



## INTRODUCTION: CARDIOVASCULAR MAGNETIC RESONANCE

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While magnetic resonance imaging (MRI) has been around since the 1980s, it has traditionally been confined to extracardiac structures due to the heart's motion with each heartbeat and motion from breathing. There were a number of hardware and software improvements in the late 1990s that propelled cardiovascular magnetic resonance (CMR) to the forefront of cardiac imaging modalities.

In this issue of the *Methodist DeBakey Cardiovascular Journal*, we feature a number of reviews on various clinical applications of CMR—function, viability, and ischemia—that have proven useful in the assessment of ischemic injury, cardiomyopathies, thrombus, and congenital heart disease. There is also a review on the role of CMR for assessment of valvular heart disease. One of the limitations of MRI is its inability to image patients with implanted pacemakers and defibrillators, even though the use of these devices has increased exponentially within the last decade. A review in this issue will also address the safety and feasibility of imaging patients with implanted devices. Based on the validation data presented, I believe we can now say that the presence of an implanted device is not an absolute contraindication to MRI.

Our hope with this issue is to provide our readers with an overview of the advances in cardiovascular magnetic resonance imaging and its various uses in the diagnosis, assessment, and treatment of cardiovascular disease.