



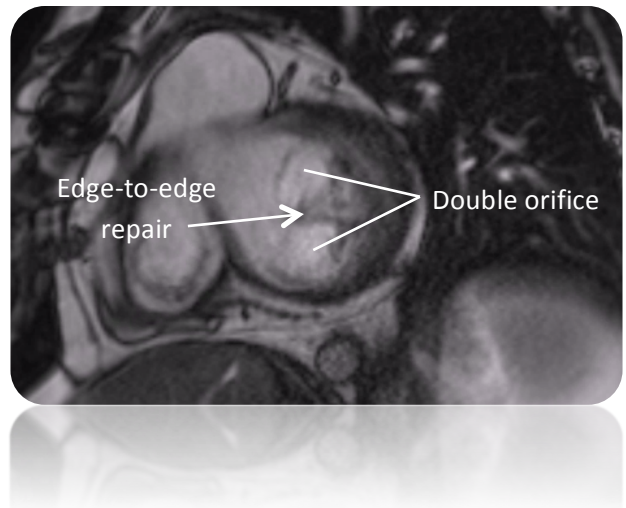
Cardiac MRI Essentials

Mitral valve surgery

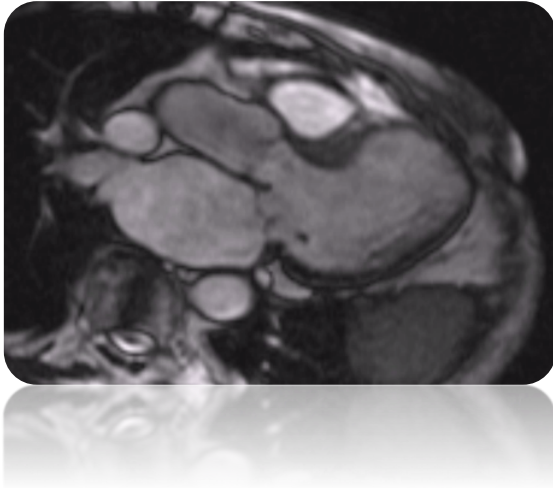
- Virtually all prosthetic heart valves are safe to scan at 1.5T
- Metallic artifact is occasionally a challenge with some valves
- CMR permits assessment of:
 - Valve anatomy and stability
 - Valve function
 - Valvular stenosis
 - Valvular regurgitation
 - Assessment of left ventricular size and function

Alfieri mitral valve repair

- Edge-to-edge repair of mitral valve
- MV short axis view shown here
- Note 'double orifice'



Warning: Not all prosthetic valves have been assessed for safety using 3T

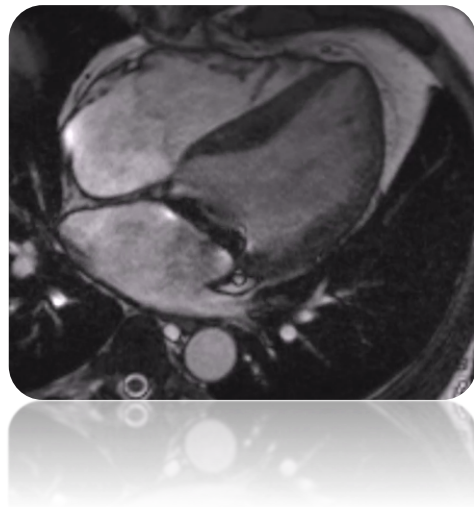


Bioprosthetic mitral valve

- Three-chamber view
- Porcine mitral valve replacement
- Normal appearance to leaflet thickness and mobility on cine CMR

Metallic mitral valve replacment

- Metallic valve well-seated
- Can check for mitral regurgitation using cine CMR
- Note metallic artifact



How do we use CMR to assess the mitral valve after surgery?

CMR of the mitral valve after surgery allows us to:

- Assess prosthesis stability (where appropriate)
- Assess any evidence of stenosis
- Identify and quantify any regurgitation
- Assess left ventricular size and systolic function.

Further reading

Heart valve disease: investigation by cardiovascular magnetic resonance. *Journal of Cardiovascular Magnetic Resonance* 2012; **14**: 7 [[click here to access online](#)]