MR physics: Tom Dresselaers
Dr. Kaatje Goetschalckx
Cardiology Technologists: Guido Putzeys, Kris Byloos, Stefan Gheysels, Prof. Jan Bogaert, prof. Steven Dymarkowski

multicenter long-term (25 years) case-control study which will reserve in patients with chronic thrombo-embolic disease (Promotor contact: mathias.claeys@uzleuven.be , guido.claessen@uzleuven.be)
disease using a state-of-the art exercise CMR protocol with Our goal is to determine the cardiopulmonary determinants of We also study cardiac contractile and pulmonary vascular health benefits of high-level endurance sports training.

Our current fellows are Dr Davide Curione (Rome) and Dr. Manuel Barrero-Pérez (Salamanca).

If interested in a CMR fellowship, please contact Jan Bogaert. We advise a fellowship duration of at least 3 months, preferably 6-12 months. Please be aware that there is a high demand for such fellowships (first come, first serve).

Dr. Rolf Symons
My PhD is a joint PhD between UZ Leuven and NIH (promotor J.Bogaert - co-promotor D.Bluemke / S.Janssens) and involves the use of CMR and CT to study CAD patients. CMR has been used to study the impact of infarct severity on regional and global LV remodeling in STEMI patients (Eur Heart J 2016). We are currently looking at the prognostic value of CMR in predicting long-term patient outcome.

Contact: rolf.symons@uzleuven.be

Dr. Frederik Helsen
My PhD project (promotor W.Budts) concerns adults myocardial fibrosis are probably important contributing patients are at increased risk of arrhythmias, severe TR, As the right ventricle acts as systemic RV, these myocardial dysfunction and RV failure. RV geometry and myocardium, non-ischemic cardiomyopathies to pericardial imaging. Over the years we have created (to a large extent with former UZL CMR fellows) a multi-national CMR network allowing to multicentrically study cardiac pathology with CMR (eg, collaboration with Lausanne, Pisa, Rome, Milan).

Finally, our expertise in CMR has been used to act as a CMR core lab in several clinical trials.

Contact: rolf.symons@uzleuven.be

Dr. Kaatje Goetschalckx
As a cardiologist, specialised in noninvasive cardiac imaging, cardiac rehabilitation and sports cardiology, cardiac stress MRI is part of my routine clinical since 2008. Scientifically, I’m interested in the absolute quantification of myocardial blood flow in patients: I, in the NOMI-substudy (Oosterlinck et al. 2013, Gheysens et al. 2013)

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Prof. Dr. Rolf Symons
My current research is focused on CMR sequence development, evaluation and optimization with emphasis on clinical implementation (eg free-breathing MOLLI registration T1(T2)/ECV mapping).

Contact: tom.dresselaers@uzleuven.be

Dr. Mathias Claeyss / Dr. Guido Claessen
ProAthHeart (Prospective Athlete’s Heart) is a prospective multicenter long-term (10 years) case-control study which will detail the evolution of exercise-induced cardiac remodeling (‘athlete’s heart’) amongst elite junior endurance athletes using echocardiography and (exercise) CMR and assess the long-term health benefits of high-level endurance sports training. We also study cardiac contractile and pulmonary vascular reserve in patients with chronic thrombo-embolic disease (Professor Ingeet et al. 2014). Our goal is to determine the cardiopulmonary determinants of exercise limitation in patients with chronic thrombo-embolic disease using a state-of-the art exercise CMR protocol with simultaneous invasive pressure measurements. We hypothesize that exercise measures will allow earlier diagnosis, have prognostic implications and will help to guide therapeutic decisions.

Contact: mathias.claeys@uzleuven.be , guido.claessen@uzleuven.be

Dr. Kaatje Goetschalckx

Dr. Mathias Claeyss

Dr. Frederik Helsen
My PhD project (promotor W.Budts) concerns adults patients with d-TGA (atral switch) as well as l-TGA patients. At the right ventricle acts as systemic RV, these patients are at increased risk of arrhythmias, severe TR, myocardial dysfunction and RV failure. RV geometry and myocardial fibrosis are probably important contributing factors. The CMR exam is comprehensive including myocardial mapping, feature tracking and ergometer CMR.

Contact: frederik.helsen@uzleuven.be

Tom Dresselaers, PhD, MSc.
I recently joined the clinical CMR team as MR physicist. Previously I worked as a research expert in preclinical MRI (MoSAIC, Leuven) on topics such as the cardioprotective effect of ischemic preconditioning in the metabolic syndrome (Goek bloch et al. 2013), on correlations of rodent CMR with PET and US (Kromer et al. 2013, Gheysens et al. 2013) and characterizing the impact of heart failure in different mouse models with CMR (e.g. Jacobs et al. 2013).

My current research is focused on CMR sequence development, evaluation and optimization with emphasis on clinical implementation (eg free-breathing MOLLI registration T1(T2)/ECV mapping).

Contact: tom.dresselaers@uzleuven.be

Our CMR Team

Radiology (head: prof. Raymond Oyen)
Prof. Jan Bogaert, prof. Steven Dymarkowski
Technologists: Guido Putzeys, Kris Byloos, Stefan Gheysels, MR physics: Tom Dresselaers
PhD students: dr. Rolf Symons
Cardiology (head: prof. Stefan Janssens)
Dr. Kaatje Goetschalckx
PhD students: dr. Matthias Claeyss, dr. Frederik Helsen

Site info
UZ Leuven: 2000 beds, 653,000 consultations/year
Radiological examinations: 424,000/year
Radiology department: 7 MR systems (4 clinic / 3 research)
- 1.5T Ingenia (Philips) - CMR
- 1.5T Achieva (Philips) - CMR
- 3.0T Achieva (Philips)
- 3.0T Ingenia Cx (Philips)
- 3.0T Ingenia (Philips)
- 1.5T Signa PET/MR (GE)

Data processing unit (MIRC): +/- 100 people

UZ Leuven as CMR Training Site
UZ Leuven has been a training site for CMR since more than 15 years. January 2017 more than 20 fellows, coming from 22 countries worldwide, received a dedicated CMR training in Leuven. Many of them are still active in CMR on a daily basis.

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