

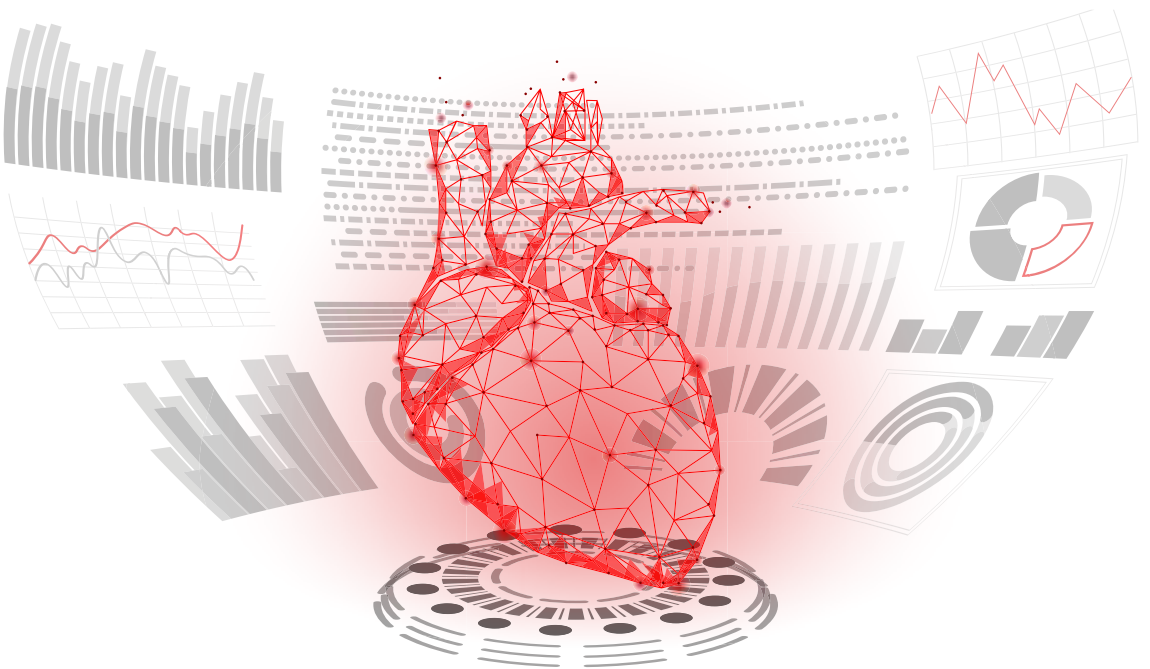


Onassis
Cardiac Surgery
Center

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

15-16 September 2023

Onassis Cardiac Surgery Center





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

Organizers

Evangelia Nyktari, Consultant-Cardiologist, CMR Specialist, Non-Invasive Cardiology Department, Onassis Cardiac Surgery Center, Athens, Greece

Thomas Vrachliotis, Director, Department of Radiology, Onassis Cardiac Surgery Center, Athens, Greece

Directors

Vassilios Vassiliou, Professor in Cardiac Medicine (Norwich, U.K.)

Theodoros Karamitsos, Associate Professor of Cardiology (Thessaloniki, Greece)

Evangelia Nyktari, CMR Specialist (Athens, Greece)

Tania Kourtidou, Pediatric CMR Specialist (Athens, Greece)

Description

Foundations of Cardiovascular Magnetic Resonance - Core Training. A Level I SCMR (Society of Cardiovascular Magnetic Resonance).

Expectations and Goals

About the Course

This is a 2-day introductory course on CMR for Cardiology and Radiology trainees and Cardiology and Radiology clinicians. The course objective is to outline the role of CMR in diagnosis and clinical management of heart disease, including ischaemia 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, and post-processing sessions will link the theoretical knowledge with the application of CMR in daily clinical routine.

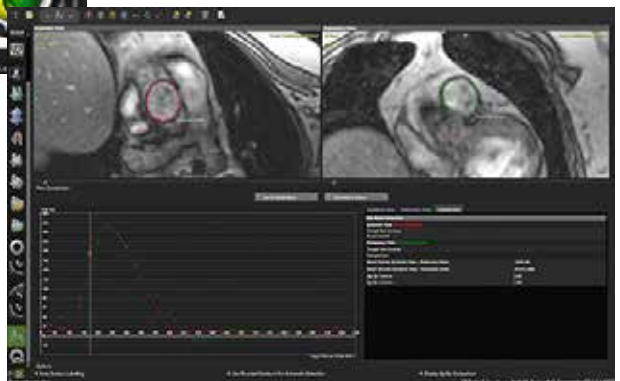
Official language will be Greek but certain lectures and discussions will be in English. **Hands-on training on 50 cardiac MRI cases will be included.** A logbook of 50 cases will be reviewed and offered to all delegates.



**SCMR level 1
certification course**

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 September 15th

07:30 - 8:00	Registration and coffee
08:00 - 8:15	Welcome T. Vrachliotis, T. Antoniou, P. Minogiannis, I. Boletis Introduction to the course V. Vassiliou, T. Karamitsos, E. Nyktari, T. Kourtidou
	Back to the basics-safety and physics Moderators: R. Mohiaddin, Th. Vrachliotis
08:15 - 08:45	CMR safety: magnetic fields, contrast agents, and contraindications E. Nyktari
08:45 - 09:15	MRI contrast agents; mechanisms and applications N. Alexopoulos
09:15 - 09:30	Contrast agents in pediatric and congenital heart disease - the great debate T. Kourtidou
09:30 - 10:00	Image formation: basic physics for the clinician I A. Fotaki
10:00 - 10:30	Basic pulses and sequences: basic physics for the clinician II A. Fotaki
10:30 - 11:00	Coffee How we do it: the analysis Moderators: T. Kourtidou, E. Nyktari, V. Vassiliou
11:00 - 11:45	Hands on: how to do measurements (small groups) Volumes and function A. Hui Sze Kwong
11:45 - 12:45	CMR analysis and reporting–structured approach E. Nyktari, T. Kourtidou
12:45 - 14:00	Cases overview–anatomy and function logbook E. Nyktari, T. Karamitsos
14:00 - 14:45	Lunch Flow analysis and valvular heart disease Moderators: V. Vassiliou, T. Karamitsos
14:45 - 15:15	Flow imaging and quantitative analysis of velocity-encoded images E. Nyktari
15:15 - 15:45	CMR in the evaluation and management of patients with valvular stenosis or regurgitation V. Vassiliou
15:45 - 16:15	4D flow imaging I. Voges
16:15 - 16:30	Echocardiographer perspective: when is CMR needed in VHD D. Tsiapras

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16:30 - 17:15	Cases overview–Logbook–Flow–VHD M. Radike, V. Vassiliou, T. Kourtidou, E. Nyktari Cardiomyopathies Moderator: D. Tsiapras
17:15 - 17:45	CMR in cardiomyopathies I: nonischemic cardiomyopathies T. Karamitsos
17:45 - 18:15	CMR in cardiomyopathies II: inflammatory cardiomyopathies/myocarditis in the covid-era V. Vassiliou
18:15 - 18:45	CMR in cardiomyopathies III: infiltrative cardiomyopathies M. Radike
18:45 - 19:15	Cases overview–Logbook–Cardiomyopathies V. Vassiliou, E. Nyktari
19:15 - 19:30	Q&A–Feedback of day 1 M. Radike, V. Vassiliou, I. Voges, E. Nyktari

DAY 2 - Saturday September 16th

	Cardiomyopathies Moderators: V. Vassiliou, T. Karamitsos
08:00 - 08:30	Cases overview–Logbook–Cardiomyopathies V. Vassiliou, E. Nyktari Ischaemic heart disease Moderators: V. Vassiliou, T. Karamitsos
08:30 - 09:00	Myocardial infarction: acute, chronic, and minoca–viability studies T. Karamitsos
09:00 - 09:30	Ischaemia assessment by CMR–adenosine perfusion and dobutamine stress MRI S. Vakrou
09:30 - 10:15	Cases overview logbook: ischaemia and viability assessment T. Karamitsos, E. Nyktari
10:15 - 10:30	Coffee
10:30 - 11:30	Virtual CMR scanning An introduction to cardiac MRI scanning using the Corsmed MRI simulator. Practicing and working with the software on your laptop is just like running a real scanner. A 30-day licence to practice at home is included for every participant. CMR in vascular/aortic cases and tumors of the heart Moderator: T. Karamitsos
11:30 - 12:30	CMR of vascular pathology, including aortic disease R. Mohiaddin
12:30 - 13:00	CMR for cardiac masses and tumours R. Mohiaddin



- 13:00 - 14:00 Cases overview logbook: vascular/masses
T. Karamitsos, M. Radike, E. Nyktari
Bayer satellite symposium
- 14:00 - 14:15 Gadolinium and safety in children
T. Kourtidou
- 14:15 - 14:30 Stress MRI-advances in ischaemic heart disease
T. Karamitsos
- 14:30 - 15:00 **Lunch**
CMR in congenital heart disease
Moderators: I. Voges, E. Nyktari
- 15:00 - 15:30 CMR in CHD pre-op (fetal to adult)-imaging goals to help the surgeon
T. Kourtidou
- 15:30 - 16:00 CMR in ACHD post op-imaging goals for long term follow-up: 30 minutes
I. Voges
- 16:00 - 16:15 Fetal CMR-a new era
I. Voges
CMR in arrhythmia
Moderator: R. Mohiaddin
- 16:15 - 16:45 CMR in arrhythmia I-Atrial Fibrillation, LA Fibrosis, and LA Function
K. Letsas
- 16:45 - 17:15 CMR in arrhythmia II-VT tachycardia and CMR substrate analysis/VT corridors
E. Nyktari
- 17:15 - 17:45 **Coffee**
CMR in special conditions
Moderator: Th. Vrachliotis
- 17:45 - 18:15 CMR for pericardial disease/extracardiac findings
M. Radike
- 18:15 - 18:45 Cases overview: pericardium/arrhythmia logbook
V. Vassiliou, E. Nyktari, T. Karamitsos
- 18:45 - 19:00 Value of a joint cardiology-radiology cardiac imaging program
K. Toutouzias, Th. Vrachliotis
- 19:00 - 19:20 Clinical case based MCQ
E. Nyktari, M. Radike, T. Kourtidou
- 19:20 - 19:30 Q+A, closing remarks, feedback and certificates
V. Vassiliou, E. Nyktari, T. Kourtidou, Th. Vrachliotis

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Faculty Members

Alexopoulos Nikolas, M.D, Head Cardiologist, Cardiovascular Imaging (CT/MRI), Athens Euroclinic

Fotaki Anastasia, M.D., Research Fellow, King's College, London, UK

Hui Sze Kwong Anne, Eng (FR), Advanced Clinical Applications Lead - EMEA/LATAM, Circle Cardiovascular Imaging

Karamitsos Theodoros, M.D., Associate Professor of Cardiology, Aristotle University of Thessaloniki, Thessaloniki, Greece

Kourtidou Tania, M.D., Consultant-Cardiologist, Pediatric CMR Specialist, Onassis Cardiac Surgery Center, Athens, Greece

Letsas Konstantinos, M.D., Deputy Director, Cardiac Electrophysiology Unit, Onassis Cardiac Surgery Center, Athens, Greece

Mohiaddin Raad, M.D., Professor of Cardiovascular Imaging at the National Heart and Lung Institute Imperial College London and Royal Brompton Hospital, London, UK

Nyktari Evangelia, M.D., Consultant-Cardiologist, CMR Specialist, Non-Invasive Cardiology Department, Onassis Cardiac Surgery Center, Athens, Greece

Radike Monika, M.D., Consultant Cardiothoracic Radiologist, Liverpool Heart and Chest NHS Foundation Trust, Liverpool, UK

Toutouzas Konstantinos, M.D., Professor of Cardiology, National and Kapodistrian University of Athens, Medical School, First Department of Cardiology, Hippokration General Hospital, Athens, Greece

Tsiapras Dimitrios, M.D., Deputy Director, Non-Invasive Cardiology Department, Onassis Cardiac Surgery Centre, Athens, Greece

Vassiliou Vassilios, M.D., Professor in Cardiac Medicine, University of East Anglia, Norwich, UK

Vakrou Styliani, M.D., Clinical Fellow Advanced Cardiovascular Imaging, Onassis Cardiac Surgery Center

Voges Inga, M.D, Professor in Congenital Cardiology and Cardiovascular Magnetic Resonance Imaging, University Hospital Schleswig-Holstein, Kiel, Germany

Vrachliotis Thomas G., M.D., Director, Department of Radiology, Onassis Cardiac Surgery Center, Athens, Greece

Useful links

<https://scmr.org/>

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

Course Material

Handouts of presentations

Recommended reading

1. Myerson, S.G., Francis, J., & Neubauer S. (Eds), (2010). Oxford Specialist Handbooks in Cardiology. Cardiovascular Magnetic Resonance. Oxford University Press
2. Danias, P. G. (2008). Cardiovascular MRI: 150 Multiple-Choice Questions and Answers. Humana Press
3. Varghese A., Pennell, D.J., (2007). Cardiovascular Magnetic Resonance Made Easy. Churchill Livingstone Elsevier
4. Syed, M.A., Mohiaddin, R.H. (Eds), (2012). Magnetic Resonance Imaging of Congenital Disease. Springer
5. Vassiliou, V.S., Cameron, D., Prasad, S.K., Gatehouse, P.D. (2018). Review paper:



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Venue:

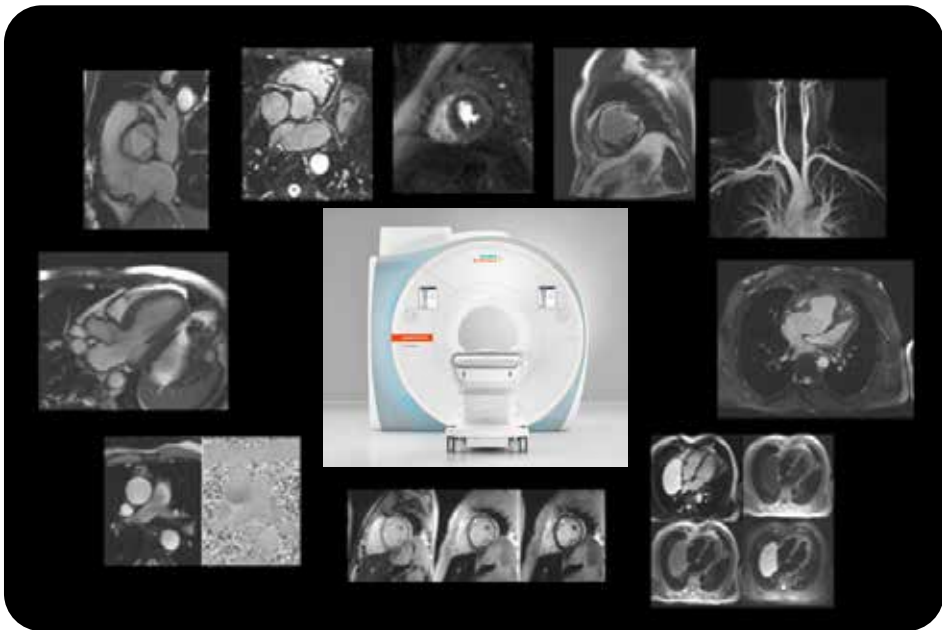
Onassis Cardiac Surgery Center,
Stelios Papadimitriou Seminar Room (7th floor),
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Information & Registration:

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Attendance is free of charge. Limited number of seats.



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