
Siemens delivers comprehensive tools to tackle perceived complexity around cardiac MR



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- A range of innovative technology from Siemens Healthcare ensures the most difficult cardiac MR examinations can be simplified
- Tackles misconceptions around cardiac MR that are thought to be holding back wider adoption

Siemens Healthcare is providing a range of tools and advanced technology to help tackle the perception that cardiac MR is complex and unattainable for widespread use. Cardiovascular disease (CVD) causes more than a quarter of all deaths in the UK, or around 160,000 deaths each year¹. A range of innovative MR systems, clinical software applications and imaging coils ensure the most difficult cardiac MR examinations can be simplified, providing more clinicians with the ability to image cardiac patients rapidly and efficiently.

Early diagnosis is crucial in preventing death from the condition and minimising the impact on the long-term healthcare economy. Although the use of cardiac MR techniques for diagnosis of CVD in the UK is increasing, misconceptions around its complexity are thought to be holding back wider adoption. This comes despite advancements in ease of use and a comprehensive range of diagnostic capabilities in use across leading UK healthcare centres.

Approximately 60 centres currently perform cardiac MR in the UK with the majority of these examinations being for the assessment of cardiac viability in patients with ischemic heart disease. An increasing number of these sites are also performing stress perfusion MR to evaluate the blood supply to the muscle of the heart to guide planning decision making for interventional procedures. The excellent functional information 3D anatomical data from MR is also an invaluable tool in the assessment of patients with congenital heart disease.

A large variety of diseases of the heart muscle (cardiomyopathies) are easily assessable with cardiac MR as the modality can depict accumulation of water or other substances in the spaces between the cells of the heart. These can be characteristic of diseases of the myocardium from infection through diseases such as cardiac amyloid.

"The perceived complexity of procedures and the lack of familiarity with cardiac anatomy presents challenges in the routine adaptation of cardiac MR as a clinical tool," states Peter Weale, Staff Scientist at Siemens Healthcare. "Although the UK currently leads the way in cardiac MR, SPECT has historically been adopted as the default imaging modality for the assessment of ischaemic heart disease, mainly due to its common availability and familiarity amongst clinicians. Although an effective technique, cardiac MR can be used within hospitals to provide a comprehensive single modality to assess."

Siemens Healthcare offers pioneering MR systems with integrated coil technology and a variety of advanced applications to expand cardiac services. The day optimising throughput (Dot) software engine ensures MR systems are future-proofed for cardiac use. The software allows automation of the steps needed to get a high quality scan and adapt to a patient's condition, helping the user to achieve rapid and consistent results. Dot allows historically difficult cardiac examinations to be incorporated into a general workload, rather than relying on dedicated slots when the necessary skilled staff members are available.

Peter Weale continues, "With the right tools in place, the full benefits of cardiac MR can be realised. It has potential to be at the forefront of cardiology decision making, not only in the UK, but worldwide. It is essential that patients are investigated using the optimal technique for their condition, to diagnose and investigate it effectively. Cardiac MR deserves to have its place in any multi-modality imaging department, creating an environment where individual modalities including CT, ultrasound and angiography work hand in hand, rather than in silos."

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