

**9th Annual Cardiovascular
Magnetic Resonance
Training Course
The Summit at the Arch**

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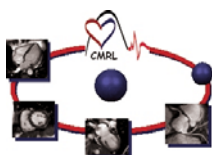
Washington University in St. Louis School of Medicine

9th Annual CMR Training Course The Summit at the Arch

Monday - Friday

March 5 - 9, 2007

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



**CT and MR
Hands-On
Training at
1.5T and 3T
available**



OKLAHOMA HEART
Research & Education
FOUNDATION



Course Chairs

Samuel A. Wickline, MD, FACC

Edward T. Martin, MD, FACC

Mary P. Watkins, RT (MR) (R)

Presented By

Cardiovascular MR Laboratories (CMRL)
Washington University School of Medicine
Oklahoma Heart Foundation

Sponsored By

Washington University School of Medicine,
Continuing Medical Education and the
Oklahoma Heart Foundation

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 five-day lecture course including hands-on training, the attendee should be able to:

- Acquire a generalized knowledge of Cardiovascular MR 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.
- Demonstrate familiarity with and ability to perform basic CT angiography.
- Employ the techniques of CMR for flow assessment in the aortic and mitral valves.
- Assess basic imaging protocols for most common referrals.

With completion of the three-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 the implementation of a basic cardiac MR function exam.
- Assess basic imaging protocols for most common referrals.

ACCREDITATION

Washington University is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

CREDIT

AMA: Washington University designates this educational activity for a maximum of 29.5 (18.25 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 designates this educational activity for a maximum of 30 hours (hands-on and lectures) and 19 hours (lectures only) in Category A CE credits (approval pending)

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 Institute, National Institutes of Health,
Bethesda, Maryland

David Bluemke, MD, PhD, MsB, Associate Professor of Radiology
Clinical Director of MRI, Department of Radiology
Johns Hopkins University 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

George Gentchos, MD
Departments of Medicine and Radiology
University of Vermont, Burlington, Vermont

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

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

Lynn Coulter, RN, Project Manager
Cardiovascular Magnetic Resonance Laboratories

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

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

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

Bruce Lindsay, MD, Associate Professor of Medicine
Director of Clinical Electrophysiology

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
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

MONDAY, MARCH 5

Eric P. Newman Education Center (EPNEC), 320 S. Euclid Ave.

LECTURE SERIES I

- 12:15pm *Registration & Refreshments*
- 12:45 **Welcome & Introductions**
- 1:00 **Basic Physics of CMR I** - Patrick Winter, PhD
- 1:45 **Cardiovascular Anatomy and Pathology** - Samuel A. Wickline, MD, FACC
- 2:15 **CMR Patient Safety & MRI ECG Applications** - Todd Williams, RT (MR) (R)
- 2:45 *Refreshment Break*
- 3:00 **CMR Basic Function Protocol & Image Analysis**
Mary P. Watkins, RT (MR) (R)
- 3:30 **Valves & Flow** - Samuel A. Wickline, MD, FACC
- 4:15 **MRA of the Peripheral Vasculature, Aorta and Pulmonary**
Edward T. Martin, MD, FACC
- 5:00 *Welcome Reception & Marketplace Exhibition*
- 7:00 *Adjourn*

TUESDAY, MARCH 6

Eric P. Newman Education Center (EPNEC), 320 S. Euclid Ave.

LECTURE SERIES II

- 7:30am *Continental Breakfast*
- 8:00 **Basic Physics of CMR II** - Shelton Caruthers, PhD
- 8:45 **Diastolic Function** - Sandor Kovacs, PhD, MD
- 9:30 **Basics of CT Coronary Angiography** - George Gentchos, MD
- 10:00 *Refreshment Break*
- 10:15 **Setting Up a Clinical CMR Practice** - Edward T. Martin, MD, FACC
- 10:45 **Interventional MRI** - Bruce Lindsay, MD
- 11:30 **CMR Technology - Software & Hardware**
- 12:00pm *Luncheon & Marketplace*
- 2:00 **Pediatric/Congenital CMR** - Mark Fogel, MD
- 2:45 **Cardiomyopathies and RVD** - David Bluemke, MD, PhD
- 3:15 *Refreshment Break*
- 3:30 **MR Coronary Imaging** - Matthias Stuber, PhD
- 4:15 **Case Studies**
- 5:00 *Adjourn*

WEDNESDAY, MARCH 7

Eric P. Newman Education Center (EPNEC) 320 S. Euclid Ave.

LECTURE SERIES III

- 7:30am *Continental Breakfast*
- 8:00 **Myocardial Perfusion and Viability** - Scott D. Flamm, MD
- 8:45 **3T CMR Applications: Pitfalls & Solutions** - Matthias Stuber, PhD
- 9:30 **Application of CMR in Acute Chest Pain** - Andrew Arai, MD
- 10:15 *Refreshment Break*
- 10:30 **Multi-slice CT: Non-Coronary Applications** - David Bluemke, MD, PhD
- 11:15 **Personalized Medicine and MRI** - Gregory Lanza, PhD, MD
- 11:45 **Closing Comments**
- 12:00pm *Luncheon (to be provided)*

WEDNESDAY, MARCH 7 (Continued)

CORTEX Building, 4320 Forest Park

HANDS-ON LABS SECTION I

- 1:00pm Group I: Demonstration of ECG/VCG Setup and CMR Function Video
Group II: Basic CMR Functional Study
Group III: Basic Cardiac CT Scanning
- 3:00 *Refreshment Break*
- 3:15 Group II: Demonstration of ECG/VCG Setup and CMR Function Video
Group III: Basic CMR Fimctopma; Stidu
Group I: Basic Cardiac CT Scanning
- 5:15 *Adjourn*

THURSDAY, MARCH 8

CORTEX Building, 4320 Forest Park

HANDS-ON LABS SECTION II

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

FRIDAY, MARCH 9

CORTEX Building, 4320 Forest Park

HANDS-ON LABS SECTION III

- 8:00am *Continental Breakfast*
- 8:30 Group I: CMR Scanning Exercises 1.5T
Group II: CMR Scanning Exercises 3T
Group III: Image Analysis/Reading Case Studies
- 9:45 *Break*
- 9:50 Group II: CMR Scanning Exercises 1.5T
Group III: CMR Scanning Exercises 3T
Group I: Image Analysis/Reading Case Studies
- 11:05 *Break*
- 11:10 Group III: CMR Scanning Exercises 1.5T
Group I: CMR Scanning Exercises 3T
Group II: Image Analysis/reading Case Studies
- 12:15pm *Closing Remarks*

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 or the Metro 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: \$109 Standard/\$124 Executive Level/\$149 Concierge Level (+tax)
- **Chase Park Plaza** [5 blocks from the medical center campus]
(314) 633-3000 or toll free (877) 587-2427
212-232 N. Kingshighway Blvd., St. Louis, MO 63108
Rate: \$155 One Bedroom Suite (+tax)
- **Drury Inn at Union Station** www.drury.com [Accessible via MetroLink]
(314) 231-3900, 201 S. 20th St., St. Louis, MO 63103
Rate: \$96 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 26, 2007.

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 OR cmrl.wustl.edu/education/

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

9th Annual CMR Training Course

March 5 - 9, 2007

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
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Address _____

City/ State/ Zip _____

Office Telephone Number	Fax
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Specialty _____

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

Physicians Only: Medical School Graduate of
 Washington Univ Other (Indicate) _____ Year _____

REGISTRATION FEES:

	<u>By Feb 26</u>	<u>After Feb 26</u>
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- | | | |
|---|---------|---------|
| <input type="checkbox"/> Full Course: Lectures & Hands-On | \$1,750 | \$1,925 |
| <input type="checkbox"/> Physician Lectures Only | \$ 475 | \$ 525 |
| <input type="checkbox"/> Allied Health Lectures Only | \$ 250 | \$ 275 |

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 and Medical Center parking.

THREE CONVENIENT WAYS TO REGISTER!

- 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.)