Luncheon (to be provided)
1:30  Group III: Presentation & Demonstration of ECG/VCG Setup + Basic Functional
      Group I: Basic CMR Functional Study
      Group II: Basic Cardiac CT Scanning
3:30  Refreshment Break
3:45  Group I: CMR Scanning Exercises 1.5T
      Group II: CMR Scanning Exercises 3T
      Group III: CCT Scanning Exercises
5:45  Adjourn

FRIDAY, MARCH 7 - HANDS-ON LABS SESSION II
CORTEX Building, 4320 Forest Park

7:30am  Continental Breakfast
8:00  Group II: CMR Scanning Exercises 1.5T
      Group III: CMR Scanning Exercises 3T
      Group I: CCT Scanning Exercises
9:30  Refreshment Break
9:45  Group III: CMR Scanning Exercises 1.5T
      Group I: CMR Scanning Exercises 3T
      Group II: CCT Scanning Exercises
11:15  Luncheon (to be provided)
12:30pm  Group I: CMR Scanning Exercises 1.5T
         Group II: CMR Scanning Exercises 3T
         Group III: Image Analysis/reading Case Studies
1:30  Refreshment Break
1:45  Group II: CMR Scanning Exercises 1.5T
      Group III: CMR Scanning Exercises 3T
      Group I: Image Analysis/Reading Case Studies
2:45  Refreshment Break
3:00  Group III: CMR Scanning Exercises 1.5T
      Group I: CMR Scanning Exercises 3T
      Group II: Image Analysis/Reading Case Studies
5:00  Adjourn
GENERAL INFORMATION

Location: Eric P. Newman Education Center (EPNEC) 320 S. Euclid Ave., St. Louis, Missouri 63110. Since meeting room temperatures are difficult to regulate to everyone’s appeal, bringing a jacket or sweater is recommended.

Parking: Courtesy parking is available for paid registrants at The North Garage (map will be sent with acknowledgment). Bring your parking ticket to the registration desk for validation. Validation for other medical center parking garages is not available.

Accommodations: Make your reservations directly with a hotel and indicate that you are attending a Washington University seminar for special rates.

- The Parkway Hotel [on the medical center campus]
  (314) 256-7777  toll free (866) 314-7700  www.theparkwayhotel.com
  4550 Forest Park Blvd., St. Louis, MO 63110
  Rates: $119 Standard  $129 Executive Level

- Chase Park Plaza [5 blocks from the medical center campus]
  (314) 633-3000  toll free (877) 587-2427  www.chaseparkplaza.com
  212-232 N. Kingshighway Blvd., St. Louis, MO 63108
  Rate: $162 One Bedroom Suite (+tax)

- Drury Inn at Union Station [Accessible via MetroLink]
  (314) 231-3900  www.druryhotels.com/properties/unionstation.cfm
  201 S. 20th St., St. Louis, MO 63103
  Rate: $106 standard room (+tax)

Please Note: Washington University is not responsible for airline or hotel reservations. Please confirm seminar registration acceptance prior to purchase of non-refundable or penalty airline tickets.

Transportation/MetroLink: The Central West End MetroLink Station is conveniently located at the medical center on Euclid Avenue, ½ block south of EPNEC. The MetroLink trip from the airport to the medical center takes approximately 20 minutes and costs $2.00 - $3.00 each way. Taxis are available at the airport and will cost approximately $35 to the medical center.

Registration/Payment Policy: Your full payment in advance completes your registration and ensures your enrollment in this course. If you have not received an acknowledgment within two weeks of your registration submission, please call the CME office. Opportunities for on-site registration are limited and may be unavailable. To inquire about the availability to register on-site, please contact the CME office.

Cancellations: Registration fee less $100 full course/$50 lectures only administrative charge is refundable if cancellation is received in writing by February 19, 2008.

Special Needs: Continuing Medical Education at Washington University School of Medicine fully complies with the legal requirements of the Americans with Disabilities Act rules and regulations thereof. If any participant of this meeting is in need of accommodations, please do not hesitate to submit written requests at least one month prior to seminar date. Assisted listening devices available on loan.

For Further Seminar Information:
Washington University School of Medicine, Continuing Medical Education
Websites: cme.wustl.edu/cardiology OR ctrain.wustl.edu
Email: cme@wustl.edu  314-362-6891  800-325-9862  Fax 314-362-1087
Day of Seminar Only Telephone Number: (314) 747-6338

Minimum and Maximum Enrollments Have Been Established.
ADVANCE REGISTRATION
10th Annual CMR Training Course
March 4 - 7, 2008

To ensure proper spelling of your name, please print clearly. The information provided will appear as written on the attendance roster. If you wish not to be listed on the attendance roster, check here: ☐

First Name Initial Last Name Degree

Address

City/ State/ Zip

Office Telephone Number Fax

Specialty

If you wish to receive CME announcements online, indicate your email address.

Medical School Graduate of: ☐ Washington University ☐ Other Year ______

REGISTRATION FEES: By Feb 19 After Feb 19

☐ Full Course: Lectures & Hands-On $1,950 $2,150
☐ Physician Lectures Only $  525 $  575
☐ Allied Health Lectures Only $  350 $  375
☐ Fellows Lectures Only $  350 $  375

20% Discount for groups of 3 or more (lecture portion only) until 2/14.

Your full payment in advance completes your registration and ensures your enrollment in this course. Fees include enrollment, continuing education credits, educational materials, continental breakfasts, refreshment breaks, luncheons, Medical Center parking and admission to the Reception/Market Place Exhibition.

CONVENIENT WAYS TO REGISTER!

☐ Online **NEW** Secure online registration available at http://cme.wustl.edu. Click on the course name.

☐ MAIL this completed form with your check payable to Washington University. CME/WUSM, Campus Box 8063, 660 S. Euclid Ave., St. Louis, MO 63110

☐ FAX this completed form with credit card information to: Fax (314) 362-1087 ☐ MasterCard ☐ Visa ☐ Discover

Name on Card ________________________________________________________________

Card # ________________________________________________________________

Exp. Date _________ Signature ________________________________

☐ PHONE your registration to: (800) 325-9862 or (314) 362-6891 (Please have your credit card information ready.)