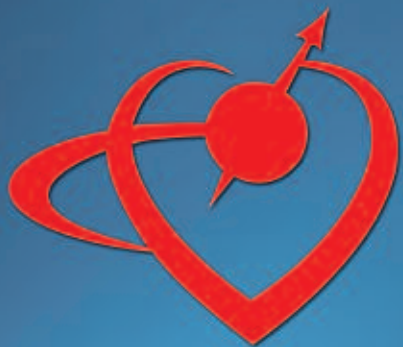


FINAL PROGRAM



SCMR

**Society for Cardiovascular
Magnetic Resonance**

15th Annual Scientific Sessions

February 2-5, 2012

Marriott World Center

Orlando, Florida

Jointly sponsored by SCMR
and the University of Minnesota

www.scmr.org

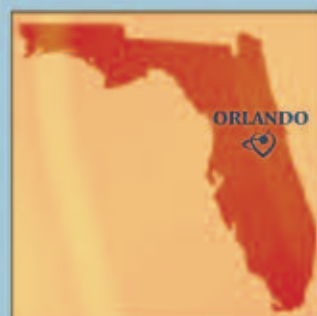
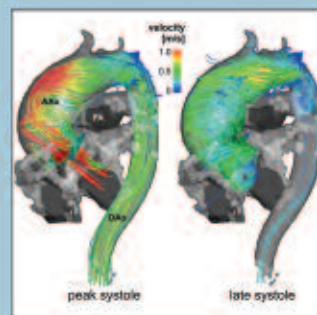
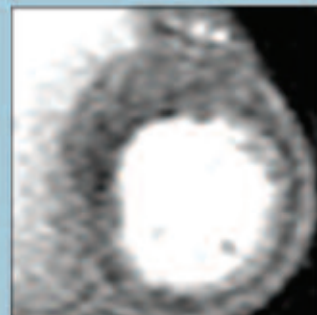
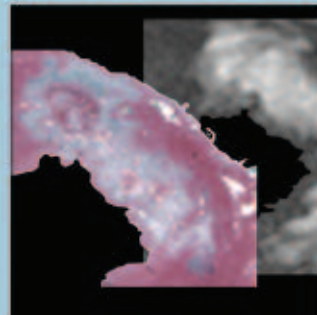
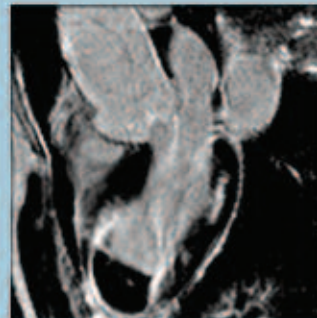
Pre-conference Courses

- Physicians
- Congenital/Pediatric

February 2, 2012

Technologist Workshop

February 3-5, 2012





15th Annual Scientific Sessions • February 2 – 5, 2012
Marriott World Center • Orlando, FL USA

PROGRAM-AT-A-GLANCE

TIME	Sago Ballroom	Crystal Ballroom J1	Crystal Ballroom J2	Crystal Ballroom G1	Crystal Ballroom A-B-C	
WEDNESDAY, FEBRUARY 1, 2012						
8:00 AM - 6:00 PM			SCMR/ISMRM Jointly Sponsored Workshop			
THURSDAY, FEBRUARY 2, 2012						
8:00 AM - 6:00 PM		Congenital/Pediatric Pre-conference Course	SCMR/ISMRM Jointly Sponsored Workshop	Physician's Pre-Conference Course		
FRIDAY, FEBRUARY 3, 2012						
7:00 AM - 8:00 AM	Physics for Physicians 1 Crystal Ballroom P	Cardiology for Non-cardiologists 1 Crystal Ballroom M				
8:00 AM - 9:30 AM	Welcome and Opening Plenary					
9:30 AM - 10:00 AM	CMR Questionnaire					
10:00 AM - 10:30 AM	Refreshment Break/Exhibits/Posters - Royal/Sabal Ballrooms					
10:30 AM - 12:00 PM	Invited Lecture Session 1 Non-ischemic Heart Disease 1	Case Review 1 Fascinating Vascular Disease Cases	Invited Lecture Session 2 Cardiac Metabolism and Molecular Imaging	Oral Abstract Session 1 ECA Clinical	Technologist Workshop	
12:00 PM - 12:30 PM	SCMR Business Meeting					
12:30 PM - 1:30 PM	Lunch/Exhibits/Posters - Royal/Sabal Ballrooms					
1:30 PM - 3:00 PM	Invited Lecture Session 3 Coronary and Vascular CMR	Case Review 2 Congenital Heart Disease 1	Oral Abstract Session 2 ECA Basic Science	Oral Abstract Session 3 Clinical Outcome and Prognosis		
3:00 PM - 3:30 PM	Refreshment Break/Exhibits/Posters					
3:30 PM - 5:00 PM	Invited Lecture Session 4 Myocardial Perfusion and Ischemia	Case Review 3 When CMR Complements Other Modalities	Oral Abstract Session 4 ECA Basic Translational	Oral Abstract Session 5 DCM and Secondary CMP		
5:00 PM - 6:30 PM	Invited Lecture Session 5 Myocardial Infarction and Area at Risk	Case Review 4 Cardiac Masses: Correlating Imaging with Pathology	Oral Abstract Session 6 Comparison to Other Modalities and Cost Effectiveness	Oral Abstract Session 7 Vascular MRI: From Research to Clinical Application		
6:30 PM - 7:30 PM	Moderated Poster Session 1/Poster Viewing/Wine and Cheese Reception - Royal/Sabal Ballrooms					
SATURDAY, FEBRUARY 4, 2012						
7:00 AM - 8:00 AM	Physics for Physicians 2 Crystal Ballroom P	Cardiology for Non-cardiologists 2 Crystal Ballroom M				
8:00 AM - 9:30 AM	Invited Lecture Session 6 Interventional MRI - Vascular and Structural Heart Disease	Case Review 5 Myocardial Inflammation: What is the Diagnosis?	Oral Abstract Session 8 Novel Techniques for Clinical Application	Oral Abstract Session 9 Congenital Heart Disease 1	Technologist Workshop	
9:30 AM - 10:00 AM	Refreshment Break/Exhibits/Posters					
10:00 AM - 11:30 AM	Invited Lecture Session 7 Advanced CMR Techniques in Pediatric/Congenital Heart Disease	Case Review 6 Best Cases from the SCMR Website	Invited Lecture Session 8 Non-ischemic Cardiomyopathies 2	Oral Abstract Session 10 CAD Acute Myocardial Injury		
11:30 AM - 12:30 PM	Moderated Poster Session 2/Lunch/Exhibits/Posters					
12:30 PM - 2:00 PM	Invited Lecture Session 9 High Throughput CMR (Protocol Optimizing): Improving Quantification and Reproducibility	Case Review 7 Perfusion Imaging by CMR: Both Usual and Unusual Cases	Oral Abstract Session 11 Congenital Heart Disease 2	Oral Abstract Session 12 Stepping into New Insights: Enhancing Our Understanding		
2:00 PM - 2:30 PM	Refreshment Break/Exhibits/Posters					
2:30 PM - 4:00 PM	Invited Lecture Session 10 CMR Application in Cardiac Electrophysiology	Case Review 8 Surprising Findings in Valvular Disease	Oral Abstract Session 13 Non-ischemic Heart Disease: A Wide Spectrum from Technique to Disease	Oral Abstract Session 14 CAD: Assessment of Perfusion - Routine Patient Care and Research		
4:00 PM - 5:30 PM	Invited Lecture Session 11 Emerging CMR Technology	Case Review 9 Congenital Heart Disease 2	Oral Abstract Session 15 Hypertrophic Cardiomyopathy	Oral Abstract Session 16 Arrhythmias, EP, and Interventional Applications		
5:30 PM - 6:00 PM	CMR Technology Updates					
6:00 PM - 6:30 PM	Award Presentations					
6:30 PM - 8:00 PM	Awards Reception Crystal Ballroom H					
SUNDAY, FEBRUARY 5, 2012						
7:00 AM - 8:00 AM	Physics for Physicians 3 Crystal Ballroom P	Cardiology for Non-cardiologists 3 Crystal Ballroom M				
8:00 AM - 9:30 AM	Invited Lecture Session 12 Cost Effectiveness of CMR	Case Review 10 Interactive CMR Cases: State of the Heart	Invited Lecture Session 13 Informing Clinical Decision in Congenital Heart Disease	Oral Abstract Session 17 Novel Techniques - Assessment of the Myocardium	Technologist Workshop	
9:30 AM - 10:00 AM	Refreshment Break					
10:00 AM - 11:30 AM	Invited Lecture Session 14 CMR Safety - Contrast Agents, Medical Devices, and Issues Related to High Field Strengths	Invited Lecture Session 15 Towards Patient Specific Quantitative CMR and Computational Models of CV Flow and Function	Invited Lecture Session 16 CMR Imaging in Pre-clinical Research and Drug Development	Invited Lecture Session 17 Interventional MRI - Electrophysiology		
11:30 AM - 1:00 PM	Closing Plenary Session					
1:00 PM - 1:30 PM	Closing Remarks/Highlights from 2012 Scientific Sessions					

LEGEND:

Clinical

Congenital

Basic Science

Multi-track

WELCOME

Dear colleagues and friends,

Welcome to Orlando and the 15th Annual Scientific Sessions of the Society for Cardiovascular Magnetic Resonance! The Board of Trustees shares a strong commitment to advancing the science and practice of CMR and your attendance supports this goal and the vision and mission of SCMR.

I would like to thank the 2012 Program Committee, chaired by Dr. Raymond Kwong and Dr. Jeanette Schulz-Menger, for their time, expertise, and dedication given to designing a program guaranteed to be up-to-date, boundary pushing, and thought-provoking.

This year's meeting continues the trend of recent meetings that have focused on patient outcomes and cost effectiveness, with an Opening Plenary session translating these concepts onto the impact of CMR on Patient Care. We are honored and delighted to have Dr. Robert Bonow, a world recognized clinician and scientist in cardiovascular care, our own Past-President of SCMR Dr. Warren Manning, and SCMR Board Member Dr. Matthias Stuber who will be presenting in the opening plenary.

The scientific program has been developed to emphasize categories along four targeted tracks: General CMR, Congenital/Pediatric, Basic Science, and Case Studies. This year's program continues to build on prior years with the outstanding group of experts assembled to discuss the wide range of interesting topics and provide both an overview of CMR for those new to the field, along with sessions designed for those acquiring a deeper knowledge of CMR technology, techniques, and applications, as well as potential for the future. In parallel, the Technologist's Workshop will offer technologists sessions focused on both their clinical and research educational needs.

For those arriving early, the Pre-Conference programs include a Physician's Course, a Congenital/Pediatric Course, and for the first time a two-day joint workshop with ISMRM on Flow and Motion that takes advantage of the natural mutual interests our two memberships reflect. This joint workshop is the first of what we hope will be many more to come as we continue to expand our collaborative efforts with others interested in CMR and cardiovascular care.

Again, I extend a warm welcome to each of you and feel confident you will value the knowledge, contacts, and insights gained at the 2012 SCMR Scientific Sessions.

Sincerely,



Scott D. Flamm, MD
President, SCMR

COVER AND INSIDE PHOTO CREDITS: Through the courtesy of Drs. Jeanette Schulz-Menger, Otavio Coelho-Filho, and Michael Markl, the front cover features CMR images of an anterior infarction with extensive intracavitary thrombus, the histology and ex-vivo imaging of an infarction, an abnormal myocardial perfusion, and a 3D time-resolved phase-contrast flow mapping of an ascending aortic aneurysm.

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THE SOCIETY FOR CARDIOVASCULAR MAGNETIC RESONANCE

SCMR VISION STATEMENT

The Society for Cardiovascular Magnetic Resonance (SCMR) will be the leading international representative and advocate for all physicians, scientists, and technologists working in CMR to improve patient outcomes through excellence in education, training, standards, research and development.

The Mission of SCMR is to:

- Be the premier international model and provider of CMR education, training, standards development, and accreditation.
- Maximize clinical effectiveness of CMR through coordinated comparative effectiveness research efforts resulting in evidence-based guidelines to enhance patient care and outcomes.
- Continually enhance the accuracy, efficiency, and effectiveness of CMR in cardiovascular healthcare through technological advances.
- Promote scientific exchange through organization of an annual international scientific conference, publication of the *Journal of Cardiovascular Magnetic Resonance*, and interactive internet-enabled tools including the SCMR website.
- Build an expanding global membership of physicians, scientists, technologists, and interested healthcare partners focused on clinical applications and research in CMR.
- Develop and advance close working alliances with related societies, industry partners, and governmental and regulatory agencies to more effectively integrate and elevate the use of CMR within cardiovascular healthcare.

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Toronto, ON Canada

The Goals of the Conference are to:

- Deliver state of the art information on the science of CMR imaging and spectroscopy
- Provide a forum for the presentation of new information on CMR
- Compare and contrast CMR methods with other cardiovascular imaging approaches

At the conclusion of the Scientific Sessions, participants should be better able to:

- Discuss current and new applications where CMR helps in the diagnosis or management of adult cardiovascular disease
- Discuss current and new applications where CMR helps in the diagnosis or management of pediatric and adult congenital cardiovascular disease
- Present evidence that CMR predicts cardiovascular outcomes in patients with a wide range of diseases
- Present current evidence that CMR can be used as a valuable tool in advancing the development of new therapies for cardiovascular disease
- Explore current evidence that support CMR to be cost-effective and to improve patient care
- Present and discuss contrast enhanced and non-contrast enhanced strategies of vascular MRI
- Discuss new approaches and methodologies for CMR image acquisition in patients with cardiovascular disease
- Promote high safety standards and consistency of imaging protocols in the use of CMR in the care of patients with cardiovascular disease
- Present and discuss new approaches of molecular and interventional CMR

Accreditation

This activity has been planned and implemented in accordance with the Essential Areas and Policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint sponsorship of the Society for Cardiovascular Magnetic Resonance and the University of Minnesota. The University of Minnesota is accredited by the ACCME to provide continuing medical education for physicians.

The University of Minnesota designates the educational activities listed below for the maximum of *AMA PRA Category 1 Credits™*:

Physician Pre-conference Course – 8 *AMA PRA Category 1 Credits™*

Congenital/Pediatric Pre-conference Course – 8 *AMA PRA Category 1 Credits™*

2012 Scientific Sessions – 21.25 *AMA PRA Category 1 Credits™*

Physicians and other attendees should only claim credit commensurate with the extent of their participation in the activity.

Other Healthcare Professionals who participate in this CME activity may submit their Statements of Attendance to their appropriate accrediting organizations or state boards for consideration of credit. The participant is responsible for determining whether this activity meets the requirements for acceptable continuing education.

Technologist Workshop

This activity is approved for credit by the American Society of Radiologic Technology (ASRT) for a maximum of 15.75 CE credits.

Each technologist should claim only those hours of credit actually spent in this activity.



Admission

Conference name badges are required for admission to all activities related to the 15th Annual Scientific Sessions, including the exhibit hall and social events.

Registration Hours

The 2012 SCMR Registration Desk is located at the Crystal Ballroom located in the Crystal Ballroom Foyer. The Registration Desk will be open and staffed during the following hours:

Wednesday, February 1	12:00 PM – 6:30 PM
Thursday, February 2	7:00 AM – 6:00 PM
Friday, February 3	6:30 AM – 6:30 PM
Saturday, February 4	6:30 AM – 6:30 PM
Sunday, February 5	6:30 AM – 2:00 PM

Acknowledgements

The Society for Cardiovascular Magnetic Resonance gratefully acknowledges the support of these scientific sessions and SCMR's objectives from our industry supporters:

Siemens Healthcare
Toshiba American Medical Systems
GE Healthcare
Medis medical imaging systems, Inc.
Heart Imaging Technologies
Philips Healthcare

Exhibits

Educational and informational exhibits will be available in Royal/Sabal Ballrooms during the Scientific Sessions. Exhibiting company representatives will be available to answer your questions about their products and services. Please visit the exhibits and thank the representatives for their support. The complete list of exhibits can be found on pages 56-58.

Friday, February 3	10:00 AM – 7:30 PM
Saturday, February 4	7:00 AM – 3:30 PM

Speaker Ready Room

The 2012 Program Committee is committed to providing attendees cutting edge technology and coordinated presentations at the Scientific Sessions. To be fully prepared for your session, each presenter is requested to visit the Speaker Ready Room at least 24 hours prior to your presentation. The Speaker Ready Room is located in the St. Louis Room and will be open the following days and times:

Wednesday, February 1	5:00 PM – 8:00 PM
Thursday, February 2	7:00 AM – 6:00 PM
Friday, February 3	7:00 AM – 6:00 PM
Saturday, February 4	7:00 AM – 6:00 PM
Sunday, February 5	7:00 AM – 1:00 PM

Disclosure Statement

It is the policy of the University of Minnesota - Office of Continuing Medical Education to insure balance, independence, objectivity and scientific rigor in all of its sponsored educational activities. All participating speakers and moderators, course directors, and planning committee members are required to disclose to the program audience any financial relationships related to the subject matter of this program. Relationships of spouse/partner with proprietary entities producing healthcare goods or services should be disclosed if they are of a nature that may influence the objectivity of the individual in a position to control the content of the CME activity. Disclosure information is reviewed in advance in order to manage and resolve any possible conflicts of interest. Financial disclosure information for each speaker will be shared with attendees prior to the speaker's presentation.

A complete list of disclosures is available on pages 52-54.

Marriott World Center



PHYSICIAN PRE-CONFERENCE COURSE: INTRODUCTION TO CARDIOVASCULAR MR

Thursday, February 2, 2012

8:00 AM – 6:00 PM

Crystal Ballroom G1

Chairs: Patricia Bandettini, MD, NHLBI-National Institutes of Health
Steffen Petersen, MD, DPhil, Barts and The London NHS Trust

*Pre-conference Course Educational Objectives**

- Modify sequence parameters to enhance MR image quality and to identify common artifacts
- Plan, perform, and read cardiac MRI including stress test
- Recognize the current common pulse sequence techniques and their potential clinical applications

Agenda

8:00 am – 8:10 am **Introductory Remarks**

Session Co-chairs: Patricia Bandettini, MD, NHLBI;
Steffen Petersen, MD, Barts and The London NHS Trust

8:10 am - 9:50 am **Basics of CMR**

8:10 am **Basics: Spins and Hardware**

Tobias Schaeffter, PhD, King's College London

8:30 am **Black-blood Sequences**

Anthony Aletras, PhD, University of Central Greece

8:50 am **Bright-blood Sequences**

Robert Judd, PhD, Duke University

9:10 am **Let's Go Faster: Parallel Acquisition Techniques**

Michael Hansen, PhD, National Institutes of Health

9:30 am **Dealing with Breathing Artifacts and Arrhythmia**

Christine Lorenz, PhD, Siemens Corporate Research, Inc.

9:50 am - 10:10 am **Refreshment Break**

10:10 am - 12:10 pm **How To Sessions**

10:10 am **How to Measure Regional and Global Ventricular Function**

Ceri Davies, MD, Barts and London NHS Trust

10:30 am **How to Quantify Blood Flow**

Alex Pitcher, MD, Oxford Centre for Clinical Magnetic Resonance Research

10:50 am **How to Perform High-quality Delayed Enhancement**

Alexander Dick, MD, University of Toronto

11:10 am **How to Optimize MR Angiography**

Christoph Herborn, MD, Medical Prevention Center Hamburg

11:30 am **How to Assess the Coronary Arteries Using CMR**

Hajime Sakuma, MD, MIE University

11:50 am **How to Assess Myocardial Iron Overload**

John Paul Carpenter, MBBS, Royal Brompton Hospital

12:10 pm - 1:10 pm **Lunch (on own)**

1:10 pm - 3:10 pm **Clinical Applications of CMR - Part 1**

1:10 pm **Optimizing Efficiency of Protocols**

Mark Westwood, MD, The London Chest Hospital

1:30 pm **CMR to Assess the Etiology of Cardiomyopathy**

Joseph Suttie, MBBS, University of Oxford

1:50 pm **CMR in the Assessment of Possible Arrhythmogenic Right Ventricular Dysplasia**

Matthias Friedrich, MD, Université de Montréal

2:10 pm **CMR in Suspected Acute Myocarditis**

Ian Paterson, MD, University of Alberta

2:30 pm **CMR in Myocardial Ischemia**

Stephen Harden, MD, Southampton General Hospital

2:50 pm **CMR in Myocardial Viability**

Phillip Yang, MD, Stanford University

3:10 pm - 3:40 pm **Refreshment Break**

3:40 pm - 6:00 pm **Clinical Applications of CMR - Part 2**

3:40 pm **CMR in Congenital Heart Disease**

Vivek Muthurangu, MD, UCL Institute of Child Health and Great Ormond Street Hospital

4:00 pm **CMR in Valvular Disease**

Erik Schelbert, MD, University of Pittsburgh

4:20 pm **CMR in Pericardial Disease**

Monvadi Srichai, MD, NYU School of Medicine

PHYSICIAN PRE-CONFERENCE COURSE: INTRODUCTION TO CARDIOVASCULAR MR (CONT'D)

4:40 pm **CMR in the Assessment of Intracardiac Mass**
Peter Buser, MD, University Hospital Basel

5:00 pm **Knowing When to Choose CMR in a Multimodality Imaging Climate**
Marcus Chen, MD, National Institutes of Health

5:20 pm **Panel Discussion of Submitted Questions**
Patricia Bandettini, MD, NHLBI
Matthias Friedrich, MD, Université de Montréal
Christoph Herborn, MD, MBA, Medical Prevention Center Hamburg
Vivek Muthurangu, MD, UCL Institute of Child Health and Great Ormond Street Hospital
Steffen Petersen, MD, The Barts and The London NHS Trust
Subha Raman, MD, The Ohio State University
Tobias Schaeffter, PhD, King's College London

SCMR 2012 PRE-CONFERENCE COURSE: CONGENITAL/PEDIATRIC PRE-CONFERENCE COURSE

8:00 AM – 6:00 PM **Crystal Ballroom J1**

Chairs: Vivek Muthurangu, UCL Institute of Child Health and Great Ormond Street Hospital;
Andrew Powell, MD, Children's Hospital Boston

*Pre-conference Course Educational Objectives**

- Discuss current and new applications where CMR helps in the diagnosis or management of congenital and adult congenital cardiovascular disease.
- Better understand what CMR technology can provide in the management of congenital heart disease

8:00 am – 10:00 am **Session I - Practical Answers to Everyday Questions**

8:00 am **How to Make Sense of Congenital Cardiac Anatomy - The Segmental Approach**
Tal Geva, MD, Children's Hospital Boston

8:30 am **How to Write a Great Congenital CMR Report**
James Nielsen, MD, Mt. Sinai School of Medicine

8:50 am **Too Small or Too Big - What Are Normal Values for Ventricular Parameters in Children?**
Adam Dorfman, MD, University of Michigan Health Systems

9:10 am **What are the Risks of Anesthesia and Sedation for CMR?**
Kirsten Odegard, MD, Children's Hospital Boston

9:40 am **Which Cardiac Devices are CMR Compatible?**
Tobias Schaeffter, MD, King's College London

10:00 am – 10:30 am **Refreshment Break**

10:30 am – 12:30 pm **Session II - Sharpening Your CMR Tools**

10:30 am **Ventricular Function: How to Make the Gold Standard Shine**
Sohab Fratz, MD, Deutsches Herzzentrum München

10:55 am **Flow Imaging: Tips, Tricks, and Pitfalls**
Philipp Beerbaum, MD, PhD, King's College London

11:20 am **Contrast-enhanced Angiography: Optimizing the Protocol**
Taylor Chung, MD, Children's Hospital & Research Center

11:45 am **3D SSFP Whole Heart Imaging – A Recipe for a Clear Picture**
Gerald Greil, MD, King's College London

12:05 pm **Fibrosis Imaging: How to Get the Best from Your Scar Imaging**
Carsten Rickers, MD, University Hospital of Schleswig-Holstein

12:30 pm – 1:30 pm **Lunch (on own)**

1:30 pm – 3:30 pm **Session III - Standard Clinical Applications**

1:30 pm **Shunt Lesions**
Oliver Tann, MD, Great Ormond Street Hospital

1:55 pm **Coarctation of the Aorta**
Lauren Sena, MD, Children's Hospital Boston



SCMR 2012 PRE-CONFERENCE COURSE: CONGENITAL/PEDIATRIC PRE-CONFERENCE COURSE (CONT'D)

- | | |
|---|--|
| <p>2:15 pm Transcatheter Pulmonary Valve Implantation
Andrew Taylor, MD, UCL Institute of Child Health</p> <p>2:40 pm Fontan Operation
Rajesh Krishnamurthy, MD, Texas Children's Hospital</p> <p>3:05 pm Cardiac Masses
Rebecca Beroukhim, MD, Children's Hospital Boston</p> <p>3:30 pm – 4:00 pm Refreshment Break</p> <p>4:00 pm – 6:00 pm Session IV - Advanced Clinical Applications</p> <p>4:00 pm MR Augmented Catheterization: Luxury or Necessity?
Reza Razavi, MD, King's College London</p> | <p>4:25 pm Measurement of Myocardial Strain: Does It Change Anything?
Kan Hor, MD, Cincinnati Children's Hospital Medical Center</p> <p>4:50 pm Complex Cases: Test Your Knowledge
Vivek Muthurangu, MD, UCL Institute of Child Health and Great Ormond Street Hospital
Andrew Powell, MD, Children's Hospital Boston</p> <p>5:30 pm Q & A Session with Panel</p> |
|---|--|

JOIN SCMR TODAY!

Membership Benefits

Free authorship in the open access publication *Journal of Cardiovascular Magnetic Resonance*
Annual International Scientific Sessions • Exclusive members-only web-based services
Protocols and Standards for training and practice • Discounts on SCMR educational events and materials

Membership Descriptions

Regular Member A physician, scientist or industry (community) member who satisfies the requirements of good character and who has demonstrated an interest in cardiovascular magnetic resonance. All regular members have the right to hold office and vote providing that dues are paid and current.

Trainee Member Physicians in training, doctoral candidates and post-doctoral fellows who are receiving training, experience or competence in cardiovascular magnetic resonance. Trainee members are eligible for up to 4 years and must provide a letter of verification of active training from their institution yearly. Trainee members may vote and serve on committees.

Technologist/Allied Health Member Two years active, direct experience in the field are required to become a technologist/allied health member having the right to vote and to hold office, providing that dues are paid and current.

Emeritus Member Emeritus member status is available to a member in good standing for the previous five years who is retired from active practice, teaching and research, and is at least 65 years of age. Applications are reviewed and approved by the Executive Committee. Emeritus members cannot hold elected office or serve as committee chairs, but do receive member discounts to meetings, may vote and serve on committees.

Associate Member The Associate Membership category is available to medical professionals (MD and PhD) who work in developing countries where the prevailing wage makes regular Society membership dues unaffordable. The features and application procedure are detailed on the SCMR website.

Visit the SCMR website www.scmr.org for additional membership and Society information.

Friday, February 3, 2012

7:00 am – 8:00 am **Continental Breakfast** Palms Ballroom Foyer

7:00 am – 8:00 am **Physics for Physicians** Crystal Ballroom P

How to Make MR Images

Michael Hansen, PhD, National Institutes of Health

7:00 am – 8:00 am **Cardiology for Non-cardiologists** Crystal Ballroom M

7:00 am **Most Common Clinical Indications for CMR: Strengths and Weaknesses**

Afshin Farzaneh-Far, MD, PhD, University of Illinois

7:30 am **CMR-specific Artifacts**
Daniel B. Ennis, PhD, University of California – Los Angeles

8:00 am – 8:15 am **Welcome and Opening Comments** Sago Ballroom
Scott Flamm, MD, Cleveland Clinic

8:15 am – 9:30 am **Opening Plenary Session – Advancing Patient Care Using CMR Imaging**
Moderators: Raymond Y. Kwong, MD, MPH, Brigham and Women's Hospital
Jeanette Schulz-Menger, MD, Charite Universitätsmedizin Berlin

Upon completion of this educational activity, the participant should be better able to:

- Understand the current evidence surrounding viability imaging from the STICH trial and the role of cardiac magnetic resonance imaging in this area
- Recognize the current issues and the future of noninvasive imaging of the coronary arteries by magnetic resonance
- Name a number of novel technical development that can improve patient management in the near future

8:15 am **What is the Status of Viability Imaging after STICH?**
Robert Bonow, MD, Northwestern University Medical Center

8:35 am **The Present and the Future of Coronary Magnetic Resonance Angiography**
Warren Manning, MD, Beth Israel Deaconess Medical Center

8:55 am **What CMR Technology Can Take Patient Care to a New Level in the Near Future**
Matthias Stuber, PhD, Lausanne University

9:15 am **Q and A**

9:30 am – 10:00 am **CMR Questionnaire**
Moderator: Gerald Pohost, MD, University of Southern California

10:00 am – 10:30 am **Refreshment Break** Royal/Sabal Ballrooms

10:30 am – 12:00 pm **Concurrent Sessions**

Invited Lecture 1 – Non-ischemic Heart Disease 1 Sago Ballroom

Moderators: Ricardo Cury, MD, Radiology Associates of South Florida
Steffen Petersen, MD, The Barts and The London NHS Trust
Upon completion of this educational activity, the participant should be better able to:

- Optimize the CMR protocols used in non-ischemic heart disease
- Differentiate cardiomyopathies using CMR
- Discuss the impact of CMR on the management of non-ischemic heart disease

10:30 am **DCM**
Ravi Assomull, MRCP, Royal Brompton Hospital

10:45 am **Myocarditis**
Saidi Mohiddin, MBChB, London Chest Hospital

11:00 am **Heritable Cardiomyopathies**
Ali Yilmaz, MD, Robert-Bosch-Krankenhaus

11:15 am **Progress in ARVD/C Diagnosis**
David Bluemke, MD, PhD, National Institutes of Health

11:30 am **Impact of CMR on Treatment of NICM**
Saman Nazarian, MD, Johns Hopkins Outpatient Center

11:45 am **Q and A**

Invited Lecture 2 – Cardiac Metabolism and Molecular Imaging Crystal Ballroom J2

Moderators: Gregory Lanza, MD, PhD, Washington University
Graham Wright, MD, Sunnybrook Health Sciences Centre
Upon completion of this educational activity, the participant should be better able to:

- Appreciate in overview the current status of imaging atherosclerosis and cardiac energetics with MRI today
- Recognize emerging MRI molecular imaging agents that can build upon these current capabilities
- Understand the clinical unmet need and opportunity that molecular imaging offers in the management of cardiovascular patients

10:30 am **Targeted Agents for Atherosclerosis Characterization**
David Sosnovik, MD, Harvard Medical School

10:45 am **Carotid Angiogenesis and 19F Imaging**
Shelton Caruthers, PhD, Washington University – St. Louis

11:00 am **Cardiac Energetics**
Stefan Neubauer, MD, John Radcliffe Hospital

11:15 am **Visualizing Cardiomyocyte Function Using Carbon-13 MR**
Marie Schroeder, MD, University of Oxford

11:30 am **13C Imaging of Metabolic Disorders - Physiological Considerations**
Craig Malloy, MD, University of Texas Southwestern Medical Center

11:45 am **Q and A**

Case Review 1 – Fascinating Vascular Disease Cases Crystal Ballroom J1

Moderators: Richard Coulden, MD, University of Alberta
Uma Valeti, MD, University of Minnesota
Presenters: Lucien Abboud, MD, DeBakey and Heart Vascular Institute
Christine Heilmair, MD, HELIOS Klinikum Krefeld
Mayil Krishnam, MRCP, FRCR, University of California - Irvine

Oral Abstract Session 1 – Early Career Award – Clinical Crystal Ballroom G1

Moderators: Joao Lima, MD, Johns Hopkins University
Dudley J. Pennell, MD, Royal Brompton Hospital

10:35 am **O1 MRI in Childhood Arrhythmogenic Right Ventricular Cardiomyopathy and Proposed Modification of the Task Force Criteria for Children**
Lars Grosse-Wortmann, MD, Hospital for Sick Children

10:49 am **O2 Feasibility and Prognostic Value of Stress-perfusion CMR in Obesity**
Ravi Shah, MD, Brigham and Women's Hospital

11:03 am **O3 Stress CMR Myocardial Perfusion Imaging (CMR-MPI) Is Cost-effective Compared to Nuclear SPECT: A Retrospective Cost-effectiveness Analysis**
Sanjeev Francis, MD, Massachusetts General Hospital

11:17 am **O4 Impact of CMR Parameters on Prognosis after ST-Elevation Myocardial Infarction – A Comparison to Traditional Outcome Markers**
Suzanne de Waha, University of Leipzig, Heart Center

11:31 am **O5 Non-invasive Assessment of Interstitial Myocardial Fibrosis in Pressure-Overload Left Ventricular Hypertrophy**
Andrew Jabbour, Cardiology Fellow, Royal Brompton and Harefield NHS Foundation Trust, Imperial College London

11:45 am **O6 Prognostic Significance of Midwall Fibrosis in Dilated Cardiomyopathy**
Ankur Gulati, Royal Brompton Hospital

12:00 pm – 12:30 pm Sago Ballroom
SCMR Business Meeting

12:30 pm – 1:30 pm **Posters, Exhibits, Lunch (on own)** Royal/Sabal Ballrooms

1:30 pm – 3:00 pm **Concurrent Sessions**

Invited Lecture 3 – Coronary and Vascular CMR Sago Ballroom

Moderators: James Carr, MD, PhD, Northwestern University
Warren Manning, MD, Beth Israel Deaconess Medical Center
Upon completion of this educational activity, the participant should be better able to:

- Know the optimal dose reduction strategies for performing MRA in the at risk patient
- Understand the current role of coronary MRA in clinical practice
- Have a better understanding of MRI capability and shortcomings for coronary lumen and arterial wall imaging

1:30 pm **Coronary Lumen and Arterial Wall Imaging with MRI**
Debiao Li, PhD, Cedars Sinai Medical Center

1:50 pm **MRA in the "At Risk" Patient - Dose Reduction Strategies and Non-Contrast Techniques**
Robert Edelman, MD, Evanston Hospital

2:10 pm **Coronary MRA in Real Practice: Is it Feasible and Cost-effective?**
Hajime Sakuma, MD, MIE University Hospital

2:30 pm **MRI of the Peripheral Vasculature - The New Gold Standard?**
J. Paul Finn, MD, University of California – Los Angeles

2:50 pm **Q and A**

Case Review 2 – Congenital Heart Disease 1

Crystal Ballroom J1

Moderators: Reza Rezavi, MD, King's College London
Michael Taylor, MD, Cincinnati Children's Hospital Medical Center
Presenters: Jaspreet Singh, MD, University of Arizona
Supriya Jain, MD, Children's Hospital Boston
Mark Rabbat, MD, Loyola University Medical Center
Rebecca Beroukhim, MD, Children's Hospital Boston
Anil Attili, MD, University of Kentucky
Sandra Kocina, MD, Emory University
Sowmya Balasubramanian, MD, Children's Hospital Boston

Oral Abstract Session 2 – Early Career Award - Basic Science

Crystal Ballroom J2

Dedicated to the memory of Stefan Fischer

Moderators: Dara Kraitchman, VMD, PhD, Johns Hopkins University
Stefan Neubauer, MD, John Radcliffe Hospital

- 1:35 pm** **O7** **A New CMR Protocol for Non-destructive, High Resolution, Ex-vivo Assessment of the Area At Risk Simultaneous with Infarction: Validation with Histopathology**
Lowie Van Assche, MD, Duke University
- 1:49 pm** **O8** **Left Atrial Scar Assessment Using Imaging with Isotropic Spatial Resolution and Compressed Sensing**
Mehmet Akcakaya, PhD, Beth Israel Deaconess Medical Center
- 2:03 pm** **O9** **Interactive Real-time Mapping and Ablation of the Pulmonary Veins and Cavotricuspid Isthmus in an Ovine Model with an Externally-irrigated MRI-compatible Ablation Catheter**
Anand Ganesan, MBBS PhD, University of Adelaide
- 2:17 pm** **O10** **MRI Based Non-invasive Detection of Cardiomyocyte Hypertrophy and Cell-volume Changes**
Otavio Coelho-Filho, MD, MPH, State University of Campinas
- 2:31 pm** **O11** **Probing Atherosclerotic Angiogenesis with New Manganese-based Nanocolloid for T1-weighted MRI**
Kezheng Wang, MD, PhD, 4th Affiliated Hospital of Harbin Medical University, Washington University School of Medicine - St.Louis
- 2:45 pm** **O12** **Accurate Method for Measuring Arterial Pulse Wave Velocity by Cardiovascular Magnetic Resonance**
El-Sayed Ibrahim, PhD, University of Florida

Oral Abstract Session 3 – Clinical Outcome and Prognosis

Crystal Ballroom G1

Moderators: Ingo Eitel, MD, University of Leipzig
Michael McConnell, MD, Stanford University School of Medicine

- 1:35 pm** **O13** **Prognostic Value of Delayed Enhancement Cardiovascular Magnetic Resonance in Patients with Sarcoidosis**
Han Kim, MD, Duke University
- 1:47 pm** **O14** **Assessment of Warranty Time for Dobutamine Stress Magnetic Resonance Imaging in 3138 Consecutive Patients: A Bi-center Study**
Sebastian Kelle, MD, German Heart Institute Berlin
- 1:59 pm** **O15** **Impact of Ejection Fraction on Long-Term Outcome after ST-Elevation Myocardial Infarction – Comparison between Cardiac Magnetic Resonance Imaging and Transthoracic Echocardiography**
Suzanne de Waha, University of Leipzig, Heart Center
- 2:11 pm** **O16** **End Systolic Volume and Scar Burden are Incremental and Independent Predictors of Survival in Patients with Severe Ischemic Cardiomyopathy**
Deborah Kwon, MD, Cleveland Clinic
- 2:23 pm** **O17** **Gray-zone Late Gadolinium Enhancement Greatly Enriches the Prediction of Ventricular Arrhythmia; A Cardiovascular MRI Study**
Asghar Fakhri, Allegheny General Hospital
- 2:35 pm** **O18** **Quantification of Infarct Tissue Heterogeneity and Remote Myocardial Fibrotic Burden during Convalescent Phase After Acute Myocardial Infarction (MI) Provided Strong and Complementary Evidence of Ventricular Arrhythmogenicity from Quantitative Microvolt T-wave Alternans Testing (PROSPECT-CMR Study)**
Bobby Heydari, MD, Brigham and Women's Hospital
- 2:47 pm** **O19** **Design and Rationale of the MR-INFORM Study: Stress Perfusion MRI to Guide the Management of Patients with Stable Coronary Artery Disease**
Shazia Hussain, MbChB, Kings College
- 3:00 pm – 3:30 pm** **Refreshment Break** Royal/Sabal Ballrooms

3:30 pm – 5:00 pm Concurrent Sessions

Invited Lecture 4 – Myocardial Perfusion and Ischemia Sago Ballroom

Moderators: Michael Jerosch-Herold, PhD, Brigham and Women's Hospital
Joseph Selvanayagam, MBBS, DPhil, Adelaide Hospital
Upon completion of this educational activity, the participant should be better able to:

- Better understand the pros and cons of CMR perfusion for ischemia assessment
- Understand why perfusion artifacts occur and how to recognize them and minimize them in clinical practice
- Understand the potential of non-contrast perfusion methods in current practice

3:30 pm CMR Perfusion Imaging in Clinical Cardiology: Comparison with Other Non-invasive Imaging Modalities
Timothy Christian, MD, University of Vermont

3:45 pm How to do CMR Perfusion in Real World Practice: Tricks and Tips
Sven Plein, MD, PhD, University of Leeds

4:00 pm Quantitative CMR Perfusion: Does It Add Value?
Andrew Arai, MD, NHLBI

4:15 pm Non-contrast Perfusion Methods: Ready for Prime Time?
Krishna Nayak, PhD, University of Southern California

4:30 pm Moving Towards Whole-heart Perfusion Imaging with MRI
Sebastian Kozerke, PhD, Institute for Biomedical Engineering University and ETH Zurich

4:45 pm Q and A

Case Review 3 – When CMR Complements Other Modalities Crystal Ballroom J1

Moderators: Ron Blankstein, MD, Brigham & Women's Hospital
Edward Martin, MD, Oklahoma Heart Institute
Presenters: Joel Wilson, MD, NHLBI
Christopher Miller, MBChB, University of Manchester
Anthon Fuisz, MD, Washington Hospital Center
Edward Hulten, MD, Brigham and Women's Hospital
Scott Bingham, MD, Central Utah Imaging
Juan Battle, MD, Radiology Associates of South Florida

Oral Abstract Session 4 – Early Career Award - Basic Translational Crystal Ballroom J2

Moderators: Christopher Kramer, MD, University of Virginia
Gerald Pohost, MD, University of Southern California

3:35 pm O20 Automatic Segmentation of Myocardium at Risk in T2-weighted Cardiovascular Magnetic Resonance
Jane Sjogren, MSc, Skåne University Hospital

3:49 pm O21 Free-breathing Late Gadolinium Enhancement CMR with a Fixed Short Scan Time Using CosMo
Mehdi Moghari, Harvard Medical School

4:03 pm O22 Improved Late Gadolinium Enhancement Imaging of Left Ventricle with Isotropic Spatial Resolution
Mehmet Akcakaya, PhD, Beth Israel Deaconess Medical Center

4:17 pm O23 Interstitial Expansion in Health and Disease – An Equilibrium Contrast CMR Study
Daniel Sado, MRCP, The Heart Hospital

4:31 pm O24 Quantifying the Area at Risk Using the Infarct Lateral Border: Importance of Infarct Transmurality
Christoph Jensen, MD, Elisabeth Hospital Essen

4:45 pm O25 Improve of Arrhythmogenic Right Ventricular Cardiomyopathy/Dysplasia Evaluation by Magnetic Resonance Using Ventricular Arrhythmia Suppression with Intravenous Lidocaine
Afonso Shiozaki, MD, PhD, Maringá Imaging Institute

Oral Abstract Session 5 – DCM and Secondary CMP Crystal Ballroom J1

Moderators: Herbert Frank, MD, University of Vienna
Subha Raman, MD, The Ohio State University

3:35 pm O27 Non-contrast T1 Mapping Characterizes the Myocardium Beyond That Achieved by Late Gadolinium Enhancement in Both Hypertrophic and Dilated Cardiomyopathy
Joseph Suttie, MD, University of Oxford

3:47 pm O28 Measurement of Extracellular Volume Fraction by Cardiac Magnetic Resonance Imaging Detects Diffuse Myocardial Fibrosis in Systemic Sclerosis
Daniel Lee, MD, Northwestern University, Feinberg School of Medicine

3:59 pm O29 Cardiovascular Magnetic Resonance T2 Mapping Detects Myocardial Edema in Patients with Chronic Dilated Cardiomyopathy
Taigang He, PhD, Royal Brompton Hospital

4:11 pm O30 Left Ventricular Mass by Cardiac Magnetic Resonance Imaging and Adverse Cardiovascular Outcomes in Patients Treated with Anthracycline-based Chemotherapy
Tomas Neilan, MD, Massachusetts General Hospital

4:23 pm O31 Regional Expression of Myocardial Sheet Dysfunction in Dystrophin-deficient Cardiomyopathy Elucidated with Diffusion Tensor MRI and Optical Calcium Mapping
Ya-Jian Cheng, MS, Washington University - St. Louis

4:35 pm O32 In-vitro Evaluation of a Novel MR-compatible Cardiac Biopsy Catheter for MR-guided Myocardial Biopsies
Sebastian Seitz, PhD, University of Heidelberg

5:00 pm – 6:30 pm Concurrent Sessions

Invited Lecture 5 - Myocardial Infarction and Area at Risk Sago Ballroom

Moderators: Christopher Kramer, MD, University of Virginia
Holger Thiele, MD, University of Leipzig

Upon completion of this educational activity, the participant should be better able to:

- Select the optimal MR sequences for myocardial salvage and hemorrhage imaging, and understand all potential pitfalls and artifacts
- Understand the pathophysiology, clinical scenarios, and the prognostic impact influencing myocardial salvage, microvascular obstruction, and hemorrhage in clinical practice
- Have a glimpse into current and future research, understand into which direction research is directed in acute coronary syndromes, and how/when CMR is used in clinical research

5:00 pm Assessing Myocardial Salvage - State of the Art
Anthony Aletras, PhD, University of Central Greece

5:20 pm CMR in Acute Coronary Syndromes for Prognosis Estimation - Infarct Size, Microvascular Obstruction, or Myocardial Salvage. Better than Other Clinical Risk Tools?
Ingo Eitel, MD, University of Leipzig Heart Center

5:40 pm Beyond Salvage, Infarct Size and Microvascular Obstruction - Can T2 - or T2*-Weighted Images Identify Hemorrhage?
Adam Mather, MD, University of Leeds

6:00 pm Clinical and Research Use of CMR in Acute Coronary Syndromes
Raymond Kim, MD, Duke Cardiovascular MRI Center

6:20 pm Q and A

Case Review 4 - Cardiac Masses: Correlating Imaging with Pathology Crystal Ballroom J1

Moderators: Carlos Rochitte, MD, Heart Institute – InCor
Ralf Wassmuth, MD, HELIOS-Charite Berlin
Presenters: Joel Wilson, MD, NHLBI
Saad Alhumayyd, MD, University of Toronto

Oral Abstract Session 6 – Comparison to Other Modalities and Cost Effectiveness Crystal Ballroom J2

Moderators: Otavio Coelho-Filho, MD, MPH, State University of Campinas
Edward Martin, MD, Oklahoma Heart Institute

5:05 pm O33 Can CMR Be the New 'Gold Standard' for Constrictive Pericarditis?
John Power, University of Rochester, Allegheny General Hospital

5:17 pm O34 Cardiovascular Magnetic Resonance with Late Gadolinium Enhancement Improves Mortality Prediction beyond Echocardiography: A Comparative Effectiveness Study
Erik Schelbert, MD, University of Pittsburgh

5:29 pm O35 Treadmill Exercise Stress Cardiac MRI for the Assessment of Left Ventricular Wall Motion: A Comparison with Stress Echocardiography in Healthy Volunteers
Paaladinesh Thavendiranathan, MD, MSc, Cleveland Clinic Foundation

5:41 pm O36 Unrecognized Myocardial Infarction by Echocardiography in Relation to Infarct Characteristics as Assessed by Cardiovascular Magnetic Resonance Imaging
Caroline Jaarsma, MD, Maastricht University Medical Center

5:53 pm O37 The Effect of Myocardial Fibrosis on Left Ventricular Diastolic Function Assessed by Non-invasive Cardiac Magnetic Resonance and Echocardiography
Azarakhsh Babolian, MD, Tehran University of Medical Sciences

6:05 pm O38 Validating Feature Tracking MRI for the Assessment of Strain Rate in Patients with Various Hemodynamic States
Dvorah Holtzman, MD, St. Francis Hospital

6:17 pm O39 Self-gated Cardiac Magnetic Resonance Perfusion Imaging compared with X-ray Angiography: A Pilot Study
Alexis Harrison, University of Utah

Oral Abstract Session 7 – Vascular MRI: From Research to Clinical Application Crystal Ballroom G1

Moderators: Jens Bremerich, MD, University Hospital Basel
J. Paul Finn, MD, University of California – Los Angeles

- 5:05 pm O40 High Resolution Slice-selective Fourier Velocity Encoding Using Spiral SENSE with Velocity Unwrap**
Jennifer Steeden, PhD, UCL
- 5:17 pm O41 PPACK and Bivalirudin Nanoparticles Enable Simultaneous Imaging and Potent Inhibition of Acute Clotting**
Jacob Myerson, MS, Washington University - St. Louis
- 5:29 pm O42 Copper Nanocolloids: A New Thrombus Molecular Imaging Approach to Ruptured Plaque**
Dipanjan Pan, Washington University Medical School
- 5:41 pm O43 Paradoxical Changes in Lumen Size During Progression and Regression of Carotid Atherosclerosis**
Sobhan Kodali, MD, Allegheny General Hospital
- 5:53 pm O44 Prospective Swallowing Motion Self-gating: A Feasibility Study in Carotid Artery Wall MRI Using 3D Variable-Flip-Angle TSE**
Zhaoyang Fan, PhD, Cedars-Sinai Medical Center
- 6:05 pm O45 The Feasibility of 350 Micron Spatial Resolution Coronary MRA at 3T in Humans**
Ahmed Gharib, MB, CHB, National Institutes of Health
- 6:17 pm O46 The Association between Aortic Stiffness Parameters and Left Ventricular Deformation: Preliminary Results from the MESA 5 Study**
Atul Chugh, Johns Hopkins University

6:30 pm – 8:00 pm Royal/Sabal Ballrooms
Moderated Poster Session 1, Poster Session 1, and Wine and Cheese Reception

Saturday, February 4, 2012

- 6:45 am – 8:00 am Continental Breakfast** Royal/Sabal Ballrooms
- 7:00 am – 8:00 am Physics for Physicians** Crystal Ballroom P
- 7:00 am Tissue Characterization: T1 Techniques**
Anthony Aletras, PhD, University of Central Greece

7:30 am Tissue Characterization: T2 and T2* Techniques

Anthony Aletras, PhD, University of Central Greece

7:00 am – 8:00 am Cardiology for Non-cardiologists Crystal Ballroom M

7:00 am Clinical Uses of Myocardial T1 Imaging

Subha Raman, MD, The Ohio State University

7:30 am Clinical Uses of Myocardial T2 and T2* Imaging

Subha Raman, MD, The Ohio State University

8:00 am – 9:30 am Concurrent Sessions

Invited Lecture 6 - Interventional MRI - Vascular and Structural Heart Disease Sago Ballroom

Moderators: Anthony Faranesh, PhD, NHLBI
Harald Quick, PhD, Institute of Medical Physics

Upon completion of this educational activity, the participant should be better able to:

- Recognize recent advances in CMR of congenital heart disease
- Understand the strength and weaknesses of computer modeling based on CMR data
- Be familiar with the use of CMR for fetal cardiac evaluation

8:00 am Interventional Cardiovascular MRI

Robert Lederman, MD, NHLBI

8:15 am Fusing MRI and Ultrasound for Intervention Guidance

Reza Razavi, MD, King's College London

8:30 am Fusing MRI and X-Ray for Stem Cell Therapies

Amish Raval, MD, University of Wisconsin Medical School

8:45 am Devices for iMRI in Vascular / Valvular Procedures

Harald Quick, PhD, Institute of Medical Physics

9:00 am Real-time MRI for Interventional Guidance

Juan Santos, PhD, Stanford University

9:15 am Q and A

Case Review 5 - Myocardial Inflammation: What is the Diagnosis? Crystal Ballroom J1

Moderators: Julio Chirinos, MD, University of Pennsylvania
Albert de Roos, MD, PhD, Leiden University Medical Center

Presenters: Birgit Langhans, MD, Deutsches Herzzentrum München
Elizabeth Joseph, MBBS, DMRD, DNB, CMC Vellore
Filip Zemrak, MD, MRCP, The London Chest Hospital

Oral Abstract Session 8 – Crystal Ballroom J2 Novel Techniques for Clinical Application

Moderators: Anthony Aletras, MD, University of Central Greece
Sven Plein, MD, PhD, University of Leeds

- 8:05 am** **047** **Validation of Dynamic Three-dimensional Whole Heart Magnetic Resonance Myocardial Perfusion Imaging against Single Photon Emission Computed Tomography for the Detection of Functionally Significant Coronary Heart Disease**
Roy Jogiya, MBBS, King's College London
- 8:17 am** **048** **Quantification of Myocardial Perfusion Based on Signal Intensity of Flow Sensitized MRI**
Sumeda Abeykoon, MS, University of Cincinnati
- 8:29 am** **049** **Diffusion MRI Tractography of the Human Heart (In Vivo) at End-Diastole and End-Systole**
Choukri Mekkaoui, Harvard Medical School
- 8:41 am** **050** **Cardiac Magnetic Resonance Myocardial Feature Tracking Correlates with Natural Radial Strain and Corresponds to Inotropic Stimulation**
Andreas Schuster, MD, King's College London
- 8:53 am** **051** **Quantitative Free-breathing 3T T2-mapping of the Heart Designed for Longitudinal Studies**
Ruud B. Van Heeswijk, PhD, University Hospital Lausanne (CHUV)
- 9:05 am** **052** **Slice-selective Implementation of an Adiabatic T2 Prep Sequence Increases Coronary Artery Conspicuity at 3T**
Sahar Soleimanifard, MSE, Johns Hopkins University
- 9:17 am** **053** **Highly Effective Fat Suppression in Clinical T1-Weighted Imaging of Ischemic and Non-Ischemic Heart Disease with DeSPAIR**
Wolfgang Rehwald, PhD, Siemens Healthcare, Duke University Medical Center

Oral Abstract Session 9 – Crystal Ballroom G1 Congenital Heart Disease 1

Moderators: James Nielsen, MD, Mt. Sinai School of Medicine
Emanuela Valsangiacomo, MD, University Children's Hospital

- 8:05 am** **054** **Diagnostic Accuracy of Post-mortem Cardiovascular Magnetic Resonance Imaging in Fetuses, Newborns, and Children**
Andrew Taylor, MD, UCL Institute of Cardiovascular Science

- 8:17 am** **055** **Normal Values of Aortic Dimensions, Distensibility, and Pulse Wave Velocity in Children and Young Adults**
Inga Voges, MD, University Hospital Schleswig-Holstein
- 8:29 am** **056** **Fully-automatic, Patient-specific 3D Aortic Arch Modeling for Patient Treatment with Aortic Arch Anomalies**
Benedetta Leonardi, MD, Bambino Gesù Pediatric Hospital
- 8:41 am** **057** **Cardiac Magnetic Resonance Imaging and Gadolinium Angiography for Neonates and Small Infants: A 10-Year Single Institutional Experience**
Sheela Rangamani, University of Nebraska/Creighton University, Joint Division of Pediatric Cardiology, Children's Hospital and Medical Center
- 8:53 am** **058** **Equilibrium Contrast Cardiovascular Magnetic Resonance Shows Increased Interstitial Expansion in the Systemic Right Ventricle of Adults Late after Mustard or Senning Surgery for Transposition of the Great Arteries**
Daniel Sado, MRCP, The Heart Hospital
- 9:05 am** **059** **Reduced Global Longitudinal and Radial Strain with Normal Left Ventricular Ejection Fraction Late after Effective Repair of Aortic Coarctation - A CMR Feature Tracking Study**
Shelby Kutty, Joint Division of Pediatric Cardiology, University of Nebraska College of Medicine/ Creighton University School of Medicine, Children's Hospital and Medical Center
- 9:17 am** **060** **CMR Adenosine Stress Perfusion in Pediatrics and Congenital Heart Disease: Effects on Clinical Decision Making and Outcomes**
Michael Campbell, MD, Duke University Medical Center

9:30 am – 10:00 am Refreshment Break Royal/Sabal Ballrooms

10:00 am – 11:30 am **Concurrent Sessions**

Invited Lecture 7 - Advanced CMR Sago Ballroom Techniques in Pediatric/Congenital Heart Disease

Moderators: Andrew Powell, MD, Children's Hospital Boston
Andrew Taylor, MD, UCL Institute of Child Health

Upon completion of this educational activity, the participant should be better able to:

- Recognize recent advances in CMR of congenital heart disease
- Understand the strength and weaknesses of computer modeling based on CMR data
- Familiarize themselves with the use of CMR for fetal cardiac evaluation



SCIENTIFIC SESSIONS – AGENDA

10:00 am 4D Flow: Current Applications, Limitations, and Future Prospects

Michael Hope, MD, University of California – San Francisco

10:15 am Pre-intervention Computer Modeling in Congenital Heart Disease: From Computers to Practice

Ajit Yoganathan, PhD, Georgia Institute of Technology

10:30 am Advances in Time-resolved Angiography-Temporal vs Spatial Resolutions

Gerald Greil, MD, King's College London

10:45 am Real-time Imaging in Congenital Heart Disease

Vivek Muthurangu, MD, UCL Institute of Child Health and Great Ormond Street Hospital

11:00 am Fetal CMR: Technical Challenges and Current Applications

Michael Seed, MBBS, The Hospital for Sick Children

11:15 am Q and A

Invited Lecture 8 - Non-Ischemic Cardiomyopathies 2

Crystal Ballroom J2

Moderators: Patricia Bandettini, MD, NHLBI
Sven Plein, MD, PhD, University of Leeds

Upon completion of this educational activity, the participant should be better able to:

- Understand the differential diagnosis of non-ischemic cardiomyopathy
- Use CMR appropriately to diagnose non-ischemic cardiomyopathies
- Understand the role of CMR in the risk-stratification of patients with non-ischemic cardiomyopathies

10:00 am Non-Ischemic Cardiomyopathy – Diagnostic Challenges, New Techniques

James Moon, MD, The Heart Hospital

10:15 am Diagnostic and Prognostic Utility of CMR in Infiltrative Cardiomyopathies

Frederick Ruberg, MD, Boston University School of Medicine

10:30 am Moving Beyond Pretty Pictures: The Current and Emerging Clinical Role of CMR in Hypertrophic Cardiomyopathy

Martin Maron, MD, Tufts University

10:45 am Latest Advances in CMR of Iron Overload Cardiomyopathy

Dudley Pennell, MD, Royal Brompton Hospital

11:00 am Diastolic Heart Function: Current and Future Clinical Imaging Approaches

Hildo Lamb, MD, PhD, Leiden University Medical Center

11:15 am Q and A

Case Review 6 – Best Cases from the SCMR Website

Crystal Ballroom J1

Moderators: Chiara Bucciarelli, MD, Royal Brompton Hospital
Robert Rollings, MD, Savannah Cardiology

Oral Abstract Session 10 – CAD Acute Myocardial Injury

Crystal Ballroom G1

Moderators: Andrew Arai, MD, NHLBI
Holger Thiele, MD, University of Leipzig

10:05 am O61 Detecting Acute Reperfusion Myocardial Hemorrhage with CMR: A Translational Study

Avinash Kali, MS, University of California - Los Angeles

10:17 am O62 Diagnostic Performance of T2-Weighted CMR for Evaluation of Acute Myocardial Injury

Monvadi Srichai, MD, NYU School of Medicine

10:29 am O63 Understanding Why Edema in Salvaged Myocardium Is Difficult to Detect by Late Gadolinium Enhancement

Martin Ugander, MD, PhD, National Institutes of Health

10:41 am O64 Recovery of Regional Myocardial Function and Myocardial Oedema Following Reperfused Acute Myocardial Infarction

Ananth Kidambi, BMBCh MRCP, University of Leeds

10:53 am O65 Comparison between Magnetic Resonance Imaging and Single-Photon Emission Tomography for the Assessment of Myocardial Salvage after Coronary Revascularization in Acute Myocardial Infarction

Martin Hadamitzky, MD, Deutsches Herzzentrum München

11:05 am O66 Correlation of CMR and Biochemical Markers of Myocardial Injury in a Multi-centre Study: PROTECTION AMI CMR Sub-study

Suchi Grover, MBChB, Flinders Medical Centre, Flinders University

11:17 am O67 Impact of Chronic Statin-pretreatment on Myocardial Damage as Assessed by Cardiac Magnetic Resonance Findings in Patients with Acute ST-elevation Myocardial Infarction

Georg Fuernau, MD, University of Leipzig - Heartcenter

11:30 am – 12:30 pm

Royal/Sabal Ballrooms

Moderated Poster Session 2, Poster Session 2, Exhibits, Lunch (on own)

12:30 pm – 2:00 pm Concurrent Sessions

Invited Lecture 9 - High Throughput CMR (Protocol Optimizing): Improving Quantification and Reproducibility Sago Ballroom

Moderators: Tobias Schaeffter, PhD, King's College London
Holger Thiele, MD, University of Leipzig

Upon completion of this educational activity, the participant should be better able to:

- Select the appropriate MR sequences for different cardiovascular pathologies
- Understand the factors that influence the quality and reproducibility of different CMR protocols
- Decide between required quality and related scan time to enable a higher throughput of CMR in clinical practice

12:30 pm Optimal Imaging Protocols for Ischemia Detection in < 30 Minutes

Matthias Friedrich, MD, Université of Montréal

12:45 pm Reliable Imaging Protocols for Delayed Enhancement and Edema Imaging

Orlando Simonetti, PhD, The Ohio State University

1:00 pm High Throughput CMR In Clinical Practice - Tips and Tricks to Get You through the Day

Scott Flamm, MD, Cleveland Clinic

1:15 pm Dedicated CMR Protocols in the Evaluation of Acute Coronary Syndromes

Ricardo Cury, MD, Radiology Associates of South Florida

1:30 pm Screening Adult Survivors of Childhood Cancer for Cardiomyopathy

Gregory Armstrong, MD, St. Jude Children's Research Hospital

1:45 pm Q and A

Case Review 7 - Perfusion Imaging by CMR: Both Usual and Unusual Cases Crystal Ballroom J1

Moderators: David A. Bluemke, MD, PhD, National Institutes of Health
Dipan J. Shah, MD, Methodist DeBakey Heart & Vascular Center
Presenters: Helen Mathias, MD, Bristol Heart Institute
Paul Chacko, MD, The Ohio State University
Michael Salerno, MD, PhD, University of Virginia

Oral Abstract Session 11 – Congenital Heart Disease 2 Crystal Ballroom J2

Moderators: Kan Hor, MD, Cincinnati Children's Hospital Medical Center
Rajesh Krishnamurthy, MD, Texas Children's Hospital

12:35 pm 068 Aortic Dimensions on Cardiovascular Magnetic Resonance Imaging Relate to Pregnancy Outcomes in Women with Coarctation of the Aorta: A Multicenter Study

Laura Jimenez Juan, MD, Toronto General Hospital

12:47 pm 069 Cardiac Magnetic Resonance Differentiates Subtypes in Bicuspid Aortic Valve and Reveals Various Frequencies of Aortic Stenosis among Subtypes

Ralf Wassmuth, MD, Helios Klinikum and Charité University Medicine Berlin

12:59 pm 070 Multimodality Assessment of Aortic Stenosis Severity in Transcatheter Aortic Valve Implantation (TAVI): Comparison Between Cardiovascular Magnetic Resonance, Transesophageal and Transthoracic Echocardiography

Andrew Jabbour, Cardiology Fellow, Royal Brompton and Harefield NHS Foundation Trust, Imperial College London

1:11 pm 071 The Effect of Myocardial Fibrosis on Ventricular Remodeling Following Valve Replacement for Severe Aortic Stenosis. A CMR Study Comparing Transcatheter Aortic Valve Implantation and Surgical Aortic Valve Replacement

Timothy Fairbairn, MBChB, University of Leeds

1:23 pm 072 Potential of Pre-contrast T1 Mapping as a Marker of Interstitial Fibrosis in Severe Aortic Stenosis

Andrew Jabbour, Cardiology Fellow, Royal Brompton and Harefield NHS Foundation Trust, Imperial College London

1:35 pm 073 PINOT NOIR: Pulmonic INSufficiency ImprOvemenT with Nitric Oxide Inhalational Response

Scott Flamm, MD, Cleveland Clinic, Cleveland Clinic

Oral Abstract Session 12 – Stepping into New Insights: Enhancing Our Understanding Crystal Ballroom G1

Moderators: Michael Markl, PhD, Northwestern University;
Florian von Knobelsdorf, MD, Charité Medical University Berlin

12:35 pm 074 Cine-ASL: A New Arterial Spin Labeling Method for Myocardial Perfusion Mapping in Mice Using a Cine-FLASH Labeling and Readout Module

Thomas Troalen, MD, Centre de Résonance Magnétique Biologique et Médicale

12:47 pm 075 Derangement of Cardiac Energy Metabolism Is Acutely Exacerbated during Exercise in Hypertrophic Cardiomyopathy, Independent of Hypertrophy or Late Gadolinium Burden

Joseph Suttie, MD, University of Oxford



SCIENTIFIC SESSIONS – AGENDA

12:59 pm 076 Pre-contrast ShMOLLI T1 Mapping in Cardiac AL Amyloidosis

Theodoros Karamitsos, MD, PhD, University of Oxford
Centre for Clinical Magnetic Resonance Research (OCMR)

1:11 pm 077 Determine the Myocardial T2* Cut-off Value in Thalassemia Using Gaussian Mixtures Models

Taigang He, PhD, Royal Brompton Hospital

1:23 pm 078 Mechanistic Insights and Characterization of Cardiomyopathy Due to Sickle Cell Disease

Amit Patel, MD, University of Chicago

1:35 pm 079 Is There an Alternative Explanation to Post-MI Emergence of Mitral Regurgitation; A CMR-LGE Observational Study

Hari Bogabathina, MD, Allegheny General Hospital

1:47 pm 080 Decreased Exercise Capacity in 'Asymptomatic' Patients Late after Relief of Severe Pulmonary Stenosis and Moderate Restenosis: Evidence for Diastolic Dysfunction

Soha Romeih, MD, Academic Medical Center

2:00 pm – 2:30 pm Refreshment Break Royal/Sabal Ballrooms

2:30 pm – 4:00 pm Concurrent Sessions

Invited Lecture 10 - CMR Applications in Cardiac Electrophysiology Sago Ballroom

Moderators: Thomas Hauser, MD, Beth Israel Deaconess Medical Center
Tobias Schaeffter, PhD, King's College London

Upon completion of this educational activity, the participant should be better able to:

- Describe the role of CMR for management of patients with cardiac arrhythmia
- Understand how CMR-data can be used in planning a cardiac resynchronization therapy (CRT) procedure
- Understand the benefits of using CMR data for treatment of atrial fibrillation

2:30 pm Evaluation of Pulmonary Vein Anatomy before and after AF Ablation

Thomas Hauser, MD, MPH, Beth Israel Deaconess Medical Center

2:45 pm Late Gadolinium Enhancement of the Left Atrium

Nassir Marrouche, MD, University of Utah

3:00 pm Substrate Evaluation for VT Ablation

Saman Nazarian, MD, Johns Hopkins Outpatient Clinic

3:15 pm CRT and Coronary Vein Imaging

John Oshinski, PhD, Emory University Hospital

3:30 pm Image Integration for Electrophysiology Procedures

Kawal Rhode, PhD, King's College London

3:45 pm Q and A

Case Review 8 - Surprising Findings in Valvular Disease Crystal Ballroom J1

Moderators: Marcus Chen, MD, NHLBI
Albert van Rossum, MD, PhD, VU Medical Center
Presenters: Manish Motwani, BSc, MBChB, University of Leeds
Timothy Wong, MD, University of Pittsburgh School of Medicine
Christoph Jensen, MD, Elisabeth Hospital Essen
Elisa McAlindon, MD, Bristol Heart Institute
Robert Quaife, MD, University of Colorado
Roshan Weerackody, MD, The Barts and The London NHS Trust
Federico Mordini, MD, Washington DC VA Medical Center
Sujata Shanbhag, MD, NHLBI

Oral Abstract Session 13 - Non-ischemic Heart Disease: A Wide Spectrum from Technique to Disease Crystal Ballroom J2

Moderators: Daniel Messroghli, MD, Deutsches Herzzentrum Berlin
Nathaniel Reichek, MD, St. Francis Hospital

2:35 pm 081 T2-mapping in Normal Volunteers Compared to Patients with Edema Reveals Wide Range of Myocardial T2 in Female Volunteers

Ralf Wassmuth, MD, Helios Klinikum and Charite University Medicine Berlin

2:47 pm 082 Application of a High Resolution T1 Mapping with MOLLI (hrMOLLI) in Patients in Clinical Setting: A Reproducibility Study

Valentina Puntmann, King's College London

2:59 pm 083 Quantitative T1 Mapping and the Fibrotic Index in Normal Healthy Volunteers; Relationship to Aging and Cardiac Dimensions

Tomas Neilan, MD, Brigham and Women's Hospital

3:11 pm 084 Diabetics Without Prior Cardiovascular Disease have Diffuse Interstitial Fibrosis by CMR Independent of Clinical Risk Factors

Ravi Shah, MD, Brigham and Women's Hospital

3:23 pm 085 Cardiovascular Changes in Patients with Acromegaly Assessed by CMR

Filip Zemrak, MD, MRCP, The London Chest Hospital

3:35 pm **086** **Trabeculated (Non-compacted) and Compact Myocardium in Adults: The Multi-Ethnic Study of Atherosclerosis**
Nadine Kawel, MD, National Institutes of Health

3:47 pm **087** **Patterns of Late Gadolinium Enhancement in 94 Patients with AL or Transthyretin Cardiac Amyloidosis**
Jason Dungu, BSc, MBBS, St George's University of London

Oral Abstract Session 14 – CAD: Assessment of Perfusion – Routine Patient Care and Research **Crystal Ballroom G1**

Moderators: Victor Ferrari, MD, University of Pennsylvania
Eike Nagel, MD, PhD, King's College London

2:35 pm **088** **The Factors Limiting the Diagnostic Accuracy of Myocardial Perfusion Cardiac Magnetic Resonance Imaging: Coronary Flow Reserve and Amount of Myocardial Scar**
Masaki Ishida, MD, PhD, Mie University Hospital

2:47 pm **089** **High-Resolution versus Standard-resolution Cardiovascular Magnetic Resonance Perfusion Imaging for the Detection of Coronary Artery Disease**
Manish Motwani, BSc, MBChB, University of Leeds

2:59 pm **090** **Transmural Perfusion Gradient Analysis by High-resolution MR versus Fractional Flow Reserve for the Assessment of Coronary Artery Stenosis**
Amedeo Chiribiri, MD, King's College London

3:11 pm **091** **Validation of Dynamic Three-dimensional Whole Heart Magnetic Resonance Myocardial Perfusion Imaging at 3.0 Tesla Against the Duke Jeopardy Score to Assess Myocardium at Risk**
Roy Jogiya, MBBS, King's College London

3:23 pm **092** **Validation of Dynamic Three-dimensional Whole Heart Magnetic Resonance Myocardial Perfusion Imaging at 3.0 Tesla Against Fractional Flow Reserve for the Detection of Flow-Limiting Coronary Heart Disease**
Roy Jogiya, MBBS, King's College London

3:35 PM **093** **Cardiovascular Magnetic Resonance Stress Perfusion Compared to Single Photon Emission Computed Tomography (SPECT) in Patients with Left Main Stem Disease: a CE-MARC Substudy**
Ananth Kidambi, MBCh MRCP, Multidisciplinary Cardiovascular Research Centre & Leeds Institute of Genetics, Health and Therapeutics

3:47 PM **094** **The Role of Cardiovascular Magnetic Resonance in Women with Suspected CAD: a CE-MARC Sub-study**
Manish Motwani, BSc, MBChB, University of Leeds

4:00 pm – 5:30 pm **Concurrent Sessions**

Invited Lecture 11 - Emerging CMR Technology **Sago Ballroom**

Moderators: Daniel Ennis, PhD, University of California – Los Angeles
Krishna Nayak, PhD, University of Southern California

Upon completion of this educational activity, the participant should be better able to:

- Recognize and recall five emerging CMR technologies
- Summarize the rationale and applications for each of them
- Critique the advantages and disadvantages of the current state-of-the-art

4:00 pm **7T CMR: Technology and Applications**
Jeanette Schulz-Menger, MD, Charite
Universitätsmedizin Berlin

4:15 pm **CMR Compressed Sensing: Technology and Applications**
Shreyas Vasanawala, PhD, Stanford University

4:30 pm **Using Hyperpolarized ¹³C to Study Cardiac Metabolism**
Charles H. Cunningham, PhD, University of Toronto

4:45 pm **Advances in MRA with Blood-pool Contrast Agents**
Philipp Moritz Wagner, MD, Charite - University
Hospital Berlin

5:00 pm **Free Breathing, Motion Corrected, High-Resolution Exams**
Michael Hansen, PhD, National Institutes of Health

5:15 pm **Q and A**

Case Review 9 – Congenital Heart Disease 2 **Crystal Ballroom J1**

Moderators: Sohrab Fratz, MD, Deutsches Herzzentrum München
Kevin Whitehead, MD, PhD, Children's Hospital of Philadelphia
Presenters: Andrew Crean, MD, Toronto General Hospital
Adam Dorfman, MD, University of Michigan
Michael Puchalski, MD, Primary Children's Medical Center
Ruchira Garg, MD, Miami Children's Hospital
Pierluigi Festa, MD, FTGM, Massa, Italy
Tiffanie Johnson, MD, Riley Hospital for Children
Anne Marie Valente, MD, Children's Hospital Boston

Oral Abstract Session 15 – Hypertrophic Cardiomyopathy **Crystal Ballroom J2**
Moderators: Martin Maron, MD, Tufts
Sanjay Prasad, MD, Royal Brompton Hospital

- 4:05 pm** **095** **Not All LGE Is the Same. Scar Contrast Volume of Distribution Is Lower in HCM than in Infarction**
Thomas Treibel, MBBS, University College London
- 4:17 pm** **096** **Subtle Structural Abnormalities in Genotype Positive Phenotype ‘Negative’ Patients with Pre-clinical Hypertrophic Cardiomyopathy (HCM): A Blinded, Controlled Cardiovascular Magnetic Resonance (CMR) Study**
Djeven Deva, FRCR, MRCSI, MB BCh, University Health Network
- 4:29 pm** **097** **The Relationship Between Interstitial Fibrosis and Contractile Function in HCM: A Combined T1-Mapping and CSPAMM Tagging Study**
Tevfik Ismail, BSc(Hons), MB BS, MRCP, Royal Brompton Hospital
- 4:41 pm** **098** **Quantitative of Myocardial Extracellular Volume Fraction Improves Characterization of Fibrotic Burden in Patients with Apical Hypertrophic Cardiomyopathy Beyond Visual Assessment with Late Gadolinium Enhancement**
Eri Watanabe, MD, PhD, Brigham and Women’s Hospital
- 4:53 pm** **099** **Characterization of Patients with Massive Hypertrophic Cardiomyopathy Using Contrast-enhanced Magnetic Resonance Imaging: Does Contrast Provide Additional Information?**
Raymond Chan, MD, Beth Israel Deaconess Medical Center
- 5:05 pm** **0100** **T2 Abnormalities in Patients with Hypertrophic Cardiomyopathy Characterized by Cardiovascular Magnetic Resonance Imaging: An Indicator of Myocardial Injury as Assessed by the High Sensitive Cardiac Troponin T Assay**
Stephanie Lehrke, MD, Ev.- Lutherische Diakonissenanstalt Flensburg
- 5:17 pm** **0101** **A Systematic Review for Sudden Cardiac Death in Hypertrophic Cardiomyopathy Patients with Myocardial Fibrosis: A CMR LGE Study**
Nackle Silva, Allegheny General Hospital

Oral Abstract Session 16 - **Crystal Ballroom G1**
Arrhythmias, EP, and Interventional Applications
 Moderators: Alexander Dick, MD, Sunnybrook Health Sciences Centre
 Ehud Schmidt, PhD, Brigham and Women’s Hospital

- 4:05 pm** **0102** **Cardiac MRI Is Safe In Patients with Pacemakers and Defibrillators**
Alex Baher, MD, The Methodist Hospital
- 4:17 pm** **0103** **Interactive Real-time Mapping and Ablation of the Pulmonary Veins and Cavotricuspid Isthmus in an Ovine Model with an Externally-irrigated MRI-compatible Ablation Catheter**
Anand Ganesan, MBBS, PhD, University of Adelaide
- 4:29 pm** **0104** **Correlation of Cardiac Magnetic Resonance Imaging and Electrophysiology Study Findings among Patients with Frequent Premature Ventricular Contractions**
Adam Helms, MD, University of Michigan
- 4:41 pm** **0105** **CMR Measurements of Myocardial Infarct Heterogeneity Using MCLE and IR-FGRE: Correlation with Arrhythmia Inducibility and Severe ICD Events in Patients with Ischemic Heart Disease**
Yuesong Yang, MD, PhD, Sunnybrook Health Sciences Centre
- 4:53 pm** **0106** **Regional Thickness of the Compacted and Trabeculated Layers of the Left Ventricle in Young Patients Presenting with Ventricular Dysrhythmias, A Cardiac MRI Study**
Moneal Shah, MD, Allegheny General Hospital
- 5:05 pm** **0107** **Dependence of Contrast to Noise Ratio between Ablation Scar and Other Tissues on Patient Heart Rate and Flip Angle for Late Gadolinium Enhancement Imaging of the Left Atrium**
Sathya Vijayakumar, MS, University of Utah
- 5:17 pm** **0108** **Characteristics of Right Ventricular Free Wall Motion in Young Patients with Ventricular Arrhythmia, A Cardiac MRI Study**
Daniel Katz, MD, St. Francis Hospital
- 5:30 pm – 6:00 pm** **CMR Technology Updates** **Sago Ballroom**
- 6:00 pm – 6:30 pm** **Presentation of Awards** **Sago Ballroom**
- 6:30 pm – 8:00 pm** **Awards Reception** **Crystal Ballroom H**

Sunday, February 5, 2012

6:45 am – 8:00 am Continental Breakfast Palms Ballroom Foyer

7:00 am – 8:00 am Physics for Physicians Crystal Ballroom P

7:00 am Fast Imaging – When and How?
Daniel Ennis, PhD, University of California – Los Angeles

7:30 am Fast Imaging – Who and Why?
Dipan Shah, MD, Methodist DeBakey Heart & Vascular Center

7:00 am – 8:00 am Cardiology for Non-cardiologists Crystal Ballroom M

7:30 am Roundtable Case Presentations
Dipan Shah, MD, Methodist DeBakey Heart & Vascular Center
Afshin Farzaneh-Far, MD, PhD, University of Illinois

8:00 am – 9:30 am Concurrent Sessions

Invited Lecture 12 – Cost Effectiveness of CMR Sago Ballroom

Moderators: Rory Hachamovitch, MD, MSc, Cleveland Clinic
Raymond Kwong, MD, MPH, Brigham and Women's Hospital
Upon completion of this educational activity, the participant should be better able to:

- Understand the approaches used to evaluate the role and effectiveness of CMR
- Understand the methodologies used to assess the cost-effectiveness of cardiovascular testing
- Understand how physicians' use of testing can be assessed

8:00 am Use of Decision Analysis in Assessing the Cost Effectiveness of CMR
Raymond Kwong, MD, MPH, Brigham and Women's Hospital

8:15 am Observational Studies vs RCT for Defining the Role of CMR
Leslee Shaw, PhD, Emory University

8:30 am Assessing Referring Physician Use of CMR
Rory Hachamovitch, MD, MSc, Cleveland Clinic

8:45 am Enhancing MD Expertise in Cardiac Imaging: Will European Diplomat of Cardiac Radiology Make a Difference?
Jens Bremerich, MD, University Hospital Basel

9:00 am CMR More Cost-effective than Invasive Coronary Angiography in Assessing Cardiomyopathy?
Sanjay Prasad, MD, Royal Brompton Hospital

9:15 am Q and A

Invited Lecture 13 - Informing Clinical Decisions in Congenital Heart Disease Crystal Ballroom J2

Moderators: Philipp Beerbaum, MD, PhD, King's College London
Taylor Chung, MD, Children's Hospital and Research Center Oakland
Upon completion of this educational activity, the participant should be better able to:

- Utilize CMR data to determine timing and indications of pulmonary valve replacement in repaired tetralogy of Fallot
- Understand the principles and practical challenges in stress CMR in pediatrics
- Employ CMR in the evaluation of patients with single ventricle physiology

8:00 am Role of CMR in Timing and Outcomes of Pulmonary Valve Replacement
Tal Geva, MD, Children's Hospital Boston

8:15 am Stress MR in Congenital Heart Disease - Evidence for Added Clinical Value
Willem Helbing, MD, Erasmus Medical Center

8:30 am Scarring and Diffuse Fibrosis: So What?
Craig Broberg, MD, Oregon Health and Sciences University

8:45 am Can CMR Alone Be Used to Assess Single Ventricle Patients before TCPC?
Mark Fogel, MD, Children's Hospital of Philadelphia

9:00 am Single or Biventricular Management of Complex Congenital Heart Disease: What Can CMR Offer?
Lars Grosse-Wortmann, MD, Hospital for Sick Children

9:15 am Q and A

Case Review 10 - Interactive CMR Cases - State of the Heart Crystal Ballroom J1

Moderators: James Moon, MRCP, The Heart Hospital
Mark Westwood, MD, MRCP, The London Chest Hospital
Presenters: Thomas Burchell, MD, The London Chest Hospital
Neha Sekhri, MD, The London Chest Hospital
Marianna Fontana, MD, The Heart Hospital
Viviana Maestrini, MD, The Heart Hospital
Amedeo Chiribiri, MD, King's College London

Oral Abstract Session 17 - Novel Techniques - Assessment of the Myocardium Crystal Ballroom G1

Moderators: Thoralf Niendorf, PhD, Max-Delbrueck-Center for Molecular Medicine
Milind Desai, MD, Cleveland Clinic

- 8:05 am** **O109 Imaging Contrast Agent Concentration and Extracellular Volume Fraction in the Right Ventricle**
Joseph Pagano, MD, University of Alberta
- 8:17 am** **O110 Accelerated and Navigator-gated Look-locker Imaging for Cardiac T1 Estimation (ANGIE) with Reduced Motion Artifact**
Bhairav Mehta, University of Virginia
- 8:29 am** **O111 Histological Validation of ShMOLLI Equilibrium Contrast CMR for the Measurement of Diffuse Myocardial Fibrosis**
Steven White, The Heart Hospital
- 8:41 am** **O112 T2 Mapping of the Heart with High Temporal and Spatial Resolution Using a Radial Double Inversion Fast Spin-echo Pulse Sequence with View Sharing**
Maria Altbach, PhD, University of Arizona
- 8:53 am** **O113 Assessment and Improvement of Image Homogeneity in Black- Blood T2-weighted Turbo Spin-Echo CMR**
Benjamin Wince, MD, Medical University of South Carolina
- 9:05 am** **O114 Myocardium at Risk by Magnetic Resonance Imaging: Head-to-head Comparison of T2-Weighted Imaging and Early Gadolinium Enhanced Steady State Free Precession**
Joey Ubachs, MD, PhD, Lund University Hospital
- 9:17 am** **O115 Novel Magnetic Resonance Imaging Marker of Diffuse Myocardial Fibrosis in Hypertensive Heart Disease: The Role of Transcytolemmal Water-Exchange**
Otavio Coelho-Filho, MD, State University of Campinas

9:30 am – 10:00 am Refreshment Break Royal/Sabal Ballrooms

10:00 am – 11:30 am Concurrent Sessions

Invited Lecture 14 - CMR Safety - Contrast Agents, Medical Devices, and Issues Related to High Field Strengths Sago Ballroom

Moderators: David Bluemke, MD, PhD, National Institutes of Health
Jeanette Schulz-Menger, MD, Charite Universitätsmedizin Berlin

Upon completion of this educational activity, the participant should be better able to:

- Describe safety concerns for patients with pacemakers and ICDs who require MRI
- Understand the major risk factors for nephrogenic systemic fibrosis
- Describe MRI contrast agents that are available and their off-label use in cardiac MRI
- Understand the potential for high field MRI and its challenges related to safety and image quality

- 10:00 am Pacemakers and ICD**
Pro: Henry Halperin, MD, MA, Johns Hopkins University School of Medicine
Con: Frank Shellock, PhD, University of Southern California

- 10:30 am Contrast Agents and NSF**
Martin Prince, MD, PhD, Cornell University

- 10:45 am Overview of Contrast Agents and Dose, Safety (non-NSF)**
Marcelo Nacif, MD, National Institutes of Health

- 11:00 am CMR at High and Ultra-high Field Strengths: Hype or Hope?**
Thoralf Niendorf, PhD, Max Delbrueck Center for Molecular Medicine

- 11:15 am Q and A**

Invited Lecture 15 - Towards Patient Specific Quantitative CMR and Computational Models of Cardiovascular Flow and Function Crystal Ballroom J1

Moderators: Daniel Ennis, PhD, University of California – Los Angeles
Michael Markl, PhD, Northwestern University

Upon completion of this educational activity, the participant should be better able to:

- Identify and critically evaluate new methods and applications for the comprehensive evaluation of blood flow in the cardiovascular system
- Describe and critique both novel and established methods for the assessment of regional cardiac function and their potential clinical applications
- Understand the emerging role of patient specific computational modeling techniques for the analysis of cardiac function and blood flow

- 10:00 am Quantitative 4D PC-MRI for Cardiovascular Flow: Techniques, Applications & Pitfalls**
Petter Dyverfeldt, PhD, University of California – San Francisco

- 10:15 am Potential of Computational 4D Fluid Dynamics in Cardiovascular Disease**
Ajit Yoganathan, PhD, Georgia Institute of Technology

- 10:30 am Quantitative Techniques for Measuring Cardiac Motion**
Andreas Sigfridsson, PhD, Linköping University

- 10:45 am Regional Myocardial Kinematics: Emerging Clinical Applications**
Frederick Epstein, PhD, University of Virginia

- 11:00 am Putting It All Together: Toward Patient Specific Computational Modeling of Cardiac Electromechanics and Flow**
Nic Smith, PhD, King's College London

- 11:15 am Q and A**

Invited Lecture 16 - CMR Imaging in Pre-clinical Research and Drug Development Crystal Ballroom J2

Moderators: Håkan Arheden, MD, PhD, Lund University Hospital
Rob van der Geest, PhD, Leiden University Medical Center

Upon completion of this educational activity, the participant should be better able to:

- Describe different techniques and applications of preclinical CMR
- Understand the challenges of CMR in different animals models
- Understand the role of preclinical MRI in drug development and translation research

10:00 am Pre-clinical Cardiac MRI in Pharmaceutical Research: Current Status and Perspectives
Beat Jucker, PhD, GlaxoSmithKline

10:15 am Small Animal Models in Cardiac MRI
Brent French, PhD, University of Virginia

10:30 am Large Animal Models in Cardiovascular MRI
James Hamilton, PhD, Boston University

10:45 am Assessment of Plaque Burden and Treatment Efforts with MRI
Allan Moody, MBBS, Sunnybrook Health Sciences Centre

11:00 am MR Imaging in Translational Studies of Cardio-protection
Marcus Carlsson, PhD, Lund University Hospital

11:15 am Q and A

Invited Lecture 17 - Interventional MRI – Electrophysiology Crystal Ballroom G1

Moderators: Reza Razavi, MD, King's College London
Graham Wright, PhD, Sunnybrook Health Sciences Centre

Upon completion of this educational activity, the participant should be better able to:

- Learn the current status of image guidance for electrophysiology (EP) procedures
- Understand the technical aspects of MR-guided EP procedures
- Identify remaining technical and clinical challenges for transferring experimental MR-guided EP procedures into a clinical setting

10:00 am State-of-the-Art in Image Guidance for EP Ablations
Srijoy Mahapatra, MD, St. Jude Medical

10:15 am CMR Roadmap for Electrophysiology Procedures
Reza Nezafat, PhD, Beth Israel Deaconess Medical Center

10:30 am MR- EP Devices
Steffen Weiss, MSc, Philips Technologie GmbH

11:00 am MR Lesion Characterization - Can It Be Done in Real-time?
Peter Nordbeck, MD, University of Wuerzburg

11:15 am MR-Guided Atrial Ablations
Eugene Kholmovski, PhD, University of Utah

11:15 am Q and A

11:30 am – 1:00 pm Closing Plenary Session – Evidence-based Debate Sago Ballroom

Moderators: David Bluemke, MD, PhD, National Institutes of Health
Michael Jerosch-Herold, PhD, Brigham and Women's Hospital

Upon completion of this educational activity, the participant should be better able to:

- Describe the role for CMR in population based studies of cardiovascular disease
- Identify examples where CMR has played or will play a prominent role in population-based trials of cardiovascular disease
- Describe some of the main challenges for incorporating CMR in population-based trials

11:30 am Use of CMR in Population Trials
Pro: Steffen Petersen, MD, Barts and The London NHS Trust
Con: Thomas Marwick, MD, PhD, Cleveland Clinic

12:10 pm Opinions from the Experts: Incorporation of CMR into Multi-center Clinical Trials IS Critical to the Field
Matthias Friedrich, MD, Université of Montréal

12:30 pm Limitations in Clinical Trial Design Can Adversely Affect CMR
Andrew Arai, MD, NHLBI

12:50 pm Q and A

1:00 pm – 1:30 pm Closing Remarks and Meeting Highlights
Andrew Arai, MD, NHLBI



Friday, February 3, 2012

Crystal Ballroom A-B-C

10:15 am Welcoming Remarks

Ralph Gentry, ARRT, Beaumont Hospital

10:20 am – 12 Noon CMR Essentials

Ralph Gentry, ARRT, Beaumont Hospital

10:20 AM Physics for CMR- Sequences and Parameters

Jack Roy, AS, University of Virginia

Upon completion of this educational activity, the participant should be better able to:

- Understand the role of MRI hardware
- Understand the basic layout of a MRI sequence
- Know the meaning of basic MRI sequence terminology

10:55 am CMR Safety

Frank Shellock, PhD, University of Southern California

Upon completion of this educational activity, the participant should be better able to:

- Discuss MRI-related bio-effects and safety issues
- Describe problems related to acoustic noise
- Implement methods to control access to MRI environment
- Utilize comprehensive screening procedures
- Appreciate information relative to 3-Tesla
- Understand MRI labeling information

11:30 am ECG Gating Strategies

Mercedes Pereyra, MBA, BS, RT, Circle Cardiovascular Imaging

Upon completion of this educational activity, the participant should be better able to:

- Different approaches to troubleshoot ECG
- Modify the scanning protocol according to the patient's heart rate
- By examples of different methods the audience will be able to take these concepts and apply them in their environment

12 Noon - 1:00 pm SCMR Business Meeting

12:30 pm - 1:30 pm Lunch (on own)

1:30 pm - 3:00 pm Vendor Breakout Session

Moderator: Ralph Gentry, ARRT, Beaumont Hospital

1:30 pm Troubleshooting/What's New with GE, Philips, Siemens & Toshiba

2:30 pm SCMR Ask the Experts

3:00 pm - 3:30 pm Refreshment Break

3:30 pm - 5:50 pm Basic CMR

Moderator: Kraig Kissinger, BS, RT, Beth Israel Deaconess Medical Center

3:30 pm Cardiac Anatomy with CMR

Emer Sonnex, M.Phil, Alberta Health Services

Upon completion of this educational activity, the participant should be better able to:

- Recognize cardiovascular anatomy in three orthogonal planes
- Understand why we use the imaging planes that are routine in cardiac MRI
- Obtain the standard imaging planes with confidence

4:05 pm Cardiac Function and Volumetric Assessment

Gillian Smith, MSc, Royal Brompton Hospital

Upon completion of this educational activity, the participant should be better able to:

- Identify the common causes of change in ventricular volumes and function
- Describe why cardiac volumes are measured in the evaluation of cardiac functional assessment. Have a good working knowledge of available analysis
- Recognize the importance of reproducible data for accurate volumetric assessment and how to ensure the acquisition is of optimal technical quality.

4:40 pm Diastolic Function and Strain Analysis

John-Paul Carpenter, MD, Royal Brompton Hospital

Upon completion of this educational activity, the participant should be better able to:

- Acquire and analyze flow sequences for assessment of diastolic function
- Appreciate signs of diastolic impairment which suggest the need for further investigation
- Have an appreciation of advanced/research techniques for assessment of diastology

5:15 pm Mechanical Dyssynchrony - Assessing Heart Failure and Improving Cardiac Resynchronization Therapy

Jonathan Suever, Georgia Tech/Emory University

Upon completion of this educational activity, the participant should be better able to:

- Describe various CMR technologies used to measure mechanical dyssynchrony in the heart
- Summarize the importance of mechanical dyssynchrony in assessing cardiac function in heart failure patients
- Explain the benefits of utilizing mechanical dyssynchrony for cardiac resynchronization therapy planning

6:30 pm – 8:00 pm Moderated Poster Royal/Sabal Ballrooms Session 1, Poster Session 1, Exhibits, and Wine and Cheese Reception

Saturday, February 4, 2012 Crystal Ballroom A-B-C

7:45 am – 9:30 am **Aortic and Valve Disease**

Moderator: Jane Francis, DC R, DNM, The John Radcliffe Hospital

7:45 am **Imaging the Aorta**

Alison Fletcher, RT, Southampton General Hospital

Upon completion of this educational activity, the participant should be better able to:

- Understand the role of MRI in imaging the aorta
- Understand which sequences and imaging planes should be used and why
- Understand the limitations and pitfalls of imaging the aorta

8:20 am **Marfans Disease Assessed with CMR**

Alex Pitcher, MD, University of Oxford

Upon completion of this educational activity, the participant should be better able to:

- Understand the indications for CMR in patients with Marfan syndrome
- Know the CMR sequences which are often useful in patients with Marfan syndrome
- Recognize common CMR signs of Marfan syndrome

8:55 am **Valve Disease and Flow Measurement**

Yuchi Han, MD, MMSc, University of Pennsylvania

Upon completion of this educational activity, the participant should be better able to:

- Choose imaging planes for four valves
- Understand pitfalls in flow quantification
- CMR imaging of common valvular diseases

Abstract Presentations

8:55 am **T2 Cardiac Magnetic Resonance Characteristics of Pediatric Cardiac Teratoma**

Amy Tipton, BFA, Cincinnati Children's Medical Center

9:05 am **T4 Bolus Administration T1 Mapping as a Marker of Interstitial Myocardial Fibrosis in Severe Aortic Stenosis**

Rick Wage, DCR (R), Royal Brompton Hospital

9:30 am – 10:00 am **Refreshment Break** Royal/Sabal Ballrooms

10:00 am – 11:45 am **Congenital Heart Disease**

Moderator: Elizabeth Goddu, RT, Beth Israel Deaconess Medical Center

10:00 am **Congenital Heart Disease- The Role of CMR**

Justine Wilson, BS, RT (R), Children's Hospital of Philadelphia

Upon completion of this educational activity, the participant should be better able to:

- Image even the smallest of our pediatric patients and obtain the best images
- Evaluate what sequences are best for particular pathologies and how best to optimize them
- Look to the future of CMR and see where our technology is heading

10:25 am **Pediatric CMR - The Challenges**

David Annese, RT (R), Children's Hospital Boston

Upon completion of this educational activity, the participant should be better able to:

- Understand the technical challenges in imaging pediatric patients with congenital heart disease
- Understand some of the indications for cardiac MRI in pediatric patients
- Understand some basic imaging protocols in pediatric cardiac MRI

11:10 am **Anomalous Coronary Arteries Assessed with CMR**

Rajesh Krishnamurthy, MD, Texas Children's Hospital

Upon completion of this educational activity, the participant should be better able to:

- Understand the spectrum of coronary pathology in children
- Learn about common indications for coronary MR imaging in children, pros and cons of CT vs. MRI for coronary imaging, and common pitfalls of MR imaging
- Improve their skills in coronary MR imaging by understanding technique modifications necessary for children, and learning typical MR findings in pediatric coronary disease

11:45 am – 12:45 pm **Lunch (on own)**

12:45 pm – 2:00 pm **Abstract Presentations**

Moderator: Mary Watkins, RT, MR, C-TRAIN

12:45 pm **First Place Abstract: T1 Modified Short Axis Geometry for Left Ventricular Assessment in Patients with Hemodynamically Significant Pulmonary**

Amy Tipton, BFA, Cincinnati Children's Medical Center

12:55 pm **Second Place Abstract: T3 Retrospective Review of Patients with Atrial Fibrillation: Does Pulmonary Vein Isolation Make a Difference?**

Ronald Williams, BA, RT (R) (MR), Allegheny General Hospital

1:15 pm – 2:00 pm **CMR Quiz**

2:00 pm – 2:30 pm **Refreshment Break** Royal/Sabal Ballrooms

2:30 pm - 4:50 pm **Imaging the Patient with Chest Pain!**

Moderator: Alison Fletcher, RT, Southampton General Hospital

2:30 pm **Myocardial Viability**

Richard Coulden, MD, University of Alberta

Upon completion of this educational activity, the participant should be better able to:

- Understand the importance of assessing myocardial viability in patients being considered for revascularization
- Understand the role of CMR in assessing myocardial viability
- Understand how CMR fits in with other techniques that are widely used for assessing myocardial viability



SCMR 2012 TECHNOLOGIST WORKSHOP

3:05 pm Adenosine Stress Perfusion

Mark Westwood, MD, The London Chest Hospital

Upon completion of this educational activity, the participant should be better able to:

- Understand the indications for adenosine stress perfusion CMR
- Review how to perform adenosine stress perfusion in a safe manner
- Discuss potential imaging pitfalls and complications of adenosine stress perfusion CMR
- Review how to optimize workflow for adenosine stress perfusion CMR

3:40 pm Dobutamine Stress CMR

Stephen Harden, MD, Southampton General Hospital

Upon completion of this educational activity, the participant should be better able to:

- Understand why and when dobutamine stress CMR is performed
- Arrange a CMR protocol for a dobutamine CMR study
- Understand the imaging appearances in a positive and a negative study

4:15 pm The Diagnosis of Acute Myocarditis using CMR

Vanessa Ferreira, MD, University of Oxford

Upon completion of this educational activity, the participant should be better able to:

- Recognize the utility of CMR in the diagnosis of acute myocarditis
- List the CMR diagnostic criteria for myocarditis
- Understand the limitations of CMR in the diagnosis of myocarditis

5:30 pm – 6:00 pm **CMR Technology Updates** Sago Ballroom

6:00 pm – 6:30 pm **Presentation of Awards** Sago Ballroom

6:30 pm – 8:00 pm **Awards Reception** Crystal Ballroom H

Sunday, February 5, 2012 Crystal Ballroom A-B-C

7:45 am – 9:30 am MRA Techniques

Moderator: Petra Keilberg, RT, FGTM, IFC, Pisa MRI Laboratory

7:45 am Basic CE-MRA Techniques

Stephen Darty, BS, RT, Duke Cardiovascular Magnetic Resonance Center

Upon completion of this educational activity, the participant should be better able to:

- Understand proper utilization of gadolinium contrast agents in 3D CE MRA
- Understand timing of contrast administration and scan acquisition
- Understand underlying concepts of 3D angiography

8:20 am Non-contrast MRA

Debiao Li, PhD, Cedars Sinai Medical Center

Upon completion of this educational activity, the participant should be better able to:

- Obtain knowledge of current non-contrast MRA techniques and their clinical performance
- Optimize non-contrast MRA protocols
- Understand future development of non-contrast MRA

8:55 am Blood Pool and Other New Contrast Agents

J. Paul Finn, MD, University of California – Los Angeles

Upon completion of this educational activity, the participant should be better able to:

- Understand the physico-chemical properties of new and intra-vascular MR contrast agents of relevance to MR imaging
- Understand how MR imaging parameters and protocols are optimized with new vascular contrast agents
- Be familiar with the established and evolving clinical applications of vascular MR contrast agents

9:30 AM – 10:00 am **Refreshment Break**

10:00 AM – 11:45 am Advanced CMR

Moderator: Jack Roy, AS, University of Virginia

10:00 am MR Safety Consideration for High and Ultrahigh Field CMR: Implications for Routine CMR

Thoralf Niendorf, PhD, Max-Delbrueck-Center for Molecular Medicine

Upon completion of this educational activity, the participant should be better able to:

- Explain the clinical relevance of (ultra)high field CMR and recognize the technical and physical obstacles for (ultra)high field CMR
- Survey the pros and cons of (ultra)high field CMR and appreciate novel MR technology and imaging strategies driven by (ultra)high field MR
- Understand the extra added clinical value of (ultra)high field CMR consider practical implications for routine (ultra)high field CMR

10:35 am Cardiac Spectroscopy

Robert Evers, BSRT, MR, CV, CT, National Institutes of Health

Upon completion of this educational activity, the participant should be better able to:

- Understand the purpose of Cardiac Spectroscopy in MRI
- Understand the multiple ways of completing this type of difficult imaging
- Recognize common artifacts associated with Cardiac Spectroscopy in MR

11:10 am T1 and T2 Mapping Techniques

Matthew Robson, PhD, University of Oxford

Upon completion of this educational activity, the participant should be better able to:

- Understand the difference between T1 and T2 weighting and T1 and T2 mapping
- Understand the methods of acquisition for relaxation time mapping techniques
- Appreciate the sources of error and artefact and how to avoid them when using relaxation mapping methods

11:45 am Closing Remarks

Ralph Gentry, ARRT, Beaumont Hospital

FRIDAY, FEBRUARY 3, 2012

6:30 PM – 7:30 PM

Royal/Sabal Ballrooms

POSTER SESSION I – Not accredited for CME

You are invited to meet the authors of the following posters on Friday evening during the Wine and Cheese Reception.

MODERATED POSTERS:

M1- M7

BASIC TRANSLATIONAL – NEW TECHNIQUES READY FOR CLINICAL APPLICATION:

P14, P35, P50, P58, P63, P68-P69, P135, P221, P235, P242, P267-P271, P273-P276, P283, P293, P307

BASIC TRANSLATIONAL – POST-PROCESSING:

P5, P16, P56, P65-P66, P236, P244-P246, P277-P279

BASIC TRANSLATIONAL – PRE-CLINICAL VALIDATION OF AN EXISTING TECHNIQUE:

P47, P57, P60-P62, P64, P67, P106, P126, P194, P218-P220, P238-P241, P265, P281

CLINICAL OUTCOME AND PROGNOSIS:

P3, P6, P22, P46, P48, P53, P84, P86, P90, P123, P144, P147, P175, P201, P211, P223, P247, P294, P299

COST EFFECTIVENESS AND COMPARISON TO OTHER MODALITIES:

P40, P45, P76, P81, P97, P153-P155, P296-P297

HIGH THROUGHPUT AND EFFICIENT CLINICAL IMAGING:

P10, P39, P41-P44, P209, P231-P232, P256-P258, P284, P295, P298

NON-ISCHEMIC HEART DISEASE – PRIMARY AND SECONDARY CMP:

P71, P75, P141-P143, P145-P146, P148, P152, P156-P165, P167-P168, P173-P174, P176-P177, P181-P182, P185-P186, P193, P196-P197, P260, P291, P304

VASCULAR MRI:

P51, P72- P73, P77, P83, P91, P95, P127-P129, P131-P134, P136, P139, P228, P280, P292

TECHNOLOGIST POSTERS:

T1, T2, T3, T4, T5, T6, T8, T9, T10, T11, T12, T13, T14

Poster Directory

Basic Translational – New Techniques Ready for Clinical Application

M10	<i>Pang, Jianing</i>	Self-Guided Retrospective Motion Correction (SEGMO) for Free-Breathing Whole-heart Coronary MRA with 100% Acquisition Efficiency
M14	<i>Do, Loi</i>	Determination of The Volume of Coronary Microemboli Needed for Reproducible Visualization of Microinfarcts on Contrast Enhanced MDCT and MRI
P14	<i>Schuster, Andreas</i>	Cardiac Magnetic Resonance Myocardial Feature Tracking Detects Quantitative Wall Motion During Dobutamine Stress
P35	<i>Mekkaoui, Choukri</i>	Left Ventricular Remodeling Following Myocardial Infarction Revealed with a Quantitative Diffusion MRI Tractography Framework
P50	<i>Kim, Paul</i>	Manganese-Enhanced MRI in the Evaluation of Cell-Based Therapy for Myocardial Restoration
P58	<i>O h-Ici, Darach</i>	A method of studying the course of myocardial ischemia and reperfusion in rats in vivo
P63	<i>Fu, Yingli</i>	XFM-Guided Delivery of Imaging-Visible Human Mesenchymal Stem Cells into the Pericardial Space in a Porcine Model
P68	<i>Hammer, Sebastiaan</i>	Functional and Metabolic Imaging of The Right Ventricle: Short-Term Caloric Restriction Increases Myocardial Triglyceride Content and Decreases Diastolic Heart Function
P69	<i>Utz, Wolfgang</i>	Moderate Dietary Weight Loss Reduces Myocardial Triglycerides in Obese Women
P135	<i>Sosnovik, David</i>	Classification of Human Coronary Atherosclerotic Plaques with T1, T2 and Ultrashort TE MRI
P221	<i>Piechnik, Stefan</i>	Age and Gender Dependence of Pre-Contrast T1-Relaxation Times in Normal Human Myocardium at 1.5T Using ShMOLLI

SATURDAY, FEBRUARY 4, 2012

11:30 AM – 12:30 PM

Royal/Sabal Ballrooms

POSTER SESSION II – Not accredited for CME

You are invited to meet the authors on Saturday from 11:30 AM – 12:30 PM.

MODERATED POSTERS:

M8-M14

CAD ISCHEMIA AND VIABILITY:

P2, P4, P8-P9, P11-P13, P15, P17, P19-P20, P24-P28, P30, P32-P34, P36-P38, P80, P100, P188, P198, P213, P226-P227, P243, P248-P253, P263-P264, P287, P300-P302

CAD OTHER:

P21, P29, P31, P49, P52, P78, P150, P212, P225, P230, P234, P254-P255, P266, P285

CONGENITAL HEART DISEASE:

P87, P102-P122, P124, P140, P166, P199, P289

EP AND INTERVENTIONAL APPLICATIONS:

P101, P149, P200, P202-P208, P214-P217

NONE (NO SPECIFIC CATEGORY):

P1, P7, P18, P23, P82, P130, P138, P171-P172, P184, P286, P290, P303, P306

NON-ISCHEMIC HEART DISEASE – OTHER:

P79, P85, P89, P92-P94, P96, P98-P99, P125, P137, P151, P169-P170, P178-P180, P183, P187, P189-P192, P195, P210, P224, P233, P259, P288, P305

PHYSIOLOGY AND METABOLISM INCLUDING SPECTROSCOPY:

P54, P55, P59, P70, P74, P88, P222, P229, P237, P261-P262, P282

TECHNOLOGIST POSTERS:

T1, T2, T3, T4, T5, T6, T8, T9, T10, T11, T12, T13, T14

- P235** *Abd-Elmoniem, Khaled* Assessment of Coronary Artery Disease Wall Thickening using Phase-Sensitive Black-Blood MRI: Initial Experience for the Evaluation of Coronary Artery Disease
- P242** *Adluru, Ganesh* Compression2: Compressed sensing with compressed coil arrays
- P267** *Burger, Ian* Elliptical Subject Specific Model for Respiratory Motion
- P268** *Kuhara, Shigehide* Effects of Quality of Dictionary in Knowledge-Based 6-Plane Automatic Slice-Alignment Method for Cardiac Magnetic Resonance Imaging
- P269** *Nitta, Shuhei* Improvement of Knowledge-Based Automatic Slice-Alignment Method for Cardiac Magnetic Resonance Imaging
- P270** *Medrano-Gracia, Pau* Detection and Correction of Regional Shape Bias Arising from Imaging Protocol: Differences between GRE and SSFP
- P271** *Sayin, Ozan* Through-slice Dephasing for Eddy Current Artifact Reduction in bSSFP
- P273** *Wang, Jinnan* Using mDixon to remove motion artifacts in carotid artery vessel wall MRI
- P274** *Jenista, Elizabeth* Phase Sensitive Inversion Recovery with Simultaneous Dark Fat Rendering by Virtual Chemical Inversion
- P275** *Sharif, Behzad* Projection Imaging of Myocardial Perfusion: Minimizing the Subendocardial Dark-Rim Artifact
- P276** *Havla, Lukas* Improved Fat Water Separation with Water Selective Inversion Pulse for Inversion Recovery-based Cardiac MRI Sequence
- P283** *Broadbent, David* Myocardial Microvascular Function at Rest and Stress Measured With Dynamic Contrast-Enhanced MRI
- P293** *Feng, Yanqiu* On Optimal Liver T2* Measurement: Region of Interest or Pixel-Wise?
- P307** *Nam, Seunghoon* Improved Accelerated Breath-hold Radial Cine Image Reconstruction by Acquiring Additional Free-Breathing Data between Breath-holds

Basic Translational – Post-Processing

- P5** *Chiribiri, Amedeo* Quantification of Transmural Perfusion Gradients by High-Resolution MR vs Fractional Flow Reserve for the Assessment of Coronary Artery Stenosis.
- P16** *Zarinabad, Niloufar* Effect of tracer arrival time on the estimation of the myocardial perfusion in DCE-CMR.
- P56** *Positano, Vincenzo* Segmental Analysis of Cardiac Metabolism by Hyperpolarized [1-13C] Pyruvate: An in-vivo 3D MRI Study in Pigs
- P65** *Schneider, Jurgen* Highly Accelerated Cardiac Functional MRI in Rodent Hearts Using Compressed Sensing and Parallel Imaging at 9.4T
- P66** *Kung, Geoffrey* Microstructural Remodeling in the Post-infarct Porcine Heart Measured by Diffusion Tensor MRI and T1-Weighted Late Gadolinium Enhancement MRI
- P236** *Roy, Christopher* Dynamic MRI of the Fetal Myocardium
- P244** *Augustine, Daniel* CMR Right Ventricular Strain Assessment Using Feature Tracking Cine Images: Agreement With Echocardiography.
- P245** *Shaw, Jaime* Improved Navigator-gated Motion Compensation in Cardiac MR Using Additional Constraint of Magnitude of Motion-Corrupted Data
- P246** *Moghari, Mehdi* Improved Data Acquisition Efficiency for Respiratory Motion Correction in Coronary MRI
- P277** *Miller, Christopher* Comparison of Local Sine Wave Modelling with Harmonic Phase Analysis for the Assessment of Circumferential Myocardial Strain from Tagged Cardiovascular Magnetic Resonance Images
- P278** *Chung, Sohae* Correction for Non-Uniform K-Space Data Weighting Effects in First-Pass Cardiac Perfusion Imaging with TurboFLASH Readout
- P279** *Seiberlich, Nicole* Through-Time 3D Radial GRAPPA for Whole Heart Cardiac Imaging

Basic Translational – Pre-clinical Validation of an Existing Technique

- M11** *Lingala, Sajjan Goud* Motion Compensated Reconstruction for Myocardial Perfusion MRI
- M8** *Goette, Matthew* In Vivo Quantitative Imaging of Angiogenesis-targeted PFOB Nanoparticles in a Hypercholesterol Rabbit Model using 19F-MRI with Ultra-Short Echo Time Balanced SSFP
- M9** *Kitagawa, Toshiro* RGD Targeting of Human Ferritin Iron-Oxide Nanoparticles Enhances In Vivo Molecular MRI of Experimental Aortic Aneurysms
- P47** *Sarnari, Roberto* CMR Myocardial Infarct Evaluation in a Canine Model by Three Different Contrast Agents
- P57** *Schneider, Jurgen* Accurate Infarct-Size Measurements from Accelerated, Compressed Sensing Reconstructed Cine-MRI Images in Mouse Hearts
- P60** *Belin, Alexandre* Cine Interleaved Sequences Enabled Imaging of Mice on Clinical 3T MRI and Analysis of Their Cardiac Function After Myocardial Infarction
- P61** *Jogiya, Roy* First Pass Vasodilator-Stress Myocardial Perfusion CMR in Mice on a Whole-Body 3Tesla Scanner: Validation Against Microspheres
- P62** *Dash, Rajesh* Manganese-Enhanced MRI Detects Live Human Amnion-derived Mesenchymal Stem Cells In Vivo After Transplantation and Restoration of Myocardial Function in a Pig Ischemia-Reperfusion Injury Model.

P64	<i>Schuster, Andreas</i>	Cardiac Magnetic Resonance Imaging of Isolated Perfused Pig Hearts in a 3T Clinical MR Scanner
P67	<i>Dash, Rajesh</i>	In Vivo Detection and Treatment of Ischemia-Induced Cardiac Apoptosis Using an MRI-Detectable Molecular Probe and an Alpha-Adrenergic Receptor Agonist
P106	<i>Nett, Elizabeth</i>	Noninvasive pressure measurement with 4D Phase Contrast MRI in Patients with Aortic Coarctations
P126	<i>Liu, Chia-Ying</i>	Aortic Size, Distensibility, and Pulse Wave Velocity Changes with Aging: Longitudinal Analysis from Multi-Ethnic Study Of Atherosclerosis (MESA)
P194	<i>Ibrahim, El-Sayed</i>	Assessment of Iron Deposition in the Heart in Sickle Cell Patients Using 3.0 Tesla Cardiovascular Magnetic Resonance
P218	<i>Otton, James</i>	Direct comparison of MR and CT perfusion utilizing a myocardial perfusion phantom
P219	<i>Khodarahmi, Iman</i>	Accuracy of Flow Measurement with Phase Contrast MRI in a Stenotic Phantom: Where Should Flow be Measured?
P220	<i>Ye, Qing</i>	The Impact of Physiological Loading on Immune Cell Infiltration and Myocardial Function Evaluated by Cardiac MRI: A Comparison between Non-working Heart and Working Heart Transplant Models
P238	<i>Niellas-Vallespin, Sonia</i>	Diffusion Tensor MRI of the Human Heart <i>In Vivo</i> with a Navigator Based Free Breathing Approach
P239	<i>Lingala, Sajjan Goud</i>	Accelerated imaging of rest and stress myocardial perfusion MRI using multi-coil k-t SLR: A feasibility study
P240	<i>Reyhan, Meral</i>	Quantitative assessment of systolic and diastolic left ventricular twist using Fourier Analysis of STimulated echoes (FAST) and CSPAMM
P241	<i>Liu, Junmin</i>	Simultaneous Measurement of Blood-Flow Velocity and Regional Wall Motion with Phase Unwrapping
P265	<i>Liu, Chia-Ying</i>	Myocardial T1 measurement: comparison of modified Look-Locker inversion recovery (MOLLI) and T1 scout in the Multi-ethnic Study of Atherosclerosis (MESA)
P281	<i>Chow, Kelvin</i>	T2-Dependent Errors in MOLLI T1 Values: Simulations, Phantoms, and In-Vivo Studies

CAD Ischemia and Viability

M5	<i>Rathod, Krishnaraj</i>	Does Change in Heart Rate and Blood Pressure During Adenosine Stress Perfusion Cardiovascular Magnetic Resonance (A-CMRP) Imaging Predict Perfusion Defects?
M12	<i>Neizel, Mirja</i>	A Fully Automatic Cardiac Model with Integrated Scar Tissue Information for Improved Assessment of Viability
P2	<i>Haraldsson, Henrik</i>	Segmental Variation of Myocardial Deformation in Patients with Suspected Ischemic Heart Disease
P4	<i>Harker, Jodi</i>	Assessment of Significant Coronary Artery Stenosis Using Blood Oxygen Level Dependent Cardiovascular Magnetic Resonance (BOLD-CMR).
P8	<i>Morton, Geraint</i>	The Diagnostic Accuracy Of Quantitative CMR Perfusion Imaging May Not Be The Same For All Coronary Arteries.
P9	<i>Wong, Timothy</i>	Cardiovascular Magnetic Resonance Stress Perfusion Imaging Predicts 1 Year Outcomes Following Equivocal Stress Testing.
P11	<i>Woodard, Pamela</i>	Feasibility of Detecting Myocardial Ischemia Using First-Pass Contrast MRI and Regadenoson
P12	<i>Morton, Geraint</i>	Advanced Techniques Improve The Performance Of Myocardial Perfusion Imaging
P13	<i>Salerno, Michael</i>	Adenosine Stress CMR with Spiral Pulse Sequences Accurately Detect CAD
P15	<i>Andre, Florian</i>	Feasibility of High Dose Dobutamine Stress and Scar Imaging in High Field Open MRI in Patients with Suspected Coronary Artery Disease
P17	<i>Motwani, Manish</i>	Systolic Versus Diastolic Myocardial Blood Flow in Patients with Suspected Coronary Artery Disease – A Cardiovascular Magnetic Resonance Study
P19	<i>Ghugre, Nilesh</i>	Intramyo-cardial Hemorrhage Contributes to Microvascular Obstruction in Acute Myocardial Infarction
P20	<i>Ghugre, Nilesh</i>	Role of Iron Chelation in Hemorrhagic Myocardial Infarction: A Quantitative CMR Study
P24	<i>Langhans, Birgit</i>	Gender Differences in Contrast-Enhanced Magnetic Resonance Imaging After Acute Myocardial Infarction
P25	<i>Weissman, Gaby</i>	CMR in Acute Myocardial Infarction: Correlation Between Myocardial Scar and Echocardiographic strain.
P26	<i>Bourque, Jamieson</i>	T2-Imaging of the Ischemic Area-at-Risk Predicts Recovery of Cardiac Function After Acute ST-Elevation Myocardial Infarction
P27	<i>Chan, Winnie</i>	SSFP Cine Images Early Post-Gadolinium Improve Detection of Myocardial Oedema in Acute Myocardial Infarction Compared to T2-Weighted Dark Blood Turbo Spin Echo Images
P28	<i>Dall'Armellina, Erica</i>	Characterization of Acute Myocardial Infarction by Pre-Contrast T1 Mapping
P30	<i>Goldfarb, James</i>	Hemorrhagic Myocardial Infarction: Detection using Susceptibility Weighted Phase Imaging
P32	<i>Burchell, Thomas</i>	The Natural Time Course of Myocardial Oedema in the 12 Months Post ST-Elevation MI in Patients Treated with Primary Angioplasty.
P33	<i>Bönnner, Florian</i>	Multimodal MRI in the Course of Cardiac Wound Healing after Myocardial Infarction
P34	<i>Tanimoto, Takashi</i>	Assessment of Myocardial Viability in Low Signal Intensity Areas on Cine MRI Comparison with Late Gadolinium Enhancement Imaging in Patients with Prior Myocardial Infarction

- P36** *Wilson, Sean* Papillary Muscle Infarction in Relation to Left Ventricular Infarct Distribution and Transmurality - Assessment by Delayed Enhancement Cardiac Magnetic Resonance Imaging
- P37** *Jablonowski, Robert* Infarct Quantification Using 3D Inversion Recovery and 2D Phase Sensitive Inversion Recovery, Validation in Patients and Ex Vivo.
- P38** *McAlindon, Elisa* CMR Endpoints for Clinical Trials: Impact of Operator Experience on The Accuracy of Image Analysis
- P80** *Carballo, David* Value of a Hybrid PET/MRI in the Assessment of Cardiac Viability
- P100** *Goyal, Parag* Mitral Apparatus Assessment by Delayed Enhancement CMR – Relative Impact of Papillary Muscle and Left Ventricular Wall Infarction on Ischemic Mitral Regurgitation
- P188** *Monti, Lorenzo* Short Inversion Time on Delayed-Enhancement Magnetic Resonance Improves Diagnostic Accuracy in Recent-Onset Heart Failure.
- P198** *Andre, Florian* Detection and Prevalence of Myocardial Infarction Early and Late After Heart Transplantation Detected by Late Gadolinium Enhanced MRI
- P213** *Cheema, Omar* Patterns of Myocardial Fibrosis by CMR in Patients with Conduction Abnormalities.
- P226** *Asrress, Kaleab* Increased Endocardial to Epicardial Flow Ratio Present at Rest Disappears During Exercise Stress Perfusion CMR in Normal Volunteers – A Potential Mechanism for Exercise Induced Subendocardial Ischaemia
- P227** *Witschey, Walter* Real Time Measurement of Cardiac Pressure-Volume Relationships
- P243** *Kihlberg, Johan* Myocardial Deformation (Strain) Measured by DENSE Reliably Detects Myocardial Scar.
- P248** *Goldfarb, James* Three-Compartment (3C) Pharmacokinetic Modeling is More Accurate than Two-Compartment (2C) Modeling of Myocardial Fibrosis Gadolinium Kinetics
- P249** *Kino, Aya* Evaluation of Fully Automated Motion Corrected First Pass Myocardial Perfusion MRI with Semi Quantitative Perfusion Parameter Maps in Patients with Ischemic Heart Disease
- P250** *Shin, Taehoon* Time-Resolved Early-to-Late Gadolinium Enhancement MRI Using Single Breath-Hold 3D Spiral Imaging
- P251** *Giri, Shivraman* Steady-State First-Pass Perfusion (SSFP): A 3D TWIST in Myocardial First-Pass Perfusion Imaging
- P252** *Berger, Alexander* High-Dose Dobutamine Stress SSFP Cine MRI at 3 Tesla with Patient Adaptive Local RF Shimming Using Dual-Source RF Transmission
- P253** *Kino, Aya* Evaluation of Semi Quantitative Perfusion Parameter Maps Generated Based on a Fully Automated Non-Rigid Motion Correction During a First Pass Myocardial Perfusion (FPMP) MRI
- P263** *Chen, Zhong* Infarct Myocardium Tissue Heterogeneity Assessment Using Pre-Contrast and Post-Contrast T1 Maps Acquired with Modified Look-Locker Inversion Recovery (MOLLI) Imaging
- P264** *Keegan, Jennifer* Dynamic T1 for late gadolinium enhancement imaging in atrial fibrillation
- P287** *Vernikouskaya, Ina* T2 Relaxation Time Mapping in Phantom and In Vivo Myocardial Studies to Investigate Optimal Method of Quantification
- P300** *Bernhardt, Peter* Blood Oxygen Level Dependent and Adenosine-Perfusion Imaging Correlates to Invasive Measurement of Fractional Flow Reserve
- P301** *Kosiek, Ortrud* Delayed Contrast-Enhanced Cardiac MRI at an Open 1.0T MR-system Comparison of Conventional Segmented 3D Gradient Echo and Phase-Sensitive Inversion Recovery Sequences - Initial Results
- P302** *Amano, Yasuo* Simultaneous Assessment of Myocardial Scar and Coronary Artery Disease by Navigator-Gated 3D Fat-Suppressed Delayed-Enhancement CMR: Comparison with 2D Delayed-Enhancement CMR, CT and CAG
- CAD Other**
- P21** *Tödt, Tim* Relationship Between the Duration of Ischemia and Final Infarct Size in STEMI Patients Treated with Abciximab and Primary PCI
- P29** *Zia, Mohammad* Diabetes is Associated with Increased and Persistent Myocardial Edema in Infarct Segment Post Acute Myocardial Infarction
- P31** *McAlindon, Elisa* Early Gadolinium Enhancement for the Detection of Myocardial Oedema (EGE vs T2-STIR vs ACUT2E): A New Method to Assess the Area at Risk?
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- P111** *Romeih, Soha* Is Cardiac CT a Reliable Alternative For Cardiac CMR in Adult Patients with a Systemic Right Ventricle?
- P112** *Keedy, Alexander* MR Evaluation of Tetralogy of Fallot Patients after Surgical Repair: Relationship Between Aortic Dilatation and Aortic Regurgitation
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- P118** *Kozak, Marcelo* Quantification of Ductal Blood Flow with Magnetic Resonance Imaging in Newborns with Obstructive Left Heart Disease
- P119** *Nguyen, Kim-Lien* CMR in Pediatric Patients with Congenital Heart Disease: Comparison at 1.5T and at 3.0T
- P120** *Galizia, Mauricio* Steady-State Magnetic Resonance Angiography of the Thoracic Vasculature in Congenital Heart Disease using a Blood Pool Contrast Agent: Evaluation of Two Different Techniques
- P121** *Madan, Nitin* Comparison Between Proximal Thoracic Vascular Measurements Obtained by Contrast Enhanced Mra and Transthoracic Echocardiography in Infants with Congenital Heart Disease.
- P122** *Chaves, Alicia* Infant Cardiac MRI Using Oscillatory Ventilation: Safe and Effective
- P124** *Luijnenburg, Saskia* Bi-atrial Function and its Relation with Biventricular Function and Clinical Parameters in Patients Operated for Tetralogy of Fallot
- P140** *Chen, Sylvia* Diastolic Prolongation of Forward Flow in Branch Pulmonary Artery Stenosis
- P166** *Potluri, Rahul* Interrelationship of LV Mass, Focal Fibrosis by LGE, and Diffuse Fibrosis by T1-Changes in Patients with Hypertrophic Cardiomyopathy
- P199** *Grotenhuis, Heynric* Aortic and Biventricular Function in Pediatric Meningococcal Septic Shock Survivors as Assessed with MRI
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- P45** *Sonnex, Emer* Imaging Diseases of the Aorta by MRI: A Cost-Effectiveness Analysis of Contrast-Enhanced Studies Compared to Non-Contrast Enhanced Angiographic Studies
- P76** *Mikolich, J. Ronald* Is Cardiac MRI Adenosine Stress Perfusion Imaging A More Appropriate Diagnostic Tool for Obese Patients?
- P81** *Afilalo, Jonathan* Learning Curve for Quantification of Right Ventricular Size and Systolic Function in Pulmonary Arterial Hypertension: Comparison of Cardiac Magnetic Resonance and Three-Dimensional Echocardiography
- P97** *Boering, Yang Chul* Comparison of Diagnostic Performance of Different Imaging Modalities for TAVI-Patients
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- P154** *Elagha, Abdalla* Mitral Valve E-Point to Septal Separation (EPSS) Measurement by Cardiac Magnetic Resonance Imaging as a Quantitative Surrogate of Left Ventricular Ejection Fraction (LVEF)
- P155** *Redheuil, Alban* Age-Related Variations in Left Ventricular Diastolic Parameters Assessed Automatically from Phase-Contrast Cardiovascular Magnetic Resonance data: Comparison against Doppler Echocardiography
- P296** *Armstrong, Anderson* Left Ventricle Mass By Cardiac Magnetic Resonance and Echocardiography: The Multi-Ethnic Study of Atherosclerosis
- P297** *Madueme, Peace* Comparison of Area-Length Method by Echocardiography versus Full Volume Quantification by Cardiac Magnetic Resonance Imaging for the Assessment of Left Atrial Volume

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- P200** *Kholmovski, Eugene* Comparison Between Immediately and Next Day Post RF Ablation MRI in Patients with Atrial Fibrillation
- P202** *Mahnkopf, Christian* Variant Pulmonary Vein Anatomy Detected by Cardiac MRI May Predict Outcome after Pulmonary Vein Isolation in Patients with Atrial Fibrillation
- P203** *Muellerleile, Kai* Cardiac Magnetic Resonance Imaging Demonstrates Biatrial Stunning after Catheter Ablation of Persistent Atrial Fibrillation
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- P205** *Gutberlet, Matthias* First Clinical Experience in Man with the IMRICOR-MR-EP System: Electrophysiology Study Guided by Real-Time MRI
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- P207** *Jones, Daniel* Magnetic Resonance Imaging Pre and Post Pulmonary Vein Isolation for Atrial Fibrillation: Diagnostic Accuracy to Detect and Characterize Ablation Lesions.
- P208** *Chang, Lowell* Pulmonary Vein Stenosis Detection by Early Cardiac Magnetic Resonance Imaging Post-Atrial Fibrillation Ablation.
- P214** *Rabbat, Mark* Left Atrial Volume Assessment in Atrial Fibrillation Using Multimodality Imaging: A Comparison of Echocardiography, Invasive Three Dimensional CARTO and Cardiac Magnetic Resonance Imaging
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- P43** *Wattar, Abdul* Real-time and Single Shot CMR Increases Throughput and Improves Reliability
- P44** *McAlindon, Elisa* High Throughput Clinical CMR Service: Role of Technologists in LV Volume Analysis
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- P256** *Chen, Zhong* Hybrid Phase Ordering with Automatic Window Selection (HybridPAWS) Improves Respiratory-Navigator Efficiency During 3D Late-Gadolinium Enhancement CMR In Patients with Chronic Heart Failure and Irregular Respiratory Pattern
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- P284** *Zakeri, Simon* CMR Validation of Fractional Changes in Annulo-Apical Angles and TAPSE for Rapid Assessment of Right Ventricular Systolic Function
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- P23** *Van Assche, Lowie* A Novel Index of Infarct Morphology Predicts the Presence of Microvascular Obstruction in Patients with Acute Myocardial Infarction
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- P303** *Ma, Heng* Myocardial perfusion MRI with SW-CG-HYPR: A Comparison to Conventional Sr-Turbo-FLASH and X-Ray Angiography in Patients With Suspected Coronary Artery Disease
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- P96** *Fairbairn, Timothy* A CMR Study Assessing Aortic Valve Hemodynamics Post-Transcatheter Aortic Valve Implantation Compared to Surgical Aortic Valve Replacement
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- P99** *Zia, Mohammad* Severity of Mitral Valve Prolapse is Associated with Basal Left Ventricular Hypertrophy: A Cardiac Magnetic Resonance Study
- P125** *Lossnitzer, Dirk* Speckle Tracking for Cardiac MRI in Patients Pre and Post Dilatation and Stent Implantation of Aortic Coarctation
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- P151** *Biederman, Robert* If There is LV Myocardial Fibrosis Should We Expect to Find RV Myocardial Fibrosis? A Cardiovascular MRI Study
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- P170** *Wu, Ming-Ting* Diffuse Tensor Cardiac MRI Evaluation of Fiber Architecture of Athlete Hypertrophic Heart in Vivo
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- P187** Harrison, Alexis Left Atrial Late Gadolinium Enhancement Following External Beam Radiation for Lymphoma: A Potential Model for Exploring Radiation-Related Heart Disease
- P189** Meloni, Antonella Diabetes Mellitus and Cardiac Complications in Thalassemia Major Patients.
- P190** Meloni, Antonella Are the Preferential Patterns of Myocardial Iron Overload Preserved at The CMR Follow-Up?
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- P195** Meloni, Antonella Heart T2* for Prediction of Cardiac Complications in Well-Treated Thalassemia Major Patients
- P210** Biederman, Robert Mitral Regurgitation Recovery and Atrial Reverse Remodeling following Pulmonary Vein Isolation Procedure in Patients with Atrial Fibrillation: A Proof of Concept Cardiac MRI Study
- P224** Chuang, Michael Reference Values for Left Atrial Size by Cardiovascular Magnetic Resonance in the Framingham Heart Study Offspring Cohort
- P233** Posina, Kanna Relationship of Left Atrial Size and Function to Invasive Left Ventricular Filling Pressure: A Cardiac MRI Study
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- P288** Li, Laura Association of Global and Regional Central Circulation Transit time with Left Ventricular End Diastolic Pressure using Dynamic Magnetic Resonance Imaging
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- M2** Leong, Tora Giant Cell Myocarditis in the CMR Era
- M3** Andre, Florian Reference Values of Mitral and Tricuspid Annular Plane Systolic Excursion for the Evaluation of Left and Right Ventricular Performance
- M6** Marzluf, Beatrice Diffuse Myocardial Fibrosis by Post-Contrast T1-Time is Closely Related to the Degree of Heart Failure
- M7** Burger, Astrid MRI Morphological and Functional Method for Clear Distinction of Patients with Left Ventricular Non-compaction Inflammatory Dilated Cardiomyopathy and Physiological Myocardial Trabeculation
- M13** Fernandes, Juliano Myocardial T1 Mapping in Different Cardiomyopathies at 3.0T
- P071** Widya, Ralph Right Ventricular Function and Dimensions in Type 2 Diabetes Mellitus
- P075** Rider, Oliver Gender Specific Differences In Left Ventricular Remodelling in Obesity May Explain Differences In Obesity Related Mortality
- P141** van Hoorn, Frans Low Diagnostic Yield of Late Gadolinium Enhancement (LGE) in Screening Patients with Suspected Arrhythmogenic Right Ventricular Cardiomyopathy (ARVC) by Cardiovascular Magnetic Resonance (CMR)
- P142** Quarta, Giovanni Arrhythmogenic Right Ventricular Cardiomyopathy Mimics: Clinical Impact of Cardiovascular Magnetic Resonance
- P143** Miszalski-Jamka, Karol Left Ventricular Twist Abnormalities in Patients With Left Ventricular Non-compaction. A Cardiovascular Magnetic Resonance Study
- P145** Jacquier, Alexis Potential Value of T1 Mapping in Cardiac MR Assessment of Hypertrophic Cardiomyopathy and Dilated Cardiomyopathy Patients: Preliminary Results
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- P152** Tachi, Masaki Evaluation of Diffuse Myocardial Fibrosis Using Contrast-Enhanced Look-Locker Cardiac MRI and its Relation with Cardiac Function in Dilated Cardiomyopathy: Comparison Between 1.5T and 3T
- P156** Chan, Raymond Late Gadolinium Enhancement is Compatible with Advanced Age in Hypertrophic Cardiomyopathy: Implications for Risk Stratification of Sudden Death
- P157** Suttie, Joseph Patients with Hypertrophic Cardiomyopathy (HCM) and HCM Gene Carriers have Attenuated Myocardial Oxygenation Response to Vasodilator Stress - A Potential Mechanism for Sudden Cardiac Death
- P158** Hueper, Katja Reduction of Relative Resting Myocardial Blood Flow is Related to Myocardial Delayed Enhancement, T2-signal abnormalities, Left-ventricular Wall Thickness and Age in Patients with Hypertrophic Cardiomyopathy
- P159** Chen, Yucheng Fibrotic Content of LV Myocardium Quantified by CMR Characterizes Left Atrial Sizes and Total Left Atrial Emptying Function Incremental to LV functional Parameters and LV Myocardial Mass Index in Patients with Hypertrophic Cardiomyopathy
- P160** Gommans, Frank Assessment of Prognostic LV Parameters with CMR in Hypertrophic Cardiomyopathy: Impact of the Papillary Muscles

- P161** *Bhatti, Sabha* Late Gadolinium Enhancement(LGE) on Cardiac MR is a Powerful Predictor of Death and “Hard” Events in Patients with Hypertrophic Cardiomyopathy (HCM)
- P162** *Saba, Shahryar* A Novel Cardiac Magnetic Resonance Imaging Technique to Evaluate Left Ventricular Diastolic Function in Patients with Hypertrophic Cardiomyopathy
- P163** *Tanacli, Radu* Predictors of Atrial Emptying Function in Patients with Hypertrophic Cardiomyopathy: Insights from Cardiovascular Magnetic Resonance
- P164** *Andre, Florian* Bio-imaging: Late Gadolinium Enhancement in Hypertrophic Cardiomyopathy and its Relation to Novel Biomarkers of Fibrosis
- P165** *Kino, Aya* Relationship between Myocardial Scar and Hypertrophy by LGE CMR in Hypertrophic Cardiomyopathy Patients With and Without Clinical Events
- P167** *Ismail, Tefvik* Role of Inflammation in the Pathogenesis of Hypertrophic Cardiomyopathy: a T2-Mapping CMR Study
- P168** *Andre, Florian* CMR derived MAPSE and TAPSE Measurements in Hypertrophic Cardiomyopathy: Comparison to Healthy Volunteers
- P173** *Andre, Florian* MRI Detected Mass Decrease in Patients with Amyloidosis after Treatment with Green Tea: A One Year Follow-Up study
- P174** *Banyersad, Sanjay* Cardiac Involvement in Cardiac AL Amyloidosis as Measured by Equilibrium Contrast Cardiovascular Magnetic Resonance
- P176** *Schmidt, Andre* Evaluation of Chagas Heart Disease by Cardiac Magnetic Resonance After an Aborted Sudden Cardiac Death Event
- P177** *Thakrar, Darshit* T2 Mapping of the Myocardium, a Quantitative Tool for Assessment of Myocarditis.
- P181** *Grover, Suchi* Early Cardiac Changes Following Anthracycline Chemotherapy in Breast Cancer: A Prospective Multi-Centre Study Using Advanced Cardiac Imaging and Biochemical Markers
- P182** *Miller, Christopher* CMR Assessment of Myocardial Mechanics and Tissue Characterization in Patients Treated with Anthracycline Chemotherapy for Acute Myeloid Leukaemia
- P185** *Rimoldi, Ornella* Relationship Between Clinical Presenting Patterns of Acute Myocarditis and Oedema and Late Enhancement Extension.
- P186** *Ismail, Tefvik* Cardiac Effects of Anabolic Steroid Use amongst Recreational Body Builders – a CMR Study
- P193** *Hor, Kan* Presence of Late Gadolinium Enhancement in Duchenne Muscular Dystrophy Patients is Associated with Age and Global Ventricular Function
- P196** *Andre, Florian* MRI Functional and Tissue Characterisation in Patients with Systemic Lupus Erythematosus
- P197** *Kasai, Yufuko* Dose T2-Weighted Short TI Inversion Recovery Images on Cardiac Magnetic Resonance Reflect Disease Activity in Cardiac Involvement of Sarcoidosis Patients?
- P260** *Andre, Florian* Early Prediction of Infarct Size by Ultra-Fast Online Assessment of Systolic Left Ventricular Longitudinal Function
- P291** *Lundin, Magnus* Extracellular Volume MRI Increases the Detection of Myocardial Abnormalities Beyond Late Gadolinium Enhancement – Initial Findings
- P304** *Andre, Florian* MRI Assessment of Diastolic Dysfunction in Comparison to Transthoracic Echocardiography

Physiology and Metabolism including Spectroscopy

- P54** *Jung, Bernd* A Comprehensive Quantitative Comparison of Myocardial Motion in Mice, Rabbits and Humans using Phase Contrast MRI
- P55** *Antkowiak, Patrick* Quantitative First-Pass MRI Measures Increased Myocardial Perfusion After Vasodilation in Mice
- P59** *Forbes, Sean* Effect of uphill running on myocardium T2 in mdx mice
- P70** *Patel, Amit* Lipid Sub-Fractionation Predicts Worsening Myocardial Perfusion Reserve in Patients with Low-Density Lipoprotein Less Than 100mg/dL: A Regadenoson Cardiac Magnetic Resonance Study
- P74** *Panjrath, Gurusher* Skeletal Muscle High Energy Phosphate Metabolism In Patients With Obesity And Impaired Fasting Blood Glucose
- P88** *Biederman, Robert* McConnell’s Sign Unveiled
- P222** *Sado, Daniel* Assessment of the Interstitial Volume in Healthy Volunteers. An Equilibrium Contrast CMR Study
- P229** *von Knobelsdorff-Brenkenhoff, Florian* Physiological Stress During Cardiovascular Magnetic Resonance - Handgrip Exercise Induced Hemodynamic Effects
- P237** *Wu, Holden* Acquisition and Visualization of 5D Respiratory-Resolved Cardiac MRI
- P261** *Delattre, Benedicte* Intravoxel Incoherent Motion Applied to Cardiac Diffusion Weighted MRI Using Breath-Hold Acquisitions in Healthy Volunteers
- P262** *Sado, Daniel* Single Breath-Hold Vd(m) Calculation as Good as Multi Breath-Hold Technique in Equilibrium Contrast CMR
- P282** *Hedstrom, Erik* 3T BOLD MRI with Low Intrascan Variability and High Reproducibility of Limb Oxygenation Measurements

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Agenda

12:30 Lunch provided

12:45 Power. Simplicity. Discovery MR750w 3.0T and Optima MR450w 1.5T with GEM Suite for CMR.

Maggie Fung

MR Cardiovascular Applications Development Manager

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12:55 Assessment of Mitral Regurgitation Using a Semi-Automated Algorithm

Steven D. Wolff, MD, PhD

Assistant Professor of Radiology at Columbia University Medical Center

1:10 Quantitative Tissue Characterization - Where Will MR Take Us?

Graham Wright, PhD

Professor, Department of Medical Biophysics, University of Toronto/
Senior Scientist, Sunnybrook Health Sciences Centre

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GE Healthcare provides transformational medical technologies and services that are shaping a new age of patient care. Our broad expertise in medical imaging and information technologies, medical diagnostics, patient monitoring systems, drug discovery, biopharmaceutical manufacturing technologies, performance improvement and performance solutions services help our customers to deliver better care to more people through innovations focused on reducing costs, increasing access and improving quality around the world.

Booth 34

Heart Imaging Technologies

5003 Southpark Drive, Suite 140
Durham, NC 27713-9414
Tel: 919-323-3001
Fax: 866-457-3694
Web: www.heartit.com

Heart IT® is a global leader in the medical imaging industry. Their flagship product, WebPAX® was the first FDA approved zero-footprint medical imaging workstation. It allows physicians to view, report and search diagnostic-quality CMR images on any browser including mobile devices. WebPAX® has received 5 patents for its unique technology. Used by approximately 5,000 physicians at 250 medical centers, customers include leading academic institutions such as Johns Hopkins, Duke, Cornell and Ohio State.

Booth 8

Intersocietal Accreditation Commission (IAC)

Booth 7

6021 University Blvd., Ste. 500
Ellicott City, MD 21045
Tel: 800-838-2110
Fax: 800-581-7889
Email: accreditation@intersocietal.org
Web: www.intersocietal.org

The IAC provides a voluntary accreditation process for providers of MR, enabling applicant facilities to evaluate and demonstrate the level of patient care they provide.

The Standards, outlining the recommendations and requirements for a quality MR facility, will be displayed along with details of the new Online Accreditation application format.

You may visit www.intersocietal.org or call 800-838-2110 for more information. Stop by the IAC booth to learn more about payment policies linking reimbursement to accreditation.

Journal of Cardiovascular Magnetic Resonance (JCMR) Booth 2

Cardiovascular MR Unit
Royal Brompton Hospital
Sydney Street
London, SW3 6NP
United Kingdom
Tel: +44 207 351 8825
Fax: +44 207 351 8816
Email: jcmr@imperial.ac.uk
Web: www.jcmr-online.com

JCMR, the official journal of the Society for Cardiovascular MR, is an open access, online journal that publishes articles on all aspects of basic and clinical research on the design, development, manufacture, and evaluation of magnetic resonance methods applied to the cardiovascular system. The only journal devoted exclusively to cardiovascular MR, JCMR aims to provide an international forum for communicating the latest findings and reviews on the burgeoning field of cardiovascular MR imaging and spectroscopy.

Lippincott Williams Wilkins

Booth 4

3013 E. South Fork Drive
Phoenix, AZ 85048
Tel: 480-704-1995
Fax: 480-704-1995
Email: craig.roberts@wolterskluwer.com

Lippincott Williams & Wilkins has some of the best books in cardiovascular imaging.

Medis Medical Imaging Systems

Booth 38

9360 Falls of Neuse Road, Suite 103
Raleigh, NC 27615
Tel: 919-278-7890
Fax: 919-847-8817
Web: www.medis.nl

Medis is a leading provider of software solutions for accurate quantification of cardiovascular MR images. At SCMR 2012, Medis will demonstrate its latest version of its flagship product QMass® Enterprise Solution, which includes a versatile cardiac MR viewer, an integrated connectivity platform and proven best in-class quantitative analysis. Its fast analysis and total workflow solution save valuable time in clinical practice. Visit Medis at Booth 38 for more information.

MedVoxel Systems, Inc.

Booth 35

7363-515 West Hastings St
Vancouver, BC V6B 5K3
Canada
Tel: 778-782-7759
Fax: 778-782-7977
Web: www.medvoxel.com

MedVoxel Systems Inc. (MedVoxel) is software-as-a-service ("SaaS") company that develops and markets innovative imaging post-analysis solutions for cardiologists and radiologists.

MedVoxel's HeartPro Software Application (HeartPro) is a suite of cardiac MRI post-analysis tools. It is faster and more adaptable with its strong understanding of customers needs and its scientific research and the implementation capabilities.

HeartPro is a pioneering product that has been tested and proved in international and U.S. clinical environment. It is FDA 510(K) cleared.

Philips Healthcare

Booth 26

PO Box 10,000
5680 DA BEST
The Netherlands
Tel: +31 40 2765608
Web: www.philips.com

Royal Philips Electronics of the Netherlands is a diversified Health and Well-being company, focused on improving people's lives through timely innovations. As a world leader in healthcare, Philips integrates technologies and design into people-centric clinical solutions, based on fundamental customer insights and "sense and simplicity". A recent example is the Ingenia, world's first broadband digital MR scanner with patient-adapted multi-channel RF technology for crystal clear imaging, remarkable speed and robust cardiac MR results on 3.0T.

Pie Medical Imaging

Booth 31

Becanusstraat 13d
Maastricht 6216BX
The Netherlands
Tel: +31 43 328 13 28
Fax: +31 43 328 13 29
Email: pmi-exhibitor@pie.nl
Web: www.piemedicalimaging.com

Pie Medical Imaging offers quantitative cardiovascular analysis software for cardiac MR. The CAAS MRV software allows for a Functional analysis of the ventricles, a Viability (DE) and First Pass Perfusion analysis and also is available for small animal research.

The CAAS MR Flow software is designed to quantify flow and velocities in PCA MR images.



Precision Image Analysis International

Booth 33

815-18th Avenue
West Kirkland, WA 98033
Tel: 425-822-8199
Web: www.precisionanalysis.org

Precision Image Analysis (PIA) provides a service to analyze diagnostic images that is rapid, accurate and cost-effective. Currently, medical personnel can spend more than an hour post-processing imaging studies. PIA completes the quantification with a comprehensive summary report of measurement data at a turn-around time of less than 6 hours and is HIPAA compliant. All work is performed by highly trained technicians using commercially available software and supervised by a board-certified cardiologist.

Shelley Medical Imaging Technologies

Booth 12

157 Ashley Crescent
London, Ontario N6E 3P9
Canada
Tel: 519-690-0874
Email: bob.gravett@simutec.com
Web: www.simutec.com

A leader in MRI compatible and programmable heart motion phantoms, computer-controlled physiological blood flow pump simulators and anatomically correct vascular models for quantitative flow, angiographic (MRA, DSA, CTA, as well as iMRI, PIV & ultrasound), and endovascular device testing, validation and training.

We welcome your input regarding the development of the following technologies/products; an MRI compatible x,y,z motion stage, an MRI compatible rats heart motion phantom and MRI compatible perfusion, diffusion & DCE phantoms.

Siemens Healthcare

Booth 40

55 Valley Stream Parkway
Malvern, PA 19355
Tel: 610-219-5257
Fax: 610-448-1534
Email: usa.healthcare@siemens.com
Web: www.usa.siemens.com/healthcare

The Siemens Healthcare Sector is one of the world's largest suppliers to the healthcare industry and a trendsetter in medical imaging, laboratory diagnostics, medical information technology and hearing aids. Siemens offers its customers products and solutions for the entire range of patient care from a single source – from prevention and early detection to diagnosis, and on to treatment and aftercare. By optimizing clinical workflows for the most common diseases, Siemens also makes healthcare faster, better and more cost-effective. Siemens Healthcare employs some 51,000 employees worldwide and operates around the world.

Society for Cardiovascular Magnetic Resonance (SCMR)

Booth 3

19 Mantua Road
Mt. Royal, NJ 08061
Tel: 856-423-8955
Fax: 856-423-3420
Email: scmrhq@talley.com
Web: www.scmr.org

The Society for Cardiovascular Magnetic Resonance (SCMR) is a professional association whose vision is to be the leading international representative and advocate for all physicians, scientists, and technologists working in CMR to improve patient outcomes through excellence in education, training, standards, research and development. It endeavors to be the principal international, independent organization committed to the further development of cardiovascular magnetic resonance through education, quality control, research, and training.

TomTec Imaging Systems GmbH

Booth 37

Edisonstrasse 6
Unterschleissheim 85716
Germany
Tel: 0049 89032175518
Fax: 0049 89032175750
Web: www.tomtec.de

TomTec Imaging Systems is the worldwide leader for 2D-, 3D- and 4D-solutions in the area of medical ultrasound and medical information management (Healthcare IT).

We will present at the SCMR its 2D Cardiac Performance Analysis® MR for global and regional assessment of myocardial mechanics.

Diagnostic key features:

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Join us at SCMR 2012 Scientific Sessions at Booth #37!

Toshiba

Booth 16

2441 Michelle Drive
Tustin, CA 92780
Tel: 800-421-1968
Fax: 714-505-2076
Web: www.medical.toshiba.com

Innovator's in medical imaging technology, Toshiba America Medical Systems, markets, sells, distributes and services diagnostic imaging systems throughout USA. Toshiba is committed to providing our customers with the patient-focused technology and optimum system performance needed to succeed in today's healthcare marketplace.

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ultimate sophistication"
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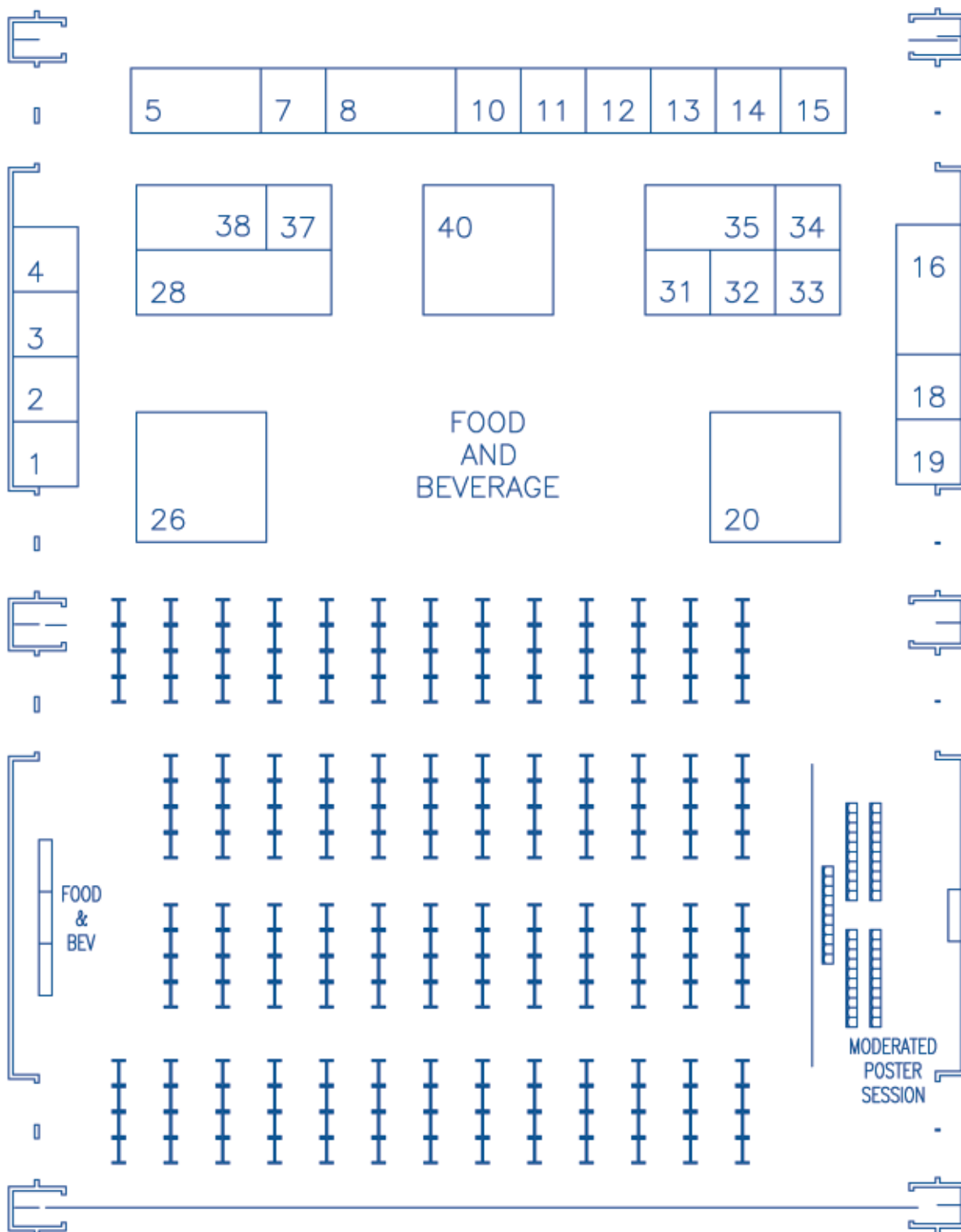
find out more at www.circlecvi.com



EXHIBIT HALL FLOOR PLAN

The Society for Cardiovascular Magnetic Resonance February 2 - 5, 2012

Marriott World Center - Palms Ballroom & Exhibition Hall



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