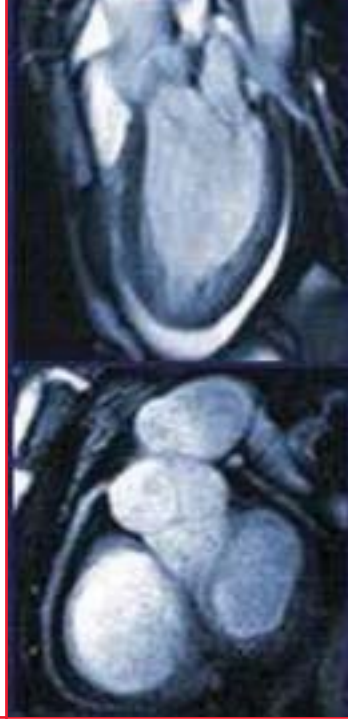




*Society for Cardiovascular  
Magnetic Resonance*



*Sixth Annual  
Scientific  
Sessions*

*February 7-9, 2003  
Orlando, Florida*



*Final  
Program*



## THE GOALS OF THE CONFERENCE ARE TO:

1. Deliver state of the art information on the science of cardiovascular MR and spectroscopy.
2. Provide a forum for the presentation of new information on cardiovascular resonance.
3. Compare and contrast cardiovascular magnetic resonance methods with other cardiovascular imaging approaches.

## WHO SHOULD ATTEND?

The intended audience consists of trainees and clinical practitioners in cardiology, cardiothoracic surgery, and cardiovascular radiology.

## ACCREDITATION STATEMENT

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 University of Minnesota and the Society for Cardiovascular Magnetic Resonance. The University of Minnesota is accredited by the ACCME to provide continuing medical education for physicians.

## DESIGNATION STATEMENT

The University of Minnesota designates the **Pre-Conference Physicians Workshop** for up to 7.75 hours in category 1 credit toward the AMA Physician's Recognition Award. Each physician should claim only those hours of credit actually spent in the educational activity.

The University of Minnesota designates the **2003 Annual Scientific Sessions** for up to 20 hours in category 1 credit toward the AMA Physician's Recognition Award. Each physician should claim only those hours of credit actually spent in the educational activity.

The American Society of Radiological Technologists (ASRT) designates the Technologist' Workshop for up to 8.5 hours in category A credit. Each registrant should claim only those hours of credit actually spent in the educational activity.

## DISCLOSURE

The University of Minnesota Office of Continuing Medical Education has a policy regarding disclosure of financial relationships. It requires course faculty to disclose whether or not they have financial interests or affiliations with organizations with a direct and substantial interest in the subject matter of their presentations. This information is provided in an addendum to the faculty listing as a matter of information for the audience.

## SPONSOR

The Society for Cardiovascular Magnetic Resonance was founded to be an international organization dedicated to the education of interdisciplinary cardiovascular investigators and clinicians in the application of magnetic resonance to the heart and its circulation; to the advancement and dissemination of the understanding, appropriate use and performance techniques; and to the provision of a forum for discussion of clinical, research, and other issues relevant to the field.

## ACKNOWLEDGMENTS

The Society for Cardiovascular Magnetic Resonance gratefully acknowledges the support of its objectives from:

Berlex  
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UCSF Medical Center, USA

**Victor Ferrari, MD, Pre-Conference Co-Chair**  
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## ADMISSION TO THE SCIENTIFIC SESSIONS AND OTHER EVENTS

Your name badge is your admission ticket and will be required for access to all annual scientific sessions, including admission to the exhibit hall and the social event and will be included in your registration package. Please be sure to wear your name badge each day.

## SPEAKER READY ROOM – DEVON ROOM

The 2003 Program Committee is committed to providing cutting edge technology at the Annual Scientific Meeting with its use of complete AudioVisual Networking capabilities. This will enable each speaker to view/edit their presentation in the speaker ready room in advance and the changes to be available to them in their respective meeting room when they arrive. Each meeting room will have a networked desktop computer at the podium and each presentation will be virtually a click away.

## REGISTRATION HOURS

### Great Hall Assembly Area

Wednesday, February 5	5:00 p.m. - 9:00 p.m.
Thursday, February 6	7:00 a.m. - 5:00 p.m.
Friday, February 7	7:00 a.m. - 5:00 p.m.
Saturday, February 8	7:00 a.m. - 5:00 p.m.
Sunday, February 9	8:30 a.m. - 12:00 p.m.

## EXHIBIT HALL HOURS

Friday, February 7	10:00 a.m. - 6:00 p.m.
Saturday, February 8	10:00 a.m. - 4:00 p.m.
Sunday, February 9	8:00 a.m. - 12:00 p.m.

# Program Agenda

## *Pre-Conference Workshop: Introduction to Cardiovascular MR*

**Thursday, February 6, 2003**

**8:00 AM–8:10 AM WELCOME**  
*Charles B. Higgins, MD  
Victor Ferrari, MD*

**8:10 AM–9:30 AM HOW-TO SESSIONS I: CMR TECHNOLOGY AND TECHNIQUES**

**Parallel A**

**Great Hall North**

**Moderator:**

*Christine H. Lorenz, PhD*

**8:10 AM–8:30 AM Pertinent Physics for CMR**  
*David Firmin, PhD*

**8:30 AM–8:50 AM How to Set Up and Run a CMR Study**  
*Walter J. Rogers, PhD*

**8:50 AM–9:10 AM Contrast and Resolution of CMR Images; Standard and Fast Techniques**  
*Frederick Epstein, PhD*

**9:10 AM–9:30 AM CMR Sequences and Physiology**  
*Christine H. Lorenz, PhD*

**9:30 AM–10:00 AM BREAK**

**10:00 AM–11:30 AM HOW-TO SESSIONS II: CMR APPLICATIONS GREAT HALL NORTH/CENTER**

**Moderator:**

*André Duerinckx, MD, PhD*

**10:00 AM–10:20 AM How to do Stress Function Imaging (Dobutamine, etc.)**  
*Penelope R. Sensky, MD*

**10:20 AM–10:40 AM How to do Stress Perfusion Imaging**  
*Joerg Barkhausen, MD*

**10:40 AM–11:00 AM How to do Coronary Imaging**  
*Michael V. McConnell, MD, MSEE*

**11:00 AM–11:20 AM MR Angiography: Vascular Imaging and Flow**  
*Paul Finn, MD*

**11:20 AM–11:40 AM Panel Discussion**

**11:40 AM–1:00 PM LUNCH (ON YOUR OWN)**

**Parallel B**

**Great Hall Center**

**Moderator:**

*Victor Ferrari, MD*

**Pertinent Physiology for CMR**  
*Frank Rademakers, MD*

**Quantitation of Global Ventricular Function and Mass**  
*John Osbinski, PhD*

**Quantitation of Regional LV Function**  
*Leon Axel, MD, PhD*

**Measurement of Blood Flow**  
*Raad Mubiaddin, MD*

# Program Agenda



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## 1:00 PM–3:40 PM HOW-TO SESSIONS III: CLINICAL REFERRALS FOR CMR

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**Moderator:**

*Norbert Wilke, MD*

**1:00 PM–1:20 PM Thoracic Aortic Disease**

*Rossella Fattori, MD*

**1:20 PM–1:40 PM Cardiac Tumors and Thrombi**

*Steven Wolff, MD, PhD*

**1:40 PM–2:00 PM Valvular Heart Disease**

*Ronald Pesbock, MD*

**2:00 PM–2:20 PM BREAK**

**2:20 PM–2:40 PM Myocardial and Pericardial Disease**

*Guillem Pons-Llado, MD*

**2:40 PM–3:00 PM Arrhythmogenic Right Ventricular Dysplasia**

*Lawrence Boxt, MD*

**3:00 PM–3:20 PM Congenital Heart Disease**

*Arno Roest, MD, PhD*

**3:20 PM–3:40 PM Ischemic Heart Disease and Viability**

*Joao Lima, MD*

**3:40 PM–4:00 PM BREAK**

**4:00 PM–5:30 PM CASE INTERPRETATIONS—PANEL**

---

**Moderators:**

*Victor Ferrari, MD*

*Norbert Wilke, MD*

**Discussants:**

*Lawrence Boxt, MD*

*Paul Finn, MD*

*Christopher M. Kramer, MD*

*Albert von Rossum, MD*

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## 5:30 PM–6:15 PM HOW-TO SESSION IV: HOW TO START A CMR PRACTICE

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**Moderator:**

*Edward Martin, MD*

**5:30 PM–5:50 PM Technologist Recruitment and Training**

*Tim Jones, MSc*

**5:50 PM–6:15 PM CMR Reimbursement**

*Steven Wolff, MD, PhD*

*Edward Martin, MD*

**6:15 PM–7:30 PM TUTORIAL: MEDIS TEACHING FILE VIEWING AND QUIZ**

**7:30 PM RECEPTION**

**GREAT HALL EAST/WEST**

# Program Agenda

## Sixth Annual Scientific Sessions

### Friday, February 7, 2003

**8:00 AM–8:15 AM**     **WELCOME ADDRESS**     **GREAT HALL NORTH/CENTER**  
*Robert Balaban, PhD*  
*Charles B. Higgins, MD*

**8:15 AM–10:30 AM**     **PLENARY SESSION I: CMR IN ISCHEMIC HEART DISEASE: STATUS 2003**

**Moderators:**

*Robert Balaban, PhD*  
*Charles B. Higgins, MD*

**8:15 AM–8:40 AM**     **Clinical Scenarios in Ischemic Heart Disease–Potential Role of CMR**  
*Ernst E. Van der Wall, MD*

**8:40 AM–9:00 AM**     **Stress Function CMR–Detection of Ischemia**  
*W. Gregory Hundley, MD*

**9:00 AM–9:20 AM**     **Stress Perfusion CMR–Detection of Ischemia**  
*Hajime Sakuma, MD*

**9:20 AM–9:40 AM**     **Evaluation of Myocardial Viability–Contrast Enhanced CMR**  
*Raymond Kim, MD, FACC*

**9:40 AM–10:00 AM**     **Cardiac MRS–Ischemia Detection and Viability**  
*Stefan Neubauer, MD*

**10:00 AM–10:20 AM**     **Coronary MR Angiography**  
*Warren J. Manning, MD*

**10:20 AM–10:30 AM**     **Discussion**

**10:30 AM–11:00 AM**     **BREAK**

**11:00 AM–12:00 PM**     **ORAL ABSTRACTS (3 PARALLEL SESSIONS)**

**BEST ORAL ABSTRACTS COMPETITION**

**GREAT HALL NORTH**

**Moderators:**

*Gerald Pobost, MD*  
*Albert von Rossum, MD*

**11:00 AM–11:10 AM**     **101 - Clinical Use Of XMR In The Diagnosis And Treatment of Congenital Heart Disease**  
*Reza F. Razavi, MD*

**11:10 AM–11:20 AM**     **102 - MR Delivery and Tracking of Magnetically-Labeled Mesenchymal Stem Cells in Myocardial Infarction**  
*Dara L. Kraitchman, VMD, PhD*

**11:20 AM–11:30 AM**     **103 - Serial Contrast-Enhanced MRI of Myocardial Infarction in Mice Early After Reperfusion: Importance of Early Treatment in Strategies to Control Reperfusion Injury**  
*Brent A. French, PhD*

**11:30 AM–11:40 AM**     **104 - Molecular Imaging of Angiogenesis Associated with Atherosclerosis In Vivo with Paramagnetic Nanoparticles at 1.5T**  
*Patrick M. Winter, PhD, BS*

**11:40 AM–11:50 AM**     **105 - Relation of Myocardial Scarring to Clinical Risk Factors for Sudden Cardiac Death in Hypertrophic Cardiomyopathy**  
*Heiko Mahrholdt, MD*

**11:50 AM–12:00 PM**     **106 - Assessment of pulmonary vein diameters after radiofrequency catheter ablation in patients with atrial fibrillation using magnetic resonance imaging and conventional x-ray angiography**  
*Thorsten Dill, MD*

# Program Agenda



## MR MEASUREMENT OF MYOCARDIAL PERFUSION

GREAT HALL CENTER

### **Moderators:**

*Zabi Fayad, PhD*

*Peter Buser, MD*

- 11:00 AM–11:10 AM 107 - A Comparison of Dobutamine Stress Function and Stress Perfusion MRI in 260 Patients**  
*James F. London*
- 11:10 AM–11:20 AM 108 - Myocardial First-Pass Perfusion Imaging: A Multicenter Dose Ranging Study**  
*Steven D. Wolff, MD, PhD*
- 11:20 AM–11:30 AM 109 - A survey of patient tolerance of MRI and SPECT myocardial perfusion studies**  
*Sven Plein, MD*
- 11:30 AM–11:40 AM 110 - Comparison of First Pass Magnetic Resonance Perfusion and Contrast Echocardiography for the Detection of ischemia in Patients with Coronary Artery Disease**  
*Nidal Al-Saadi, MD*
- 11:40 AM–11:50 AM 111 - A Combined Single-Session Analysis of Myocardial Perfusion during Adenosine Stress and of Wall Motion during High-Dose Dobutamine-Atropine Stress MRI Improves Diagnosis of Inducible Ischemia**  
*Andreas Wabl, MD*
- 11:50 AM–12:00 PM 112 - Color-Encoded Semiautomatic Analysis for Multi-slice First-Pass Magnetic Resonance Perfusion: Comparison to 99m Technetium SPECT and X-Ray Angiography**  
*Holger Thiele, MD*

## MYOCARDIAL TISSUE CHARACTERIZATION BY MRI

GREAT HALL EAST

### **Moderators:**

*Christine Lorenz, PhD*

*Matthias Stuber, PhD*

- 11:00 AM–11:10 AM 113 - Combined T2-weighted and Delayed Enhancement MRI Differentiates Acute from Chronic Myocardial Infarction**  
*Hassan Abdel-Aty*
- 11:10 AM–11:20 AM 114 - Does Transmyocardial Laser Revascularization (TMR) Give Rise to Myocardial Fibrosis?**  
*Penelope R. Sensky, MA, BS, MRCP*
- 11:20 AM–11:30 AM 115 - Chagas Disease is Characterized by Specific Pattern and Location of Myocardial Delayed Enhanced MRI**  
*Carlos E. Rochitte, MD*
- 11:30 AM–11:40 AM 116 - Myocardial Hyperenhancement in Hypertrophic Cardiomyopathy: Insights From a Genotyped Population**  
*James C. Moon*
- 11:40 AM–11:50 AM 117 - Delayed Enhanced Magnetic Resonance Imaging Detects Myocardium Injury in Acute Myocarditis**  
*Marcelo Hadlich, MD*
- 11:50 AM–12:00 PM 118 - Cardiac Magnetic Resonance Imaging Findings In Sarcoidosis**  
*Olivier Vignaux, MD, PhD*

# Program Agenda

**12:10 PM–12:40 PM SCMR BUSINESS MEETING**

**12:40 PM–1:30 PM LUNCH (ON OWN)–POSTER VIEWING SESSION I**

**EXHIBIT HALL**

**1:30 PM–3:00 PM PARALLEL SESSIONS**

	<b>A</b> <b>Heart Failure</b>  <b>GREAT HALL NORTH</b>	<b>B</b> <b>Assessment of Contractile Function</b>  <b>GREAT HALL CENTER</b>	<b>C</b> <b>Moderated Poster Tour</b>  <b>EXHIBIT HALL</b>
	<b>Moderators:</b> <i>Nathaniel Reichel, MD</i> <i>Christopher M. Kramer, MD</i>	<i>Leon Axel, MD, PhD</i> <i>Alastair Martin, PhD</i>	<i>Samuel Wickline, MD</i>
<b>1:30 PM–1:45 PM</b>	<b>Ischemic Heart Disease</b> <i>Joao Lima, MD</i>	<b>Wall Motion–Thickening</b> <i>Udo Sechtem, MD</i>	
<b>1:45 PM–2:00 PM</b>	<b>MR Evaluation of Molecular Mechanisms</b> <i>Rong Tian, MD, PhD</i>	<b>Beyond Wall Motion</b> <i>Victor Ferrari, MD</i>	
<b>2:00 PM–2:15 PM</b>	<b>Monitoring of Drug Therapy</b> <i>Christopher M. Kramer, MD</i>	<b>Advances in Myocardial Tagging</b> <i>Peter Boesiger, PhD</i>	
<b>2:15 PM–2:30 PM</b>	<b>Monitoring Surgical Therapy</b> <i>Gerald Pobost, MD</i>	<b>Advances in Phase Detection Methods</b> <i>Han Wen, PhD</i>	
<b>2:30 PM–2:45 PM</b>	<b>Nonischemic Myocardial Disease</b> <i>Matthias G. Friedrich, MD</i>	<b>Quantitation and Visualization using HARP and SENC</b> <i>Nael Osman, PhD</i>	
<b>2:45 PM–3:00 PM</b>	<b>Panel Discussion</b>	<b>Panel Discussion</b>	
<b>3:00 PM–3:30 PM</b>	<b>BREAK–POSTER VIEWING II</b>		<b>GREAT HALL NORTH/CENTER</b>
<b>3:30 PM–5:00 PM</b>	<b>ORAL ABSTRACTS (3 PARALLEL SESSIONS)</b>		

**CORONARY MR ANGIOGRAPHY**

**GREAT HALL NORTH**

**Moderators:**  
*Guillem Pons-Llado, MD*  
*Steven Wolff, MD, PhD*

- 3:30 PM–3:40 PM 119 - Catheter-Based Projection Coronary MR Angiography - A Feasibility Study**  
*Jordin D. Green, MS*
- 3:40 PM–3:50 PM 120 - MR imaging at 3.0 Tesla and coronary artery stents: Ex vivo evaluation of magnetic attraction forces and heating**  
*Alexandra Schmiedel, MD*
- 3:50 PM–4:00 PM 121 - Artifact-free coronary MR angiography and coronary vessel wall imaging in vivo using a new metallic coronary MRI stent**  
*Elmar Spuentrup*
- 4:00 PM–4:10 PM 122 - Initial Experience with Spiral MR Coronary Angiography at 3T: Anatomic Coverage, Image Quality and Susceptibility Artifacts**  
*Phillip Yang*
- 4:10 PM–4:20 PM 123 - Navigator-gated coronary MRA with subject-specific acquisition windows and motion adaptive gating - comparison with a conventional acquisition sequence**  
*Sven Plein, MD*



# Program Agenda



- 4:20 PM–4:30 PM    **124 - Contrast-enhanced MR Imaging of Coronary Arteries with Gadomer-17**  
*Jörg Barkhausen, MD*
- 4:30 PM–4:40 PM    **125 - Free-Breathing Non-Gated Coronary MRA Using a Patient-Calibrated Complex 3D Motion Model**  
*Kay Nebrke, PhD*
- 4:40 PM–4:50 PM    **126 - Whole Heart Coronary MR Angiography Using a Magnetization Prepared SSFP Sequence**  
*Oliver M. Weber, PhD*
- 4:50 PM–5:00 PM    **127 - Fast black-blood imaging of carotid arteries using multi-slice double inversion-recovery**  
*Vasily L. Yarnykb, PhD*

## DELAYED ENHANCEMENT MRI:

GREAT HALL CENTER

### A NEW GOLD STANDARD FOR ASSESSMENT OF MYOCARDIAL VIABILITY?

#### **Moderators:**

*Eike Nagel, MD*  
*Lawrence Boxt, MD*

- 3:30 PM–3:40 PM    **128 - Assessment of Myocardial Viability in Patients With Left Ventricular Dysfunction Using Contrast-enhanced Magnetic Resonance Imaging: Comparison to Thallium-201 single photon emission tomography**  
*Matthias Regenfus, MD*
- 3:40 PM–3:50 PM    **129 - Contrast-Enhanced MRI versus PET in the Assessment of Myocardial Viability – Prediction of Functional Recovery After Revascularisation**  
*Peter Hunold, MD*
- 3:50 PM–4:00 PM    **130 - Peak Cardiac Troponin I Levels Correlate with Infarct Size on Contrast-Enhanced Magnetic Resonance Imaging**  
*W. Patricia Ingkanisorn, MD*
- 4:00 PM–4:10 PM    **131 - Influence of image acquisition timing and of contrast agent dose on the quantitative determination of non-viable myocardial tissue using delayed contrast-enhanced magnetic resonance imaging in chronic myocardial infarction**  
*Steffen E. Petersen, MD*
- 4:10 PM–4:20 PM    **132 - Myocardial Delayed Enhancement: Determining the Optimal Gadolinium Dose and Delay Time for Infarct Imaging**  
*Cindy R. Comeau, BS, RT (NXMR)*
- 4:20 PM–4:30 PM    **133 - Infarct Size Identifies Patients With Substrate for Ventricular Tachycardia**  
*David Bello, MD*
- 4:30 PM–4:40 PM    **134 - Prognostic Significance of Unrecognized Myocardial Infarction Detected by Contrast Enhanced MRI**  
*Han W. Kim, MD*
- 4:40 PM–4:50 PM    **135 - Washout kinetics of Gd-DTPA differentiates acute from chronic myocardial infarction in delayed enhancement MRI**  
*Hassan Abdel-Aty*
- 4:50 PM–5:00 PM    **136 - Assessment of Function and Viability in Patients with Coronary Artery Disease with DENSE and Delayed Hyperenhancement Imaging**  
*Anthony H. Aletras, PhD*

# Program Agenda

## NEW METHODS

**GREAT HALL EAST**

**Moderators:**

*Stefan Neubauer, MD  
Hajime Sakuma, MD*

- 3:30 PM–3:40 PM 137 - An MR Method for Real Time Bicycle Exercise Stress Testing: Response of Right Ventricle to Peak Exercise In Adult Congenital Heart Disease**  
*Amr G. EL-Shafei, MD*
- 3:40 PM–3:50 PM 138 - In-vivo Quantitation of High-Speed Flow Jets in a Single Breath Hold**  
*Krishna S. Nayak, PhD*
- 3:50 PM–4:00 PM 139 - A novel method of estimating pulmonary vascular resistance utilizing invasive pressure monitoring and MRI flow data**  
*Vivek Mutburangu, MBChB(hons)*
- 4:00 PM–4:10 PM 140 - The Hybrid Interactive Magnetic Resonance Imaging (iMRI) / X-Ray Suite is a Cardiovascular Interventional Procedure Development Tool**  
*Kendrick A. Shunk, MD, PhD*
- 4:10 PM–4:20 PM 141 - A Fast, T1 Insensitive Infarct Imaging Technique**  
*Yiu-Cho Chung, PhD*
- 4:20 PM–4:30 PM 142 - Simulations for Optimization of Design Parameters for Intravascular Imaging Microcoil Construction**  
*Eddy Y. Wong*
- 4:30 PM–4:40 PM 143 - Relaxation Rate Kinetics in Blood, Normal Myocardium, and Infarct Tissue as a Function of Time After Contrast Injection**  
*Puneet Sharma*
- 4:40 PM–4:50 PM 144 - Qp/Qs In Atrial Septal Defects By Cardiac Magnetic Resonance Imaging Is Comparable To Qp/Qs By Cardiac Catheterization**  
*Umera Iqbal*
- 4:50 PM–5:00 PM 145 - Quantitative Assessment of Atrial Septal Defect Closure Using a Hybrid XMR System**  
*Simon Schalla, MD*

**5:10 PM–6:30 PM CASE INTERPRETATION: READ WITH EXPERTS**

**GREAT HALL NORTH/CENTER**

**Moderators:**

*Norbert Wilke, MD  
Guillem Pons-Llado, MD*

**Panel:**

*Jan Bogaert, MD  
David Bluemke, MD, PhD  
Francesc Carreras, MD  
Peter Buser, MD*

**6:30 PM–8:00 PM USER MEETINGS**

# Program Agenda



## Saturday, February 8, 2003

8:00 AM–9:30 AM **PLENARY SESSION II: INNOVATIONS IN CMR**

**GREAT HALL NORTH/CENTER**

**Moderators:**

*Eckart Fleck, MD  
Gerald Pobost, MD*

- 8:00 AM–8:15 AM **Real Time Imaging and Catheter Tracking**  
*Elliot McVeigh, PhD*
- 8:15 AM–8:30 AM **Interventional MRI–Coronary Stents**  
*Arno Bücker, MD*
- 8:30 AM–8:45 AM **Interventional MRI–Congenital Heart Disease**  
*Charles B. Higgins, MD*
- 8:45 AM–9:00 AM **Gene Therapy Delivery and Monitoring**  
*Norbert Wilke, MD*
- 9:00 AM–9:15 AM **High Field CMR**  
*Matthias Stuber, PhD*
- 9:15 AM–9:30 AM **Panel Discussion**

9:30 AM–10:30 AM **PLATINUM SPONSOR PRESENTATIONS**  
Specialized MR Systems and Imaging Sequences

**Moderator:**

*Warren J. Manning, MD*

- 9:30 AM **Siemens**
- 9:45 AM **Philips**
- 10:00 AM **General Electric**
- 10:15 AM **Discussion**

10:30 AM–11:00 AM **BREAK–POSTER VIEWING III**

**EXHIBIT HALL**

11:00 AM–12:00 PM **ORAL ABSTRACTS (3 PARALLEL SESSIONS)**

### ANALYSIS OF CARDIAC STRUCTURE AND FUNCTION BY MR

**GREAT HALL NORTH**

**Moderators:**

*Jan Bogaert, MD  
Arno Bücker, MD*

- 11:00 AM–11:10 AM **146 - A Comparative Study of Left Ventricular Mass between Cardiac MR and 2-D Echo in Hypertensive Subjects**  
*Khaled Alfaqih, MBBS*
- 11:10 AM–11:20 AM **147 - Assessment of Fiber Architecture and Remodeling Process in Myocardial Infarction by Using Diffusion Tensor MR**  
*Jing-Ting Wu, MD*
- 11:20 AM–11:30 AM **148 - Exercise Cardiac Stress Testing Using Real-Time MRI: A Comparison with Stress Echo in Patients**  
*James F. London*
- 11:30 AM–11:40 AM **149 - Gender Differences in Myocardial Contraction Fraction, a Volumetric Measure of Myocardial Performance**  
*Michael L. Chuang*
- 11:40 AM–11:50 AM **150 - Safety and Feasibility of High-Dose Dobutamine-Atropine Stress MRI for Diagnosis of Myocardial Ischemia: Experience in 1000 Consecutive Cases**  
*Andreas Wabl, MD*

# Program Agenda

**11:50 AM–12:00 PM**    **151 - An MR Derived Aorto-Ventricular Coupling Index is More Predictive of Cardiac Death Than EF: An NHLBI Sponsored Women's Ischemia Syndrome Evaluation (WISE) Study**

*Mark Doyle, PhD*

## VASCULAR MR

**GREAT HALL CENTER**

### **Moderators:**

*David Firmin, PhD*

*Elliot McVeigh, PhD*

**11:00 AM–11:10 AM**    **152 - Dynamic 3d MR Angiography for the Assessment of Parenchymal Perfusion in Pulmonary Embolism and Pulmonary Circulation Disorders**

*Alexander Kluge, MD*

**11:10 AM–11:20 AM**    **153 - Towards Rapid High Resolution Endovascular MRI**

*Claudia M. Hillenbrand, PhD*

**11:20 AM–11:30 AM**    **154 - Combined Transesophageal and Surface MRI Plaque Volume is the Most Reproducible Index of Aortic Atherosclerosis**

*Henning Steen, MD*

**11:30 AM–11:40 AM**    **155 - AngioSURF - based Assessment of Atherosclerotic Disease: Additional Findings and Impact on Patient Management in 200 Patients With Peripheral Vascular Disease**

*Matthias Goyen, MD*

**11:40 AM–11:50 AM**    **156 - A Switchable Multi-Coil Array Optimized for Endovascular Procedures and High Resolution Vessel Wall Imaging**

*Claudia M. Hillenbrand, PhD*

**11:50 AM–12:00 PM**    **157 - Intravascular Catheter Tracking with Adaptive Image Parameters**

*Daniel R. Elgort, MS, BS*

## CARDIOVASCULAR MR: EXPERIMENTAL ANIMAL STUDIES

**GREAT HALL EAST**

### **Moderators:**

*Leon Axel, MD, PhD*

*Jens Bremerich, MD*

**11:00 AM–11:10 AM**    **158 - Real-Time MRI-Guided Endograft Delivery in a Porcine Model of Abdominal Aortic Aneurysm**

*Venkatesh K. Raman, MD*

**11:10 AM–11:20 AM**    **159 - Picomolar Concentrations of Targeted UltraParamagnetic Nanoparticles Detect Microscopic Pathology**

*Anne M. Morawski, BS*

**11:20 AM–11:30 AM**    **160 - Macrophage Targeted MRI Contrast Agents: Effect of Time, Dose and Biochemical Environment**

*Walter J. Rogers, PhD*

**11:30 AM–11:40 AM**    **161 - Improved Adjacent Region Function Mediates Benefits of AT2-R Overexpression Post-MI**

*Christina M. Bove, MD*

**11:40 AM–11:50 AM**    **162 - Serial InVivoMagnetic Resonance Imaging of Magnetically Labeled Stem and Progenitor Cells using Micron Scale Iron Oxide Particles**

*Jonathan M. Hill, MD*

**11:50 AM–12:00 PM**    **163 - Precise Targeting of Endomyocardial Injection of Stem Cells to Porcine Myocardial Infarction using Real-time Magnetic Resonance Imaging**

*Alexander J. Dick*

**12:00 PM–1:30 PM**    **LUNCH (ON YOUR OWN)—POSTER VIEWING IV**

**EXHIBIT HALL**

# Program Agenda



**1:30 PM–3:00 PM**

**PARALLEL SESSIONS**

**A**  
**Evolving Role of CMR Compared to Traditional Techniques**

**Grand Hall North**

**Moderators:**

*Andre Duerinckx, MD, PhD*  
*Bob Hu, MD*

**1:30 PM–1:50 PM**  
**Perfusion CMR vs. Nuclear Imaging**

*Juerg Schwitler, MD*

**1:50 PM–2:10 PM**  
**Viability: CMR vs. PET**

*Marcus Schwaiger, MD*

**2:10 PM–2:30 PM**  
**Ischemia Detection: Dobutamine CMR vs. Stress Echo**

*Eike Nagel, MD*

**2:30 PM–2:50 PM**  
**Noninvasive Coronary Imaging CMR vs. CT**

*Arthur Stillman, MD, PhD*

**2:50 PM–3:00 PM**  
**Panel Discussion**

**B**  
**Practice Patterns–3Rs Referrals, Reimbursement, Research**

**Grand Hall Center**

*Roderic I. Pettigrew, MD, PhD*  
*Peter Buser, MD*

**1:30 PM–1:40 PM**  
**CMR in USA, Cardiology Practice**

*Christopher M. Kramer, MD*

**1:40 PM–1:50 PM**  
**CMR in USA, Radiology Practice**

*Steven Wolff, MD, PhD*

**1:50 PM–2:00 PM**  
**CMR in Europe, Cardiology Practice**

*Eckart Fleck, MD*

**2:00 PM–2:10 PM**  
**CMR in Europe, Radiology Practice**

*Albert de Roos, MD*

**2:10 PM–2:20 PM**  
**Multidisciplinary CMR Practice**

*Scott D. Flamm, MD*

**2:20 PM–2:30 PM**  
**CMR in Private Practice**

*Edward Martin, MD*

**2:30 PM–2:45 PM**  
**Cost Effectiveness of CMR**

*Leslee Shaw, PhD*

**2:45 PM–3:00 PM**  
**Panel Discussion**

**C**  
**Moderated Poster Tour**

**Exhibit Hall**

*Robert Balaban, PhD*

**3:00 PM–3:30 PM**

**BREAK–POSTER VIEWING V**

**EXHIBIT HALL**

**3:30 PM–5:10 PM**

**PLENARY SESSION III: CMR IN CLINICAL DECISION-MAKING**

**GREAT HALL NORTH/CENTER**

**Moderators:**

*Dudley Pennell, MD*  
*Roderic I. Pettigrew, MD, PhD*

**3:30 PM–3:50 PM** **Chest Pain Evaluation**

*Andrew Arati, MD*

**3:50 PM–4:10 PM** **Post-Revascularization**

*Albert de Roos, MD*

**4:10 PM–4:30 PM** **Valvular Heart Disease**

*Samuel Wickline, MD*

**4:30 PM–4:50 PM** **Arrhythmia Assessment**

*David Bluemke, MD, PhD*

**4:50 PM–5:10 PM** **Congenital Heart Disease**

*Tal Geva, MD*

# Program Agenda

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**5:15 PM–6:30 PM CASE INTERPRETATION—PANEL**

**Moderators:**

*Frank Rademakers, MD*  
*Martin Lipton, MD*

**Discussants:**

*Charles Higgins, MD*  
*Udo Sechtem, MD*  
*Scott D. Flamm, MD*  
*Ronald Pesbock, MD*

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**8:00 PM SOCIAL EVENT / AWARD PRESENTATIONS**

**POOLSIDE**

**Best Oral Abstract**  
**Best Poster**

## Sunday, February 9, 2003

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**9:00 AM–10:00 AM PARALLEL SESSIONS**

**A**  
**Congenital Heart Disease**  
**Great Hall North**

**Moderators:**

*Tal Geva, MD*  
*Albert de Roos, MD*

**9:00 AM–9:15 AM Aorta and Pulmonary Artery**  
*Gautham P. Reddy, MD*

**9:15 AM–9:30 AM Postop CHD**  
*G. Wesley Vick, MD*

**9:30 AM–9:45 AM Adult CHD**  
*Naeem Merchant, MD, F.R.C.P.(C)*

**9:45 AM–10:00 AM Complex CHD in Infants**  
*Andrew Powell, MD*

**B**  
**Assessment of LV Remodeling**  
**Great Hall Center**

*Robert Judd, PhD*  
*John N. Osbinski, PhD,*

**MRI and Echo Indices of Remodeling**  
*Frank Rademakers, MD*

**Role of MRI in Monitoring Pharmacologic Intervention**  
*Dudley Pennell, MD*

**Animal Models of LV Remodeling**  
*Brent French, PhD*

**Remodeling as Reflected by Contrast Enhancement**  
*David S. Fieno, PhD*

**10:00 AM–10:20 AM BREAK**

**10:20 AM–12:15 PM PLENARY SESSION IV: CMR IN ATHEROSCLEROSIS**

**GREAT HALL NORTH/CENTER**

**Moderators:**

*Andrew Arai, MD*  
*Joerg Barkhausen, MD*

**10:20 AM–10:40 AM MRI Techniques**  
*Rene Botnar, PhD*

**10:40 AM–11:00 AM Experimental Results**  
*Michael V. McConnell, MD, MSEE*

**11:00 AM–11:20 AM Clinical Findings**  
*Chun Yuan, PhD*

**11:20 AM–11:40 AM Final Frontier**  
*Zabi Fayad, PhD*

**11:40 AM Panel Discussion**

**12:00 PM Closing Remarks**  
*Charles B. Higgins, MD*  
*Guillem Pons-Llado, MD*

**12:10 PM Adjournment until 2004 in Barcelona, Spain**

# Technologist Workshop

## Course Organizers:

Christopher Kramer MD

Tim Jones MSc



## Saturday, February 8

GREAT HALL WEST

12:15 PM	<b>Opening Remarks</b>
12:30 PM–1:00 PM	<b>Cardiac MR Safety</b> <i>Frank G. Sbellock, PhD</i>
1:05 PM–1:35 PM	<b>Overview of Cardiac 3d and 2d Anatomy</b> <i>Mary Watkins, RT, MR</i>
1:40 PM–2:10 PM	<b>Basics of ECG Placement &amp; Cardiac Image Planes</b> <i>Jane M. Francis</i>
2:15 PM–2:45 PM	<b>Introduction to Cardiac MR Pulse Sequences</b> <i>Frederick Epstein, PhD</i>
2:50 PM–3:20 PM	<b>Introduction to Blood Flow and Quantification</b> <i>John P. Ridgway</i>
3:25 PM–3:55 PM	<b>Essentials of Contrast Agents and MRA</b> <i>Todd Williams RT(R)MR</i>
3:55 PM–4:10 PM	<b>Break</b>
4:10 PM–4:40 PM	<b>Basics of Congenital Heart Disease</b> <i>Naeem Merchant, MD</i>
4:45 PM–5:15 PM	<b>Aortic Disease</b> <i>Gavin Bainbridge, DCR</i>
5:20 PM–6:20 PM	<b>Interactive Case Discussions Tutorials (Congenital &amp; Nonischaemic)</b> <i>Cindy Comeau, BS, RT (N) (MR)</i>
6:30 PM	<b>Reception</b>

## Sunday, February 9

GREAT HALL WEST

8:00 AM–8:30 AM	<b>Function and Stress Function</b> <i>Cynthia Souder CNMT, RT-N, MR</i>
8:35 AM–9:05 AM	<b>Perfusion and Stress Perfusion</b> <i>Tim Jones, MSc</i>
9:10 AM–9:40 AM	<b>Viability</b> <i>James Moon</i>
9:45 AM–10:00 AM	<b>Break</b>
10:00 AM–11:00 AM	<b>Coronary Imaging</b> <i>Kraig V. Kissinger</i>
11:05 AM–12:05 PM	<b>Interactive Case Discussions Tutorials (Ischaemic)</b> <i>Mercedes Pereyra, RT</i>
	<b>Adjourn</b>

# Exhibitor Directory

## **Amersham Health**

101 Carnegie Center  
Princeton, NJ 08540  
Ph: 609.514.6353  
Fx: 609.514.6571  
www.amersham.com

*Contrast agents marketed by Amersham Health are used in X-Ray Imaging, Computed Tomography, Magnetic Resonance Imaging (MRI), Ultrasound and Nuclear Medicine. Products include, Omnipaque® (iohexol), Omiscan® (gadodiamide), Visipaque® (iodixanol), Optison™ (Perflutren Protein-Type A Microspheres for Injection USP) and Myoview™ (technetium Tc99m tetrofosmin).*

## **Biophan Technologies, Inc.**

150 Lucius Gordon Drive, Suite 215  
W. Henrietta, NY 14586  
Ph: 585.214.2441  
Fx: 585.427.2433  
www.biophan.com

*Biophan Technologies, Inc. is a development stage company that provides technical solutions that enable pacemakers, neurostimulators, and other implantable devices to be safe and compatible with magnetic resonance imaging procedures and other forms of electromagnetic interference. The company is also developing novel in-vivo magnetic resonance imaging products.*

## **CVE Systems, Inc.**

17207 Wyeth  
Spring, TX 77379

*Windatabase Programs: WinVDB (Vascular), WinEDB (Echo), WinUDB (Ultrasound), WinNMD (Nuclear) and WinMRI (Magnetic Resonance Imaging). Laboratory management and accreditation software. Supports ICAVL, ICAEL, AIUM, ICANL/ICAMRI accreditation application, CME logs. Includes patient logs, statistics reports, preliminary/final reports, and patient report templates. Monitor volume, quality, and lab operations. Custom options, network compatible. Free Trial 1-800-338-0360.*

## **EPiX Medical, Inc.**

71 Rogers Street  
Cambridge, MA 02142-1118  
Ph: 617.250.6026  
Fx: 617.250.6031  
www.epixmed.com

*EPiX Medical is a specialty pharmaceutical company developing targeted contrast agents to establish magnetic resonance imaging (MRI) as the premier method for diagnosis and management of cardiovascular disease.*

## **GE Medical Systems**

3000 N. Grandview Blvd.  
Waukesha, WI 53188  
Ph: 262.544.3740  
Fx: 262.544.3384  
www.gemedical.com

*GE Medical Systems is an \$8 billion global leader in medical imaging, interventional procedures, healthcare services and information technology. Its offerings include networking and productivity tools, clinical information systems, patient monitoring systems, surgery and vascular imaging, conventional and digital X-ray, computed tomography, magnetic resonance, ultrasound and bone mineral densitometry, positron emission tomography, nuclear medicine, and a comprehensive portfolio of clinical and business services. For more than 100 years, healthcare providers worldwide have relied on GE Medical Systems for high quality medical technology and productivity solutions. For more information, visit the GE Medical Systems web site at: www.gemedical.com.*

## **Heart Imaging Technologies**

108 Barton Lane  
Chapel Hill, NC 27516  
Ph: 919.968.6635  
Fx: 253.679.4156  
www.heartit.com

*The Heartit Image Management System (IMS) is designed to accept images from a CD containing DICOM 3.0 magnetic resonance image. The images are connected to a web page format. You can use the web page to arrange the images in an order that is different from the chronological order in which the images were acquired.*

## **Invivo Research**

12601 Research Parkway  
Orlando, FL 32826  
Ph: 407.275.3220  
Fx: 407.249.2022  
www.invivoresearch.com

*Invivo, pioneer and worldwide leader in MRI patient monitoring introduces the Magnitude™ CV patient monitoring system. Unlike conventional MRI ECG filtering schemes, the CV mode provides uninterrupted cardiac gating during the aggressive gradient interference present during CVMRI. It supports all the patient monitoring parameters and features of the standard Magnitude™, but also includes a Cardiovascular MRI (CVMRI) specific filter and gating mode for use during CVMRI procedures.*



# Exhibitor Directory



## **Lippincott Williams & Wilkins**

3772 Hunters Isle Drive  
Orlando, FL 32837  
Ph: 407.856.4661  
Fx: 407.856.4661

*Worldwide Medical Publisher of Books & Journals.*

## **Mallinckrodt**

675 McDonnell Blvd.  
St. Louis, MO 63042  
Ph: 314.654.3929  
Fx: 314.654.3135  
www.mallinckrodt.com

*Mallinckrodt features OptiMark® (gadoversetamide injection), an MR contrast agent, and Optistar™ MR, our MR power injector, built by Mallinckrodt Liebel-Flarsheim.*

## **Medis Medical Imaging Systems, Inc.**

109 Danbury Road  
Ridgefield, CT 06877  
Ph: 203.438.5588  
Fx: 203.438.5393  
www.medis.nl

*MEDIS will demonstrate the latest upgrades of its cardiovascular MR analysis software, MASS and FLOW. New developments and applications for research and clinical applications will also be discussed.*

## **Medrad, Inc.**

One Medrad Drive  
Indianola, PA 15051  
Ph: 412.767.2400  
Fx: 412.767.4128  
www.medrad.com

*Medrad's MR products portfolio...injector system, coils and monitor offer the leading edge of technology for the best in MR image quality. Stop by and visit our booth.*

## **Philips Medical Systems**

22100 Bothell Everett Highway  
Bothell, WA 98021  
Ph: 425.487.7000  
Fx: 425.485.6080  
www.pmsna.com

*Philips Medical Systems is a leading supplier of innovative diagnostic imaging systems, ultrasound, nuclear medicine/PET, medical IT, patient monitoring and related services. Their growing portfolio of best-in-class products reflects the company's unwavering commitment to helping customers achieve operational and clinical excellence in their daily practice. Philips Medical Systems is a division of Royal Philips Electronics of the Netherlands.*

## **SA Instruments, Inc.**

P.O. Box 740  
Stony Brook, NY 11790  
Ph: 631.689.9408  
Fx: 631.689.9410  
www.i4sa.com

*SA Instruments, Inc., Stony Brook, NY designs, manufactures and sells MR-compatible physiological monitoring and gating systems for use in a variety of applications.*

## **ScanMed & Medic, Inc.**

6912 N. 9th Circle, Suite C  
Omaha, NE 68122  
Ph: 402.571.3271  
Fx: 402.571.3340  
www.scanmed.com

*ScanMed continues to offer superior cardiac and angiographic imaging coils. Our new products include a dedicated high-resolution 8-channel carotid and a new combo coil, which will combine the dedicated carotid with a neurovascular coil. Finally, our peripheral vascular array now includes a cardiac attachment with an 8-channel upgrade.*

## **Siemens Medical Solutions**

186 Wood Avenue South  
Iselin, NJ 08830  
Ph: 732.590.2081  
Fx: 732.321.3287  
www.siemensmedical.com

*Siemens Medical Solutions is active in research manufacturing, marketing and exporting products for the health care market. The company is the industry's most diversified supplier of medical devices serving cardiology radiology, neurology, critical care, oncology, surgery urology, OB/GYN, clinical networking and audiology. Customer services include financing, installation planning, applications support and programs for managed healthcare.*

## **W.B. Saunders/Mosby**

P.O. Box 950138  
Lake Mary, FL 32795-0138  
Ph: 407.322.7384  
Fx: 407.322.7384

*Please visit the Saunders/Mosby booth to see our latest books and periodicals on cardiovascular imaging and cardiovascular medicine.*

## GRADING AND SELECTION OF ABSTRACTS

### Sixth Annual Scientific Sessions 2003

Responsibility for selecting abstracts rests with the Annual Scientific Sessions Committee. The committee meets at the annual sessions to set the agenda for the subsequent annual scientific meeting. Scientists from all over the world were invited to submit abstracts to the 2003 meeting. Abstract submission information was mailed to SCMR members in July 2002, and was available on the SCMR website, on August 1, 2002. Abstracts could be submitted to one of the following eight categories: Experimental MRS, Clinical MRS, Experimental MRI, New Methods, Clinical MRI - Ischemic Heart Disease; Clinical MRI - Vascular Disease; Clinical MRI - Congenital Heart Disease; Clinical MRI - Non-Ischemic Acquired heart disease. This year, we received a record number of 304 submitted abstracts from 19 countries, up from 193 the previous year (a 57% increase), clearly demonstrating worldwide expansion both of scientific interest and clinical use of CMR. Graders reviewed abstracts electronically according to scores (1-5, with 5 being the highest and 1 the lowest score), with institutions and authors anonymized. Each abstract was reviewed by at least 5 referees. Abstracts with a score above 3.4 were accepted for oral presentation at one of nine abstracts sessions, and were grouped together according to scientific theme. Abstracts scoring between 3.4 and 2 were selected for poster presentation. This year for the first time, in an effort to maximize objectivity and to facilitate judging, for the best abstract competition, the six top scoring abstracts were grouped together in an oral session. We believe that this review process has resulted in a highly attractive scientific program that should be of interest to a wide audience interested in CMR, including clinical and basic scientists as well as practicing clinicians. However, suggestions for improving the review process are always welcome. Comments and suggestions should be addressed to the Chair of the Annual Scientific Sessions Committee.

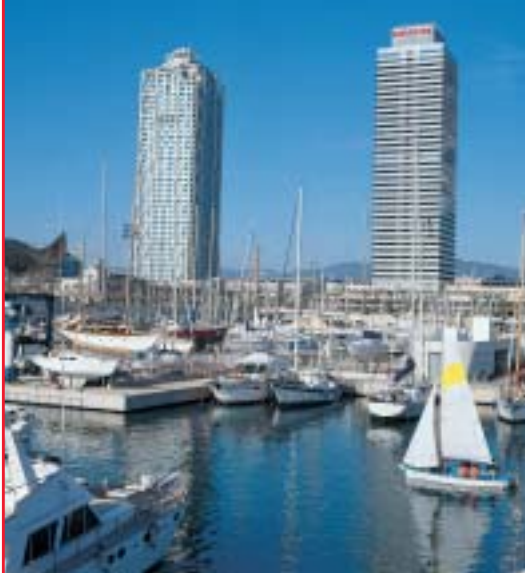
Stefan Neubauer, 2003 annual scientific sessions abstracts chairman

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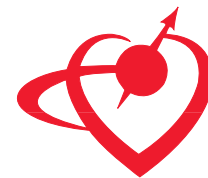
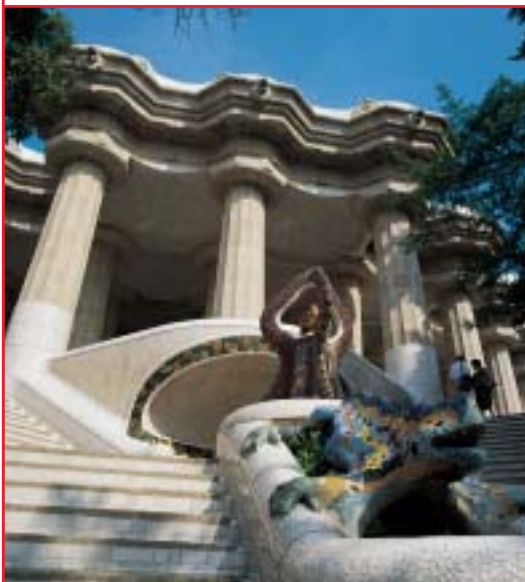
**All abstracts presented during these Annual Scientific Sessions can be viewed in their entirety in the Journal of Cardiovascular Magnetic Resonance, Volume 5, Number 1.**



*Euro/CMR 2004*  
*February 13-15, 2004*



*Barcelona, Spain*



*Future SCMR*  
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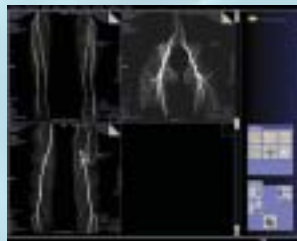
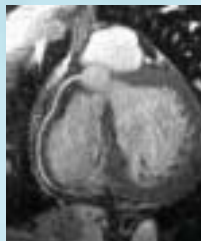
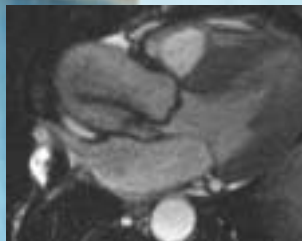


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