



**SAVE  
THE DATE**

**CMR**  
**NORTHWESTERN**

**Cardiovascular MRI  
Hands-On Training Course**

**October 11-13, 2017**

**M Northwestern Medicine®**  
Feinberg School of Medicine

**Accreditation Statement:** The Northwestern University Feinberg School of Medicine is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

**Credit Designation Statement:** The Northwestern University Feinberg School of Medicine designates this live activity for a maximum of 21.75 AMA PRA Category 1 Credit(s)<sup>™</sup>. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

CE credit will additionally be available for technologists.

The Department of Radiology, Northwestern University Feinberg School of Medicine, and Northwestern Memorial Hospital are pleased to announce a cardiovascular magnetic resonance training curriculum for physicians and technologists.

**Target Audience**

CMR Northwestern is intended for physicians and technologists who currently have some base proficiency in MR and/or knowledge of Cardiac MR and who wish to leverage the capabilities of their MR systems. A prerequisite for the course is knowledge of basic MR physics. It is optimal if both physician and technologist attend the course together, however, this is not mandatory.

**Sponsorship**

This program is sponsored by Northwestern University Feinberg School of Medicine and the Department of Radiology.

**Program Description**

The program incorporates didactic instruction with practical, hands-on scanning. Cardiovascular imaging basics will be presented, including CMR imaging physics and protocols. Clinical application will be emphasized through lectures ranging from normal anatomy to various states of cardiovascular pathology. Thirty mentored clinical cases will be presented. Participants will spend time at the imaging console with volunteers at 1.5T and 3.0T magnets. In addition, participants will study structural and functional cardiac MR evaluations utilizing current MR case specific applications, exploring cardiac morphology and function.

**Program Objectives**

- Review the indications of, contraindications to, and potential side effects of CMR.
- Demonstrate practical knowledge in technical aspects of the CMR examination.
- Describe the basic principles of MR angiography and their application.
- Recognize and minimize important image artifacts.
- Apply image post-processing techniques.
- Correlate CMR with other imaging modalities (echocardiography, nuclear cardiology, CCT, and interventional angiography) as well as with medical history, physical examination, laboratory, and hemodynamic data.
- Recognize cardiac and vascular pathology (ischemia, infarction, valve disease, congenital anomalies) on an MRI examination.

**Course Co-directors**

James Carr, MD – Associate Professor of Radiology and Medicine; Director, Cardiovascular Imaging, Northwestern University.

Jeremy Collins, MD – Assistant Professor of Radiology and Medicine, Cardiovascular Imaging, Northwestern University.

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