

Advanced Cardiovascular Magnetic Resonance Imaging Course-Hands on training

25-27 September 2026

Athens, Greece
Onassis Hospital



Advanced Cardiovascular Magnetic Resonance Imaging Course-Hands on training

Organizers

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Directors

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Description

Advanced Cardiovascular MR Imaging Course-Hands on Training

Expectations and Goals

About the Course

This is a 3-day advanced course on CMR for Cardiology, Radiology & Paediatricians trainees and clinicians as well as technicians. 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, 25th September 2026

09:00 - 09:30	Registration and coffee
09:30 - 09:45	Welcome Th. Vrachliotis, J. Papaparaskevas*, Z. Gkamalia, T. Antoniou, I. Boletis*¹
	Back to the basics Moderators: Thomas Vrachliotis
09:45 - 10:15	CMR safety: magnetic fields, contrast agents, and contraindications Panagiotis Rozos, Spyridon Zarkadoulas
10:15 - 10:45	Imaging sequences for cardiovascular anatomy, function, viability, perfusion, flow and angiography Marousa Douskou
10:45 - 11:15	Basic CMR Protocol Theodoros Karamitsos
11:15 - 11:30	Late Gadolinium Enhancement (LGE) for Myocardial Tissue Characterization Irini Velegraki
11:30 - 12:00	CMR Parametric Mapping (T1/T2/ECV) for Myocardial Tissue Characterization Theodoros Karamitsos
12:00 - 12:30	Coffee Break How We Do It: The Analysis Moderators: Evangelia Nyktari, Dimitra Antonakaki, Eirini Velegraki, Vassilios Vassiliou, Theodoros Karamitsos, Maria Erato Zymatoura, Theodoros Efremidis
12:30 - 13:00	CMR 42 post processing tools-Introduction of the software Francesco Bona
13:00 - 13:30	CMR as an Imaging Gold Standard for Assessment of Cardiac Structure and Function- How to do measurements on CMR 42- showing live step by step 3 simple cases for anatomy and function Theodoros Karamitsos
13:30 - 14:00	CMR as an Imaging Gold Standard for Assessment of Cardiac Structure and Function- How to do measurements on CMR 42- showing live step by step 3 complex cases for anatomy and function Evangelia Nyktari
14:00 - 14:30	Lunch
14:30 - 15:00	CMR as an Imaging Gold Standard for Myocardial Characterisation - How to do measurements on CMR 42- showing live step by step 3 cardiomyopathy cases. Maria-Erato Zymatoura
15:00 - 15:30	CMR as an Imaging Gold Standard for Myocardial Characterisation- How to do measurements on CMR 42- showing live step by step 3 viability and ischaemia cases. Theodora Zaglavara

15:30 - 16:00	How We Do It: The Reporting and Logbook CMR reporting – structured approach-results Evangelia Nyktari
16:00 - 16:30	Satellite Lecture Q+A, closing remarks, feedback
16:30	
16:40 - 18:40	Hands on practice in small groups in room B Group A Practise on 4 cases and self-evaluation (folder with anonymised reports) 20 cases loaded and anonymised reports provided for reference. All mentors and Circle person on site Evangelia Nyktari, Dimitra Antonakaki, Vassilios Vassiliou, Theodoros Karamitsos, Angeliki Zacharaki, Andromahi Zygyouri, Maria Erato Zymatoura, Theodoros Efremidis, Francesco Bona, Eirini Velegraki

DAY 2 – Saturday, 26th September 2026

	Basic Physics Moderators: Raad Mohiaddin, Thomas Vrachliotis
09:00 - 09:30	Physics - Basic principles / T1, T2, T2* Christos Gkizas
09:30 - 10:00	Basic Physics for the Clinician- Image Formation and basic Pulses Vivek Muthurangu
10:00 - 10:30	Recognizing and minimizing common CMR artifacts Francois Pontana
10:30 - 10:45	Coffee Break
10:45 - 11:00	How to get Certified in different levels of training Vassilios Vassiliou, Theodore Karamitsos, Evangelia Nyktari, Dimitra Antonakaki
	Ischaemic Heart Disease Moderators: Inga Voges/Eva Nyktari
11:00 - 11:20	CMR in acute and chronic myocardial infarction-viability – Case-based training (reporting session of 4 cases) Theodoros Karamitsos
11:20 - 11:30	CMR in acute and chronic myocardial infarction-viability – key slides Theodoros Karamitsos
11:30 - 11:50	MINOCA/INOCA Case-based training (reporting session of 4 cases) Christina Karamarkou
11:50 - 12:00	MINOCA/INOCA key slides Christina Karamarkou

12:00 - 12:20	Assessment of myocardial ischemia with MRI – perfusion studies and pharmacological stress testing – Case-based training (reporting session of 4 cases) Theodora Zaglavara
12:20 - 12:30	Assessment of myocardial ischemia with MRI-key slides Theodora Zaglavara
12:30 - 13:50	Assessment of CAD complications - Case based training (reporting 3 cases) Francois Pontana
12:50 - 13:00	Key slides on the use of MRI in detecting CAD complication Francois Pontana
13:00 - 13:30	Satellite Lecture
13:30 - 14:00	Lunch Cardiomyopathies/Myocarditis/Pericarditis Moderators: Monika Radike, Inga Voges
14:00 - 14:20	Myocarditis/Pericarditis new ESC guidelines- case-based training (reporting session of 4 cases) Vassilios Vassiliou
14:20 - 14:30	Key slides Vassilios Vassiliou
14:30 - 14:50	Hypertrophic cardiomyopathy case-based training (reporting session of 4 cases) Dimitra Antonakaki
14:50 - 15:00	HCM-key slides Dimitra Antonakaki
15:00 - 15:20	Infiltrative cardiomyopathies (amyloid, sarcoid, iron overload) case- based training (reporting session of 4 cases) Theodoros Karamitsos
15:20 - 15:30	Infiltrative Cardiomyopathies-key slides Theodoros Karamitsos
15:30 - 15:50	HCM-key slides Dimitra Antonakaki
15:50 - 16:00	DCM/NDLVC/ARVC-key slides Evangelia Nyktari
16:00 - 16:15	Coffee Break
16:15 - 16:45	Cardiomyopathies/inflammatory syndromes in children case-based training (reporting session of 4 cases) Sylvia Krupickova

16:45 - 17:00	Key Slides Sylvia Krupickova
17:00	Q+A, closing remarks, feedback
17:00 - 19:00	Hands on practice in small groups in room B Group B Practise on 4 cases and self- evaluation (folder with anonymised reports) 20 cases loaded and anonymised reports provided for reference Mentors and Circle person on site Evangelia Nyktari, Dimitra Antonakaki, Vassilios Vassiliou, Theodoros Karamitsos, Angeliki Zacharaki, Maria Erato Zymatoura, Andromahi Zygouri, Theodoros Efremidis, Francesco Bona, Eirini Velegraki,

DAY 3- Sunday, 27th September 2026

	CMR in Vascular/Aortic cases and Tumors of the Heart <i>Moderators:</i> Theodoros Karamitsos/Thomas Vrachliotis
09:00 - 09:20	CMR of vascular pathology, including aortic disease-Case based training (reporting session of 4 cases) Raad Mohiaddin
09:20 - 09:30	Key slides Raad Mohiaddin
09:30 - 10:00	CMR for cardiac masses and tumours- Case based training (reporting session of 6 cases) Raad Mohiaddin
10:00 - 10:15	Key slides Raad Mohiaddin
	Flow analysis and Valve Disease Moderator: Vivek Muthurangu
10:15 - 10:45	CMR Phase Contrast/ Flow 2D and 4D flow analysis Vivek Muthurangu
10:45 - 11:15	CMR in VHD- Case based training (reporting session of 4 cases) Vassilios Vassiliou
11:15 - 11:30	Key slides Vassilios Vassiliou
11:30 - 11:45	Coffee Break
	Radiology and Cardiology combined -it is for the best Moderators: Thomas Vrachliotis, Francois Pontana
11:45 - 12:00	Extracardiac Findings in CMR: Case-based training (reporting session of 4 cases) Monika Radike
12:00 - 12:35	Advances in CV imaging with PCCT. What the future holds Christos Gkizas

12:35 - 13:10

Lunch

Congenital Heart Disease

Moderators: Sotiria Apostolopoulou, Maria Drakopoulou

13:10 - 13:30

Congenital Vascular anomalies: aortic arch, pulmonary arteries, and vein malformations- Case-based training (reporting session of 4 cases)

Claudia Montanaro

13:30 - 13:40

Key slides

Claudia Montanaro

13:40 - 14:00

Atrial septal defect, ventricular septal defect, and atrioventricular septal defect (reporting session of 3 cases)

Inga Voges

14:00 - 14:10

Key slides

Inga Voges

14:10 - 14:30

CMR in imaging TOF and Congenital PV/TV anomalies -case based presentation

Claudia Montanaro

14:30 - 14:40

Key slides

Claudia Montanaro

14:40 - 14:55

CMR in Fontan Case- showing a case step by step

Sylvia Krupickova

14:55 - 15:10

Coffee Break

15:10 - 15:40

CMR in congenital heart disease-my best case

Vivek Muthurangu, Inga Voges, Claudia Montanaro

CMR in arrhythmia

Moderator: Michalis Efremidis

15:40 - 15:55

How to select the best candidate for implantable cardioverter-defibrillator implantation-CMR indications

Konstantinos Letsas

15:55 - 16:10

CMR in planning EP procedures

Evangelia Nyktari

16:10 - 16:40

Clinical case based MCQs and Self-evaluation

Eva Nyktari, Angeliki Zacharaki, Monika Radike, Inga Voges, Claudia Montanaro

Cardiovascular Magnetic Resonance Imaging - Core Training

Quizzes Moderators: Evangelia Nyktari, Monica Radike, Inga Voges, Claudia Montanaro

16:40 - 16:50 Quiz 1

16:50 - 17:00 Quiz 2

17:00 - 17:10 Quiz 3

17:10 - 17:20 Quiz 4

17:20 - 17:30 Safety in the MRI environment MCQ
Dimitrios Verganelakis

17:30 - 17:40 Clinical case based MCQs and Self-evaluation
Angeliki Zacharaki, Eva Nyktari, Dimitra Antonakaki, Maria Erato Zymatoura
Prize: CMR textbook

17:40 Q+A, closing remarks, feedback and certificates
All mentors on site

17:50 - 19:10 Hands on practice in small groups in room B

Group C

Practise on 4 cases and self- evaluation (folder with anonymised reports)
20 cases loaded and anonymised reports provided for reference

Mentors and Circle person on site

Evangelia Nyktari, Dimitra Antonakaki, Angeliki Zacharaki, Andromahi Zygouri, Maria Erato Zymatoura, Eirini Velegraki

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: Magnetic Resonance Imaging: Physics basics for the cardiologist.

Useful links

<https://scmr.org/>

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

Faculty Members

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CMR Fellow-University Hospitals Bristol and Weston NHS Foundation Trust, Bristol, U.K.

UEMS/EACCME accreditation

UEMS/EACCME accreditation has been requested for this event.

Venue:

Onassis Hospital,
Stelios Papadimitriou Seminar Room (7th floor), 356 Sygrou Avenue, Athens, Greece

