



**I-MED Radiology
Network**

Comprehensive care. Uncompromising quality.

Our cardiac services



Cardiac MRI

Cardiovascular magnetic resonance imaging, also known as cardiac MRI, is increasingly being used for non-invasive assessment of the function and structure of the cardiovascular system.

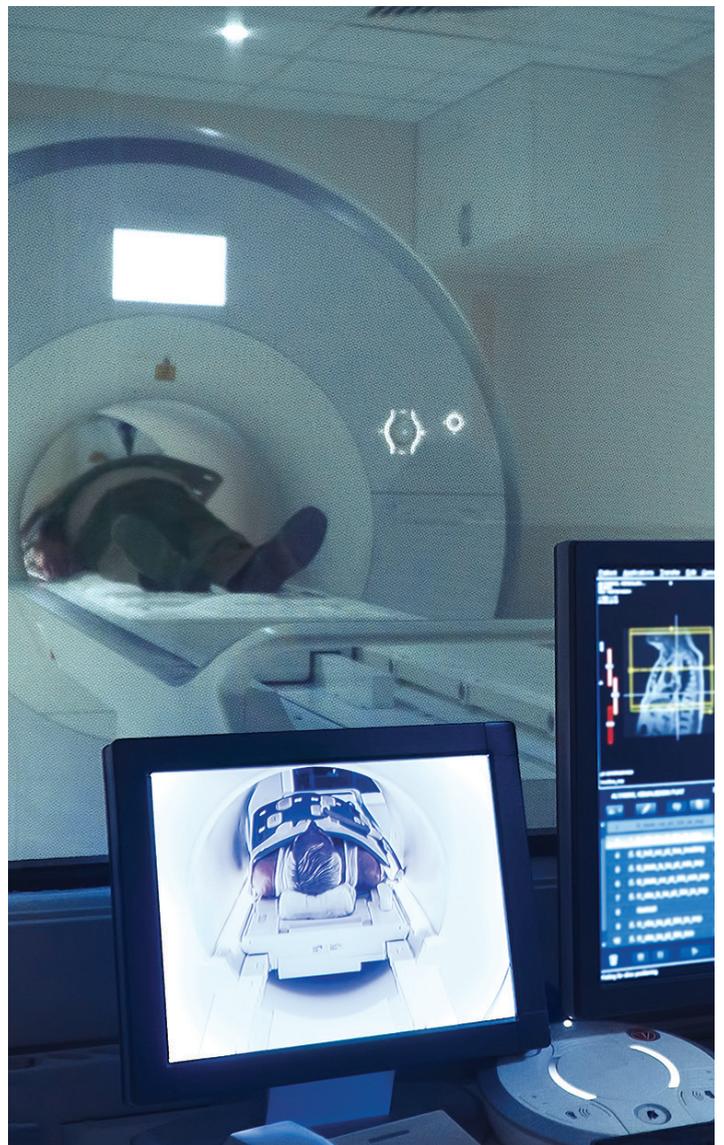
Conventional MRI sequences are adapted for cardiac imaging by using ECG gating and high temporal resolution protocols.

Cardiac MRI provides specific advantages over other cardiac imaging modalities when evaluating pathology in congenital heart disease, cardiac masses, cardiomyopathies, and in some aspects of ischaemic and valvular heart diseases. The strength of cardiac MRI in these pathologies includes its precise anatomical delineation of structures, characterisation of myocardial tissue, and accurate, reproducible measurements of blood volume and flow.

Indications for cardiac MRI

The following, although not exhaustive, are a guide to the indications for cardiac/thoracic MRI:

- Cardiomyopathy and cardiac function – true volumetric assessment of LV and RV volumes and EFs.
- Infarction and myocardial viability – detailed assessment of the extent of scar and thickness of infarct within the wall of each segment. Aids in therapeutic considerations and decision to vascularise.
- Infiltration and fibrosis – eg cardiac sarcoidosis, Churg strauss, Wegeners, etc.
- Myocarditis/pericarditis– including constrictive pericarditis.
- Valvular heart disease – severity of regurgitation or stenosis and associated cardiomyopathy. Including pre and post TAVI assessment.
- Amyloidosis.
- Myocardial and hepatic iron loading quantification.
- Cardiac thrombus and primary cardiac masses or metastases.
- Congenital heart disease.
- Shunt quantification – ASD, VSD and PFO.
- Coarctation of the aorta – including assessment of flow and reversal of flow before and after the stenosis.
- Cardiac assessment in the setting of non-diagnostic or equivocal echocardiography.



Cardiac MRI

What are the advantages of cardiac MRI?

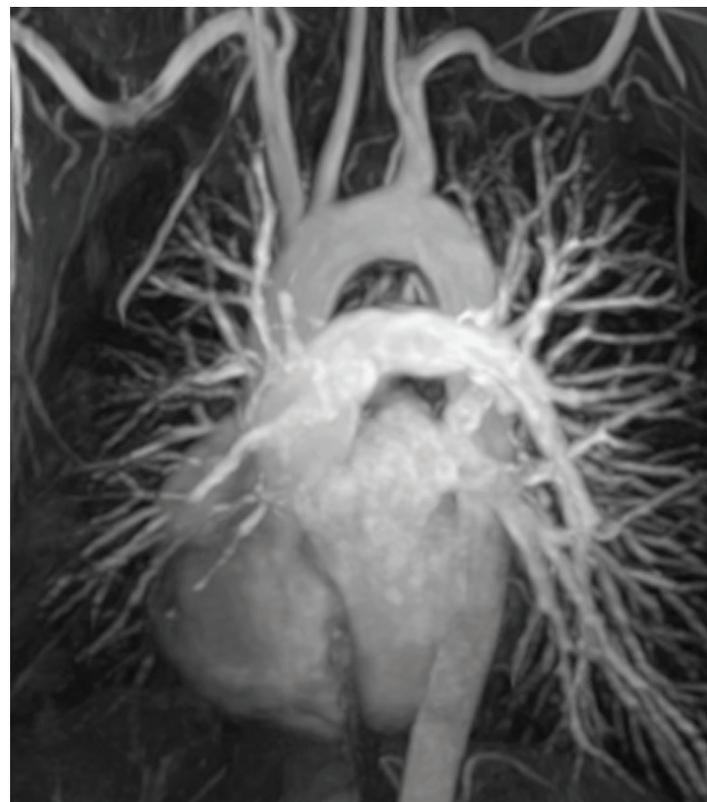
- Improved image quality
- No ionising radiation
- Accurate ejection fraction measurement
- Investigation for suspected myocarditis that cannot be confirmed on echocardiography
- Assessment of newly diagnosed cardiomyopathy with diagnostic and prognostic advantages over echocardiography
- Assessment of myocardial viability and perfusion in work-up for coronary artery bypass surgery
- Assessment of congenital heart disease

Disadvantages

- Cost and accessibility
- Contraindicated in patients with metallic implants (e.g. aneurysm clips, neurostimulators, implanted pacemakers/defibrillators), metal retained fragments in eyes or gunshot injuries
- May be unsuitable for patients with claustrophobia
- A specific cut-off weight for patients varies among individual MRI scanners. Large abdominal and shoulder girths may limit the physical ability of patients to fit in an MRI scanner
- Gadolinium is contraindicated in significant renal disease (eGFR <30 mL/minute)

Need more help?

If you have any questions or enquiries regarding our cardiac imaging services, please contact your local I-MED Radiology clinic or your Account Manager.



Is there any special preparation required for Cardiac MRI?

There is no special preparation for this examination. However, it is important to advise us if your patient:

- has a pacemaker;
- has cerebral aneurysm clips or a surgically implanted medical device or implant;
- is pregnant; or
- has a history of working with metal

All patients will be asked to complete an MRI safety questionnaire. The patient will also be asked to change into a gown as clothing may have metallic components which can interfere with the MRI images.

The procedure usually takes 30-45 minutes to complete.

[i-med.com.au/our-cardiac-services](https://www.i-med.com.au/our-cardiac-services)

<https://www.racgp.org.au/afp/2016/october/the-evolving-role-of-cardiac-magnetic-resonance-imaging-in-the-assessment-of-cardiovascular-disease/>



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Cardiac MRI Medicare rebatable indications:

ITEM	DESCRIPTION
63401	<p>NOTE: Benefits are payable for each service included by Subgroup 15 on three occasions only in any 12 month period</p> <p>MAGNETIC RESONANCE ANGIOGRAPHY performed under the professional supervision of an eligible provider at an eligible location where the patient is referred by a specialist or by a consultant physician and where the request for the scan specifically identifies the clinical indication for the scan - scan of cardiovascular system for:</p> <ul style="list-style-type: none"> - scan of cardiovascular system for: - vascular abnormality in a patient with a previous anaphylactic reaction to an iodinated contrast medium (R) (Contrast)
63404	obstruction of the superior vena cava, inferior vena cava or a major pelvic vein (R) (Contrast)
63388	tumour of the heart or a great vessel (R) (Contrast)
63385	<p>NOTE: Benefits are payable for each service included by Subgroup 14 on two occasions only in any 12 month period</p> <p>MAGNETIC RESONANCE IMAGING (including Magnetic Resonance Angiography if performed), performed under the professional supervision of an eligible provider at an eligible location where the patient is referred by a specialist or by a consultant physician - scan of cardiovascular system for:</p> <ul style="list-style-type: none"> - congenital disease of the heart or a great vessel (R) (Contrast)
63395	<p>MRI scan of the cardiovascular system, performed by a person who is:</p> <ul style="list-style-type: none"> (a) a specialist in diagnostic radiology or a consultant physician; and (b) recognised by the Conjoint Committee for Certification in Cardiac MRI for the assessment of myocardial structure and function involving: <ul style="list-style-type: none"> (a) dedicated right ventricular views; and (b) 3D volumetric assessment of the right ventricle; and (c) reporting of end diastolic and end systolic volumes, ejection fraction and BSA indexed values; if the request for the scan indicates that: (d) the patient presented with symptoms consistent with arrhythmogenic right ventricular cardiomyopathy (ARVC); or (e) investigative findings in relation to the patient are consistent with ARVC <p>NOTE: benefits are payable once in 12 months</p>

