Current Topics in Cardiovascular CT and MR

June 21-25, 2009
The Lodge at Torrey Pines
La Jolla, California

Specific course features will include:

• Cardiac Imaging “Boot Camp”
  Basic review of cardiac anatomy and imaging techniques

• 50 Mentored Cardiac CT Cases
• 50 Mentored Cardiac MR Cases

Featured Lectures on Echocardiography and Ultrasound Correlation
Course Description
This course is designed for general and subspecialty radiologists, cardiologists, vascular and cardiovascular surgeons, and other health care providers interested in Cardiovascular CT and MRI. This program will provide a state-of-the-art review of current and emerging trends in cardiovascular imaging. Emphasis will be placed on practical techniques and clinical applications of today’s high technology imaging modalities. This course will combine didactic lectures and practical workstation sessions to facilitate understanding and use of these technologies.

Course Learning Objectives
Upon conclusion of this program, participants should be able to:

- Identify basic and advanced techniques for cardiac CT and MRI
- Discuss current and future applications of ECG-gated CT angiography
- Explain appropriate indications and protocols for cardiac and vascular MRI and CT
- Discuss contrast administration and scan techniques for CT and MR angiography
- Review techniques and applications of advanced image post-processing
- Discuss current issues in contrast media safety, including contrast-induced nephropathy and nephrogenic systemic fibrosis (NSF)

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 general and subspecialty radiologists, cardiologists, vascular and cardiovascular surgeons, and other health care providers interested in Cardiovascular CT and MRI.

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 educational activity for a maximum of 32.25 AMA PRA Category 1 Credit(s)™. Physicians should only claim 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.
Educational Grants
At the time of this printing, a complete listing of commercial supporters was not available. Appropriate acknowledgment will be given to all supporters at the time of the meeting.

Faculty Disclosure
As a provider accredited by ACCME, College of Medicine, Mayo Clinic, 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.

Date and Location
The Current Topics in Cardiovascular CT and MR course will be held beginning with a Boot Camp on Sunday, June 21, through Thursday, June 25. Course headquarters will be located at The Lodge at Torrey Pines in San Diego, California.

Travel
The Lodge at Torrey Pines is located only 16 miles from San Diego International Airport. Airport transportation options and approximate current rates include, Cloud9 Shuttle $22.00 per person each way, Private Sedan $96.00 each way, and Taxi $45.00 each way.

Travel arrangements are the sole responsibility of the individual registrant.

Lodging Accommodations
The Lodge at Torrey Pines is a tribute to the California Craftsman Movement. The Lodge features 170 spacious guest rooms. The Lodge is adjacent to the Torrey Pines Golf Course and is within walking distance of Torrey Pines State Reserve.

Guest rooms have been reserved for attendees and their guests with special course rates at The Lodge at Torrey Pines, 11480 North Torrey Pines Road, La Jolla, California 92037. Reservations can be made by calling 800-656-0087. Please identify yourself as a participant of the Current Topics in Cardiovascular CT and MR conference when making your reservation. The Lodge at Torrey Pines is offering a special group rate of $275 per night based on single or double occupancy for Run of House rooms.
Please note that rooms are limited and early registration is strongly encouraged to avoid disappointment.

Hotel check-in time is after 4:00 p.m. on the day of arrival, and check-out time is before 12:00 p.m. on the day of departure. Room reservations include daily newspaper of your choice, admission and use of the fitness center and spa facilities, high-speed internet service in each guest room, bottled water in each guest room on arrival day, California select coffee and tea service in each guest room, and turn-down service with amenity.

Lodging arrangements are the sole responsibility of the individual registrant.

Registration
To register, complete the attached registration form and return by mail or fax (507-266-3061). The registration fee includes tuition, comprehensive course syllabus, continental breakfasts, break refreshments, and welcome reception. Although it is not Department of Radiology CME 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. Please present the confirmation letter when checking in at the meeting registration desk.

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 Clinic Department of Radiology CME Office by June 1, 2009 (fax#: 507-266-3061).

No refunds will be made after June 1, 2009, for any reason.

Mayo Clinic Department of Radiology CME reserves the right to cancel or postpone any course due to unforeseen circumstances. In the unlikely event Mayo Clinic Department of Radiology CME must cancel or postpone this course, Mayo Clinic Department of Radiology CME 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.

Social Programs
Welcome Reception
Monday, June 22, 2009
Attendees and a guest are cordially invited to join the course faculty for the Welcome Reception on Monday evening, June 22, 2009, at The Lodge at Torrey Pines. This casual reception welcomes you to La Jolla, officially opens the course, and offers you the perfect opportunity to make connections with existing and new colleagues. Pre-registration is requested.
Recreation/Leisure Activities

Golf – Located on a bluff above the Pacific Ocean and surrounded by Torrey Pines State Reserve, the course is blessed with breathtaking vistas and challenging lay. Situated on the 18th green of the historic South Course, The Lodge at Torrey Pines will assist you in playing Torrey Pines as well as other top San Diego-area courses. For further information, you may contact golf services directly at 858-777-6610.

Spa – Designed as homage to the early 20th-century Scottish designer Charles Rennie Macintosh, the 9,500 square-foot Spa at Torrey Pines features 14 treatment rooms, separate women’s and men’s retreats, saunas, herbal-infused steam rooms, and aromatherapy inhalation rooms. The spa menu features a complete line of restorative treatments such as therapeutic, meditative and cobblestone massages, facials, body wraps, Vichy shower and hydrotherapy, amongst other amenities. The Spa also features state-of-the-art cardio and strength equipment in the fitness center and group fitness activities including, hiking, yoga and Pilates. Swim a few laps in The Lodge’s junior-Olympic, saline pool with underwater music or relax in one of the poolside cabanas.
Faculty

COURSE DIRECTORS

Jerome F. Breen, MD  
Assistant Professor of Radiology  
College of Medicine, Mayo Clinic

Terri J. Vrtiska, MD  
Assistant Professor of Radiology  
College of Medicine, Mayo Clinic

Eric E. Williamson, MD  
Assistant Professor of Radiology  
College of Medicine, Mayo Clinic

MAYO CLINIC – ROCHESTER

Jerome F. Breen, MD  
Assistant Professor of Radiology  
College of Medicine

Iulian M. Burtea, MD  
Cardiac Imaging Fellow  
Department of Radiology

Daniel M. Couri, MD  
Cardiovascular Fellow  
Department of Cardiovascular Disease

Chad J. Fleming, MD  
Instructor in Radiology  
College of Medicine

James Glockner, MD  
Assistant Professor of Radiology  
College of Medicine

Paul R. Julsrud, MD  
Professor of Radiology  
College of Medicine

Ronald S. Kuzo, MD  
Associate Professor of Radiology  
College of Medicine

Dennis A. Laudon, MD  
Assistant Professor of Emergency Medicine  
College of Medicine

Robert A. Lee, MD  
Assistant Professor of Radiology  
College of Medicine

David L. Levin, MD, PhD  
Associate Professor of Radiology  
College of Medicine

Matthew W. Martinez, MD  
Assistant Professor of Medicine  
College of Medicine

Cynthia H. McCollough, PhD  
Professor of Radiologic Physics  
College of Medicine

Kiaran P. McGee, PhD  
Assistant Professor of Biomedical Engineering & Radiologic Physics  
College of Medicine

Michael A. McKusick, MD  
Assistant Professor of Radiology  
College of Medicine

Andrew J. Misselt, MD  
Vascular and Interventional Imaging Fellow  
Department of Radiology

Gustavo S. Oderich, MD  
Associate Professor of Surgery  
College of Medicine

Jae K. Oh, MD  
Professor of Medicine  
College of Medicine

Brian P. Shapiro, MD  
Assistant Professor of Medicine  
College of Medicine

Terri J. Vrtiska, MD  
Assistant Professor of Radiology  
College of Medicine

Eric E. Williamson, MD  
Assistant Professor of Radiology  
College of Medicine

Phillip M. Young, MD  
Mayo Clinic Scholar  
Department of Radiology

MAYO CLINIC – JACKSONVILLE

Thomas C. Gerber, MD, PhD  
Associate Professor of Medicine & Radiology  
College of Medicine

MAYO CLINIC – SCOTTSDALE

Clinton V. Wellnitz, MD  
Instructor in Radiology  
College of Medicine

GUEST FACULTY

Dominik Fleischmann, MD  
Associate Professor of Radiology  
Stanford University

U. Joseph Schoepf, MD  
Professor of Radiology and Medicine  
Medical University of South Carolina
Program Schedule

Sunday, June 21, 2009
Cardiac Boot Camp

12:00 PM  Welcome / Introduction / Course Overview
          Eric Williamson

12:10 PM  Cardiac Anatomy & Imaging Planes
          Clinton Welnitz

12:40 PM  Basic Coronary Anatomy and Variants
          Phil Young

1:10 PM   ECG-gating and Radiation Dose for Cardiac CT
          Cynthia McCollough

1:40 PM   Contrast Media Safety - CT vs. MRI
          Chad Fleming

2:10 PM   Q&A

2:30 PM   Refreshment Break

2:45 PM   Physical Principles of Cardiac MRI
          Kiaran McGee

3:15 PM   Cardiovascular MRI - From Sequences to Protocols
          Eric Williamson

3:45 PM   Identifying and Fixing Artifacts in Cardiovascular MRI
          Kiaran McGee

4:15 PM   MR Angiography - Contrast & Noncontrast Techniques
          Phil Young

4:45 PM   Q&A

5:00 PM   Session Adjourns

Monday, June 22, 2009
Basics of Cardiac CT & MRI

6:30 AM   Registration / Breakfast

7:00 AM   Welcome / Introduction / Course Overview
          Eric Williamson

7:10 AM   Noninvasive Cardiac Imaging – Competing vs. Complementary Modalities
          Thomas Gerber

7:40 AM   Practical Aspects of Cardiac CT – Is It Really a One-stop Shop?
          Jerry Breen

8:10 AM   Practical Considerations in Cardiac MRI – Indications and Applications
          Jim Glockner

8:40 AM   Q&A

9:00 AM   Refreshment Break
Monday, June 22, 2009 - Continued

9:15 AM  Basic Coronary CT Angiography – How Do We Do It & What Can We See?
Joe Schoepf

9:45 AM  Noncoronary Applications of Cardiac CT – Structure, Function and Beyond
Joe Schoepf

10:15 AM  Q&A

10:30 AM  Refreshment Break

10:45 AM  Imaging of Congenital Heart Disease – The Conditions Every Radiologist Really Needs to Know
Paul Julsrud

11:15 AM  Imaging of Congenital Heart Disease – Part II
Paul Julsrud

11:45 AM  Q&A

12:00 PM  Morning Session Adjourns
Box Lunches Available for Mentored Case Participants

12:15 PM  Cardiac CT – 15 Mentored Cases
(Coronary Artery Disease)
Joe Schoepf

2:00 PM  Cardiac MR – 10 Mentored Cases
(Myocardial Ischemia)
Matt Martinez

3:00 PM  Session Adjourns

Tuesday, June 23, 2009
Current & Emerging Applications of Noninvasive Cardiac CT & MR

6:30 AM  Registration / Breakfast

7:00 AM  Welcome / Introduction / Course Overview
Eric Williamson

7:10 AM  Emergency Room Evaluation of Acute Chest Pain
Dennis Laudon

7:40 AM  Acute Coronary Syndrome - Correlation of MRI and Echocardiography
Jae Oh

8:10 AM  CT of Chest Pain in the ED - Triple Rule-out CT
Matt Martinez

8:40 AM  Q&A

9:00 AM  Refreshment Break

9:15 AM  Imaging Evaluation of Pericardial Disease
Andrew Misselt
**Program Schedule**

**Tuesday, June 23, 2009 - Continued**

9:45 AM  
CT and MRI of Cardiac Valvular Disease  
*Andrew Misselt*

10:15 AM  
Q&A

10:30 AM  
Refreshment Break

10:45 AM  
MRI in Cardiac Ischemia – Myocardial Viability  
*Matt Martinez*

11:15 AM  
MRI of Nonischemic Myocardial Disease  
*Ron Kuzo*

11:45 AM  
Q&A

12:00 PM  
Morning Session Adjourns  
Box Lunches Available for Mentored Case Participants

12:15 PM  
Cardiac CT – 10 Mentored Cases  
(Variant Coronary Anatomy)  
*Phil Young*

1:30 PM  
Cardiac MR – 15 Mentored Cases  
(Cardiac Masses)  
*Jim Glockner*

3:30 PM  
Session Adjourns

**Wednesday, June 24, 2009**

**Noninvasive Imaging of Vascular Disease**

6:30 AM  
Registration / Breakfast

7:00 AM  
Welcome / Introduction / Course Overview  
*Terri Vrtiska*

7:10 AM  
Aortic Disease - What Your Surgeon Needs to Know  
*Gustavo Oderich*

7:40 AM  
Aortic Disease – What Your Interventionalist Needs to Know  
*Mike McKusick*

8:10 AM  
Imaging and Mesenteric Vascular Disease - Getting It Right  
(CTA, MRA, US)  
*Vrtiska, Glockner, Lee*

8:40 AM  
Imaging and Renal Artery Disease - Getting It Right  
(CTA, MRA, US)  
*Vrtiska, Glockner, Lee*

9:25 AM  
Q&A Panel Discussion  
*All Staff*

9:40 AM  
Refreshment Break

9:55 AM  
CT Imaging of the Thoracic Aorta  
*Dominik Fleischmann*
**Wednesday, June 24, 2009 - Continued**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>10:40 AM</td>
<td>Imaging of Thromboembolic Disease Including Pulmonary Emboli</td>
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<td><em>David Levin</em></td>
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<tr>
<td>11:10 AM</td>
<td>Q&amp;A</td>
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<td>11:25 AM</td>
<td>Morning Session Adjourns</td>
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<td>Box Lunches Available for Mentored Case Participants</td>
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<tr>
<td>11:40 AM</td>
<td>Cardiac CT – 15 Mentored Cases (Extra-coronary Disease)</td>
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<td><em>Matt Martinez</em></td>
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<td>1:25 PM</td>
<td>Cardiac MR –10 Mentored Cases (Non-ischemic Myocardial Disease)</td>
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<td><em>Brian Shapiro</em></td>
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<td>2:25 PM</td>
<td>Q&amp;A</td>
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<td>2:30 PM</td>
<td>Session Adjourns</td>
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**Thursday, June 25, 2009**

**Noninvasive Imaging of Vascular Disease and Imaging of Extra-cardiac Findings**

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<tr>
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<tbody>
<tr>
<td>6:30 AM</td>
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<tr>
<td>7:00 AM</td>
<td>Welcome / Introduction / Course Overview</td>
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<td></td>
<td><em>Terri Vrtiska</em></td>
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<tr>
<td>7:10 AM</td>
<td>Injection Protocols: The Paradigm Shift With 64-Channel MDCT</td>
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<td><em>Dominik Fleischmann</em></td>
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<td>7:40 AM</td>
<td>Extra-cardiac Findings: Interstitial Lung Disease</td>
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<td><em>David Levin</em></td>
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<td>8:10 AM</td>
<td>Extra-cardiac Findings: Nodules and Masses</td>
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<td><em>David Levin</em></td>
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<td>8:40 AM</td>
<td>Imaging Peripheral Vascular Disease – Getting It Right (CTA, MRA, US)</td>
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<td><em>Vrtiska, Glockner, Lee</em></td>
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<td>9:25 AM</td>
<td>Q&amp;A Panel Discussion</td>
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<td><em>All Staff</em></td>
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<tr>
<td>9:40 AM</td>
<td>Break</td>
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<tr>
<td>9:55 AM</td>
<td>Cardiac CT - 10 Mentored Cases (Thoracic Vascular Disease)</td>
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<td><em>Iulian Burtea</em></td>
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<td>11:40 AM</td>
<td>Morning Session Adjourns</td>
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<td>Box Lunches Available for Mentored Case Participants</td>
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<tr>
<td>11:55 AM</td>
<td>Cardiac MR - 15 Mentored Cases (Pericardium, Valves and Vessels)</td>
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<td><em>Dan Couri</em></td>
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<td>12:55 PM</td>
<td>Q&amp;A</td>
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<td>1:00 PM</td>
<td>Session Adjourns</td>
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Registration Form

Current Topics in Cardiovascular CT and MR
June 21-25, 2009
The Lodge at Torrey Pines, La Jolla, California

Mail form and payment to:
Mayo Clinic
Department of Radiology, CME Office
Mayo, West-2
200 First Street SW
Rochester, MN 55905

Phone: 866-246-1581 or 507-284-3317
Fax: 507-266-3061
Website: www.mayo.edu/cme

Registration Form

Yes I Will Attend Alone
Yes I Will Attend with One Guest

Physicians $990
Residents, Physician Assistants, Nurse Practitioners $890
50 Cardiac CT Mentored Cases and 50 Cardiac MR Mentored Cases $890

Total Payment Enclosed: $________________

REGISTRATION FEE (Price Includes Cardiac Boot Camp)

PAYMENT METHOD
☐ Check (payable to Mayo Clinic)
☐ Credit Card: ☐ Visa ☐ MasterCard ☐ Discover

Card Number ____________________________________________ Expires Mo/Yr ______________________
Signature ____________________________________________ Date __________________

COMPLIMENTARY WELCOME RECEPTION – Monday Evening, June 22, 2009
☐ Yes I Will Attend Alone
☐ Yes I Will Attend with One Guest

Name______________________________________________________________________________
Degree ☐ MD ☐ PhD ☐ DO ☐ PA ☐ NP ☐ Other___________________________
Institution__________________________________________________________________________
Medical Specialty____________________________________________________________________
E-mail Address_____________________________________________________________________
Which is your preferred mailing address: ☐ Work/Business ☐ Home
Address____________________________________________________________________________
City________________________________________State/PV_____________________
ZIP/Postal Code__________________________ Country___________________________________
Home Telephone (______)__________________Business Telephone (______)_________________

☐ Please check if you have special accommodation or dietary needs and indicate specific need(s):
___________________________________________________________________________________

(Please print or type all information. You may duplicate this form for multiple registrations.)
REGISTER NOW!

Current Topics in Cardiovascular CT and MR
The Lodge at Torrey Pines
La Jolla, California

Educational Format
A distinguished faculty, including acknowledged experts in the field, will instruct attendees regarding the latest techniques in cardiovascular CT and MRI. Didactic lectures, mentored cases, and hands-on review of cardiac CT and MRI will be provided.