

## Patient information factsheet

# Cardiac MRI scan with lower kidney function

We have given you this factsheet because your cardiologist (specialist heart doctor) has referred you for a cardiac MRI scan.

In this scan we usually use a contrast agent (a liquid that shows up on the scan). Because of your lower kidney function, there is an extremely rare but serious risk from using the contrast agent.

We hope this factsheet will help you make an informed decision about whether to have this scan.

### What is a contrast agent for?

In an MRI scan, we usually use a contrast agent liquid (or dye) containing gadolinium (a rare earth metal).

We use the contrast agent to show different things depending on the type of scan you are having. If you are having a stress scan, we use it to show us the blood supply in your heart muscle. We also use it to show if there is any scar tissue in the muscle or any other difference in the tissue of the muscle. We can also use contrast agent to show areas that we are unable to show with other scans.

A radiologist (specialist scan doctor) will prescribe the contrast agent that is best for you based on the clinical information given to us by your cardiologist. The amount of contrast agent we give is based on your weight. We will give you the minimum amount that will give the results we need. The contrast agent will usually be given by a radiographer.

### Lower kidney function

Your kidney function is reduced, with an eGfr of less than 30. This means that one or both of your kidneys are not working as well as they normally should.

Because of this, there is an extremely rare but serious risk from using contrast agent. We will only recommend that you have the contrast agent if we believe the benefit gained from it outweighs any potential risk.

### Risk of nephrogenic systemic fibrosis (NSF)

Contrast agents are very commonly used in scans, with approximately 30 million doses given per year.

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An extremely rare but serious risk of using contrast agents is nephrogenic systemic fibrosis (NSF). This is a serious and potentially life-threatening condition that causes collagen to be laid down in the skin. Sometimes other organs, including the lungs, liver, muscles and heart, can be affected.

We do not know what causes NSF but it has been associated with old or high risk contrast agents when they are given to people with lower kidney function. These old or high risk contrast agents are not used any more.

The European Medicines Agency advises that lower risk contrast agents can be used for people with lower kidney function if an MRI scan using a contrast agent is clearly the best method of examination.

The two types of contrast agent we use are called Gadovist and Dotarem. These are both classified as low risk agents.

There have been four confirmed reported cases of NSF with Gadovist which has been in use since 1998. There have been no reported cases of NSF with Dotarem.

## After the scan

If you decide to have the cardiac MRI scan, you should not have another dose of MRI contrast for seven days after the scan.

## Useful links

[www.gov.uk/drug-safety-update/gadolinium-containing-contrast-agents-removal-of-omniscan-and-iv-magnevist-restrictions-to-the-use-of-other-linear-agents#background-and-2007-european-review](http://www.gov.uk/drug-safety-update/gadolinium-containing-contrast-agents-removal-of-omniscan-and-iv-magnevist-restrictions-to-the-use-of-other-linear-agents#background-and-2007-european-review)

[www.nhs.uk/conditions/mri-scan/what-happens/](http://www.nhs.uk/conditions/mri-scan/what-happens/)

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If you would like further information, please contact the cardiac MRI team on **023 8120 4499** between 8am to 6pm, Monday to Saturday.

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