The course will offer:

Lectures – Up to 100 hours
Personal attendance – Minimum 120 cases
Hands-on scanning – 36 h
Clinical reporting – Minimum 150 cases
Specific clinical application project
Log book to be kept of cases attended

Faculty

Lamia AIT ALI' MD, Ph.D *
Giovanni Donato AQUARO MD °
Andrea BARISON MD, Ph.D °
Valerio BARRA TR °
Alberto CLEMENTE MD °
Daniele DELLA LATTA Ph.D °
Nicola MARTINI, Ph.D. °
Pier Luigi FESTA MD °
Luna GARGANI MD, Ph.D. *
Alessia GIMELLI MD °
Chrysanthos GRIGORATOS Ph.D°
Serena TOMASSI Nurse °
Petra KEILBERG TR °
Antonella MELONI Ph.D °
Danilo NEGLIA MD °
Cristina PETERSEN MD, Ph.D. °
Alessia PEPE MD, Ph.D °
Vincenzo POSITANO MSc °
Giancarlo TODIERE MD °

° Fondazione Toscana G. Monasterio (FTGM)
* Istituto di Fisiologia Clinica (IFC CNR)

in collaboration with
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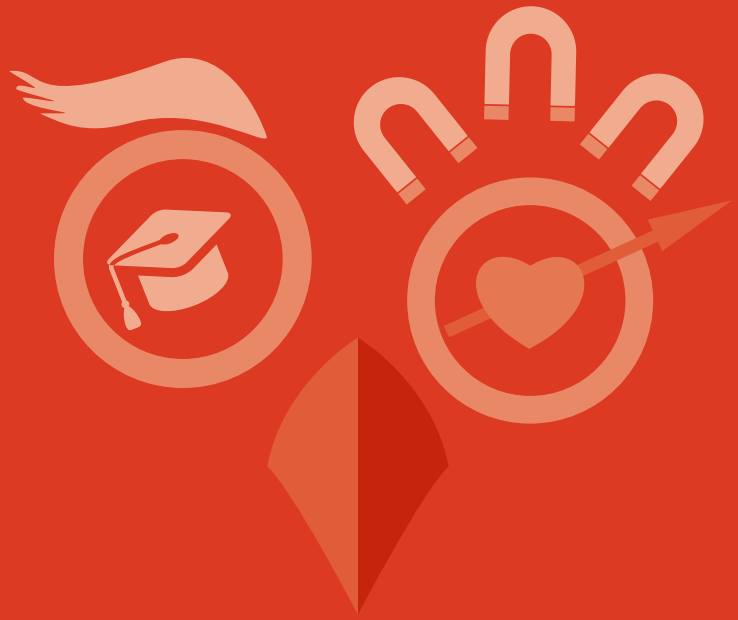

Fondazione Toscana
Gabriele Monasterio

Three-months training course in CMR

01 July - 30 September 2019

Magnetic Resonance Lab
Area della Ricerca CNR di Pisa
Via Moruzzi, 1

This program is intended for cardiologists and radiologists wishing to gain in-depth knowledge of and experience in the principles of cardiac MR, its practical implementation in a clinical environment, and reading and interpretation of CMR images. In our MR Lab more than 2500 patients are clinically scanned every year in the whole field of the cardiology. Training is propaedeutic to obtain level 2 CMR accreditation.

Objective
This program is intended for cardiologists and radiologists wishing to gain on basic cardiovascular magnetic resonance.

Setting
The CMR Unit in Pisa is an international referral centre, performing more than 2500 cardiovascular CMR studies per year covering a wide range of clinical issues.

The fee will cover:
- Tutor assistance
- Hands on CMR acquisitions and analysis
- Case reading
- Stress CMR and multimodality lectures
- Teaching material
- Lunch ticket
- Social dinner
- Attendance certificate

Cost
€ 4500 euros + 22% VAT for each physician, € 4500 + 22% VAT for each accompanying technical radiologist or nurse Maximum 2 participants. CME credits will be provided if required with an extra-fee of € 1000 + 22% VAT for each participant.

Location
Magnetic Resonance Lab
Area della Ricerca CNR di Pisa
Via Moruzzi, 1 Pisa, Italy

Topics to be covered include:

Serena Tomassi, Nurse – 2 h
MRI safety
MRI patient's preparation (basal and stress)

Antonella Meloni, PhD – 7 h
Basic principles of MRI / MRI hardware
Image quality (SNR, CNR and resolution)
Image artefacts / Heart, liver and pancreatic T2* MR assessment
Sequence design

Nicola Martini, PhD – 4 h
T2 mapping / T1 mapping / 4D flow
K-space strategies and parallel imaging

Vincenzo Positano, Msc - 6 h
Introduction to CMR image analysis and DICOM standard
Heart function assessment by CMR
3D visualization / Flow analysis
Myocardial perfusion analysis
LGE image analysis / CMR relaxometry

Petra Keilberg, TR - 7 h
Cardiac anatomy, imaging planes and appearances
CMR Acquisition protocol: thalassemia, stress, cardiomiopathy / ARVC

Valerio Barra, TR - 2 h
CMR Acquisition protocol: myocarditis
Quality in CMR

Giovanni D Aquaro, MD – 7 h
Ventricular volumes, mass and function
Myocardial perfusion imaging /
ARVC / Stress MRI using Dobutamine
Cardiac tumor and pericardial masses
Myocarditis

Andrea Barison, MD, PhD – 5 h
Device MRI compatible / Laminopathies
Cardiac Amyloidosis / Thoracic Aorta

Alessia Pepe, MD, PhD – 8 h
Stress MRI using dipiridamole and adenosine
Iron overload cardiomyopathy
Liver and pancreatic iron quantification by MR
Contrast medium / CMR in LV non compaction
CMR in reumatologic disease
CMR in oncology / CMR in CRT

Giancarlo Todiere, MD – 4 h
Hypertrofic cardiomyopathies / Myocarditis
Ischemic CMP

Chrysanthos Grigoratos, MD Ph.D – 3 h
CMR in vasculopaties / Extracardiac findings in CMR from a cardiologist's perspective
Valvulopathies

Pierluigi Festa, MD, PhD and Lami Ait Alì, MD – 10 h
Congenital heart disease: an overview / Bicuspid aortic valve and CMR study of aortic wall / Aortic coarctation and aortic arch anomalies / Dilatation of the right ventricle and anomalous pulmonary venous return / Post repaired Tetralogy of Fallot / Systemic right ventricle / Functionally univentricular heart CMR evaluation pre and post palliation / CMR in congenital heart disaese:Tips and tricks / CMR in pre and post interventional cardiac catheterization in congenital heart disease / Cases presentation of congenital heart diseases

Cristina Petersen, MD Ph.D. - 1 h
When and why Echo is better than MRI

Luna Gargani , MD Ph.D. - 1 h
Integrated cardio-pulmonary ultrasound: the physical examination of the III millennium

Alessia Gimelli, MD - 1 h
Myocardial scintigraphy: when and why

Alberto Clemente, MD - 1 h
Cardiac CT: when and why

Danilo Neglia, MD - 1 h
Multimodality imaging comparisons in CAD

Daniele Della Latta, Ph.D – 2 h
Deep learning