



ΕΛΛΗΝΙΚΗ ΚΑΡΔΙΟΛΟΓΙΚΗ ΕΤΑΙΡΕΙΑ
HELLENIC SOCIETY OF CARDIOLOGY



CARDIOVASCULAR MAGNETIC RESONANCE IMAGING CORE TRAINING

13-15 September
2019

Athens

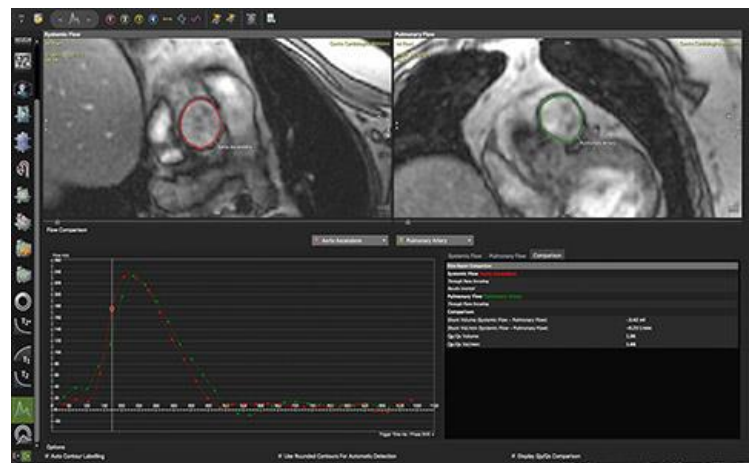
Venue: HCS building
6 Potamianou street

Registration at
geohcs@hcs.gr



Society for
Cardiovascular
Magnetic
Resonance

SCMR level 1
certification course





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HELLENIC SOCIETY OF CARDIOLOGY

Cardiovascular Magnetic Resonance Imaging- Core Training (Level 1 SCMR Workshop)

Organiser

Hellenic society of Cardiology
President : Prof J. Goudevenos

HCS/ Dr A. Patrianakos

Directors

Prof T. Karamitsos

A/Prof V. Vassiliou

Dr E. Nyktari

Description

Foundations of Cardiovascular Magnetic Resonance - Core Training

A Level I SCMR (Society of Cardiovascular magnetic resonance) certified course

Expectations and Goals

About the Course

This is a 3-day introductory course on CMR for Cardiology trainees and Cardiology clinicians. The course objective is to outline the role of CMR in diagnosis and clinical management of heart disease, including ischemia and heart failure, cardiomyopathies, congenital heart disease, in guiding medical treatment, coronary intervention and the use of medical devices. Lectures, interactive mentored interpretation of clinical CMR cases, live cases and post-processing sessions will link the theoretical knowledge with the application of CMR in daily clinical routine.

The course is given in Greek and English.

Hands-on training on 50 cardiac MRI cases will be included. A logbook of 50 cases will be reviewed and offered to all delegates.

The following subjects will be covered:

- CMR safety: magnetic fields, contrast agents, and contraindications
- MRI contrast agents; mechanisms and applications
- Flow imaging and quantitative analysis of velocity-encoded images
- CMR of cardiovascular structure and anatomy
- CMR of right and left ventricular function
- CMR of myocardial infarction, scarring, and viability assessment
- CMR of myocardial fibrosis and edema
- Pharmacologic stress testing with CMR
- CMR of vascular pathology, including aortic disease
- CMR of valvular heart disease
- CMR of pediatric and adult congenital heart disease

- CMR in cardiomyopathies and heart failure
- CMR in arrhythmia
- CMR of pericardial disease
- CMR for cardiac masses and tumors

Day 1	Friday 13 th September	Topic
12.00	12.30	Faculty meeting
12.30	12.45	Registration and Coffee
Back to Basics		
12.45	13.00	Welcome and Introduction to the Course
13.00	13.30	CMR safety: magnetic fields, contrast agents, and contraindications
13.30	14.00	MRI contrast agents; mechanisms and applications
14.00	14.30	Basic CMR Pulse Sequences to assess Structure, Function and Flow
14.30	15.00	CMR of right and left ventricular function
15.00	15.30	Coffee
15.30	16.45	Hands on: How to do measurements Volumes and Function (small groups)
16.45	17.15	What is LGE, T1-mapping, T2-mapping, and T2-star: MRI Physics for the Clinician
17.15	17.30	Coffee
17.30	18.45	Cases overview- Logbook: Anatomy and function
18.45	19.00	Q+A session
Day 2	Saturday 14 th September	Topic
08.15	08.30	Registration and Coffee
08.30	09.30	Virtual Scanning
Flow and Valves		
09.30	10.00	Flow imaging and quantitative analysis of velocity-encoded images
10.00	10.30	Echocardiographer Perspective: When is CMR Needed in VHD
10.30	11.00	CMR in the Evaluation and Management of Patients with Valvular Stenosis or Regurgitation.
11.00	11.30	Coffee
11.30	12.30	Cases overview- Logbook: Flow-VHD-shunts
Ischaemic Heart Disease		
12.30	13.00	CMR of myocardial infarction , scarring, and viability assessment
13.00	13.30	CMR Assessment of Myocardial Ischemia- Pharmacological stress testing
13.30	14.15	Lunch
14.15	15.30	Cases overview- Logbook: Viability and perfusion
Cardiomyopathies		
15.30	16.00	What I want to know from an imaging test about non-ischemic cardiomyopathies: A cardiomyopathy expert perspective
16.00	16.30	CMR in Cardiomyopathies I: Nonischemic Cardiomyopathies
16.30	17.00	CMR in Cardiomyopathies II: Infiltrative Cardiomyopathies

17.00	17.30	CMR of myocardial fibrosis (LGE, T1 mapping) and edema (T2 weighted, T2 mapping)
17.30	17.45	Coffee
17.45	19.15	Cases overview -Logbook: Cardiomyopathies
19.15	19.30	Q + A

Day 3	Sunday 15 th September	Topic
08.30	09.00	Registration and Coffee
CMR challenging topics		
09.00	09.30	Clinician Perspective: When is CMR Needed in CHD
9.30	10.00	CMR of paediatric and adult congenital heart disease
10.00	10.30	CMR of vascular pathology , including aortic disease
10.30	11.15	CMR for cardiac masses and tumours
11.15	11.30	Coffee
11.30	13.00	Cases overview -Logbook: Vascular/Shunts
13.00	14.00	Lunch
CMR in special conditions		
14.00	14.30	CMR for pericardial Disease / Extracardiac findings
14.30	15.00	CMR in Patients with Implanted Devices
CMR and Arrhythmia		
15.00	15.30	CMR in arrhythmia -Atrial Fibrillation, LA Fibrosis, and LA Function
15.30	16.00	The Value of CMR for the Electrophysiologist: Pulmonary Vein and VT Mapping
16.00	16.30	Coffee
16.30	17.30	Cases Overview -Logbook: Pericardium/ Arrhythmia
17.30	17.45	Strain imaging by echo vs. feature tracking: are we ready?
17.45	18.00	Value of a Joint Cardiology Radiology Cardiac Imaging Program
18.00	18.45	Clinical case based MCQ
18.45	19.15	Q+A, closing remarks, feedback and certificates

Course Material

1. Handouts of presentations

Recommended Reading

1. Cardiovascular Magnetic Resonance (Oxford Specialist Handbooks in Cardiology)

Saul G. Myerson, Jane Francis, and Stefan Neubauer

2. Cardiovascular MRI: 150 Multiple-Choice Questions and Answers

Peter Danias

3. Cardiovascular Magnetic Resonance Made Easy

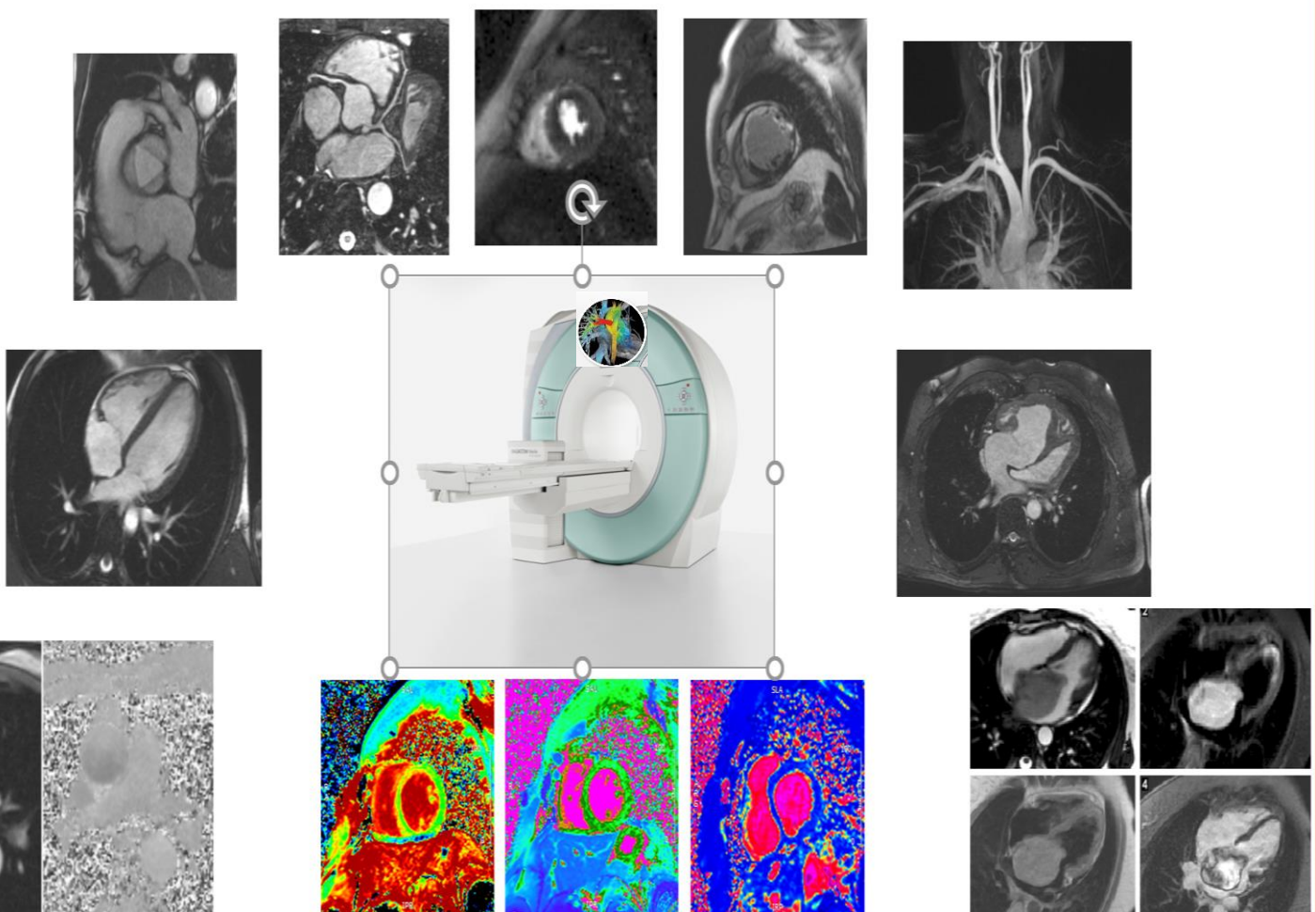
Anitha Varghese, MBBS, BSc, MRCP and Dudley J. Pennell, MD, FRCP, FACC

4. Magnetic Resonance Imaging of Congenital Disease

Mushabbar A. Syed, Raad H. Mohiaddin

5. **Review paper:** Magnetic Resonance Imaging: Physics basics for the cardiologist

Vassilios S Vassiliou, Donnie Cameron, Sanjay K Prasad and Peter D Gatehouse



Useful links

- www.SCMR.org
- <https://www.escardio.org/Guidelines/Recommended-Reading/Cardiovascular-Imaging/CMR>