The cardiovascular magnetic resonance imaging lab at the Brigham and Women’s Hospital focuses on new methods of assessing physiological markers of the myocardial that facilitate the early detection of cardiac conditions, monitoring of therapeutic interventions, and the real-world impact of CMR on patient management. The primary focus is on magnetic resonance imaging given its versatility in quantitative assessment of cardiac structure, function, tissue characteristics, and metabolism of the heart. Our lab was founded in 2001 and offers a platform for multicenter collaboration.

Past Members

Anna Y. K. Chan, MBBS, Division of Cardiology, Department of Medicine, The Chinese University of Hong Kong
Carmen W. S. Chan, MBBS, Division of Cardiology, Department of Medicine, Hong Kong University, Hong Kong
Eric Larose, MD, FRCP, Assistant Professor, Laval University Medical School, Quebec City, Canada
Afshin Afshin, MD, Assistant Professor of Cardiovascular Medicine & Radiology, University of Illinois at Chicago
Kevin Steel, DO, Assistant Professor, United States Air Force Health Services, San Antonio, Texas
Nicolas Tzemos, MD, Assistant Professor of Medicine, University of Glasgow, Scotland
Caroline Daly, MD, Assistant Professor of Medicine, St. James’s Hospital, University of Dublin Trinity College, Ireland
Krishna Nallamshetty, MD, Assistant Professor of Radiology, University of South Florida, Tampa, FL
Sharb M. Abadi, MD, Assistant Professor of Medicine, University of Texas Southwestern Medical Center, Dallas
Otavio Coelho-Filho, MD, Faculty of Medical Sciences, State University of Campinas (Unicamp), Campinas, Brazil
Eni Watabane, MD, PhD, Assistant Professor of Medicine, Tokyo Women’s Medical University, Japan
Francisco-Pierre Mongeon, MD, Assistant Professor of Medicine, Université de Montréal, Montréal Heart Institute, Canada

Major Selected Publications


Current Members 2017

On the picture from left to right: Yin Ge, MD, Kyochi Kaneko, MD; Christoph Gränz, MD; imaging fellows; Ayzay Aghayev, MD, CMR Attending; Yuna L. Choi; BSc, Core lab manager; Raymond Y. Kwong, MD, MPH, Director of CMR; Ron Blankstein, MD (CMR Attending); Patrycja Z. Galazka, MD, Sarv Priya, MD, Navkaranbir Bajaj, MD, Imaging fellows

Other members: Michael Jerchow-Herold, PhD, Director of Medical Physics; Michael L. Steigner, MD, CMR Attending; Marcelo F. DiCarli, MD, Section Chief, Noninvasive CV Imaging; Kana Fujikura, MD; Tomas S. Vita, MD, Imaging fellow, Kathleen Cheng, Core lab manager

Damien Mandy, MD, Assistant Professor of Radiology, Nancy University Hospital, Nancy, France
Yu-Cheng Chen, MD, Assistant Professor, West China Hospital, Sichuan University, Chengdu, Sichuan, China
Babok Heydari, MD, Assistant Professor of Medicine, University of Calgary, Canada
Tomas Neilian, MD, Department of Cardiology at Massachusetts General Hospital and an Assistant Professor of Harvard Medical School, Boston
Ravi Shah, MD, Department of Cardiology of the Beth Israel Deaconess Hospital, Boston
Siddique Abbasi, MD, Assistant Professor, Department of Cardiology University Rhode Island Health Service, Brown University, Rhode Island
Carlos Henrique Rassi, MD, Assistant Physician at Hospital Almeido Oswald Cruz, University of São Paulo, Brazil
Hai Liu, MD, Assistant Professor, Department of Radiology, Guangdong General Hospital, Guangzhou Shi, Guangdong, Shina
Jonathan Yuan-Hsiang Juan, MD, Assistant Professor, Department of Medical Imaging and Intervention, Chang Gung Memorial Hospital, Linkou and Healthy Aging Research Center, Chang Gun University, Taoyuan, Taiwan
Goktuk Ipek, MD, Cardiologist at Siyami Ersok Cardiothoracic Surgery Research Hospital, Istanbul, Turkey
Antonoldes Nascimiento Assuncao Junior, MD, Cardiologist at Heart Institute (InCor), University of Sao Paolo Medical School, Brazil
Loic Bierre, MD, PhD, Assistant teacher, Department of Cardiology, University Hospital of Angers, France

Major Current Projects

The Global CMR Registry (GCMR) aims to promote the collaboration of CMR programs worldwide in setting imaging and reporting standards, assessing diagnostic impact on patient care, and determining the cost-effectiveness of CMR imaging. It will be the largest collective body of evidence reflecting current clinical applications in patient care, which healthcare payers and governing bodies alike can rely on for acquiring metrics such as testing appropriateness, common indications, and diagnostic effectiveness. The registry will also be able to follow changes over time in patient impact brought about by new technical developments.

The OMEGA REMODEL Trial. A randomized control clinical trial of CMR was used to assess LV remodeling. We demonstrated a beneficial effect for high-dose omega-3 fatty acids treatment on adverse left ventricular remodeling after acute myocardial infarction in patients receiving guidelines-based therapies. This finding was supported by the attenuation of concurrent fibrosis within noninfarcted myocardium and lower levels of systemic biomarkers of myocardial inflammation and cardiac fibrosis.

The ISCHEMIA Trial is an NIH-funded trial with the primary goal of testing the hypothesis that patients with moderate ischemia evident on cardiac imaging can have improved cardiac outcome when randomized to optimal medical therapy and coronary revascularization, over optimal medical therapy alone. The HCMR trial is an NIH-funded trial assessing 2,750 HCM patients using CMR for cardiac morphology and structures, biomarkers and genetic profiles. The BWH serves as the imaging core lab for these studies.

The Myocarditis cohort study is a retrospective study with the aim to evaluate the incremental benefit of cardiac magnetic resonance imaging tissue characterization onto clinical risk profiling in patients with myocarditis.

In the dilated Cardiomyopathy Cohort Study we tested the hypothesis that diffuse fibrosis estimated by extracellular volume fraction (ECV) effectively stratifies for major heart failure outcomes in patients clinically diagnosed with non-ischemic dilated cardiomyopathy.