

MRI examination

The Radiology Department

The Radiology Department, sometimes called the x-ray, is the facility in the hospital which carries out the radiological examinations of patients, using a range of equipment, including x ray, CT scanning, ultrasound and magnetic resonance imaging (MRI).

The radiologists are doctors specially trained to interpret the results and carry out some of the more complex examinations. They are supported by radiographers who are highly trained to carry out many of the x-ray and other imaging procedures.

What is an MRI Scan?

Magnetic resonance imaging (MRI) is a specialised imaging modality that obtains multiple cross-sectional images of the organs and tissues of the body. MRI is similar to CT but is able to image the body in all dimensions and is often complimentary to CT examinations. The advantage of MRI is its ability to demonstrate the differences between soft tissues without using radiation (X rays). A computer processes the images to create cross-sectional pictures or "slices" of the area of interest. No preparation is required prior to the exam.

What are some common uses of the procedure?

MRI imaging in colorectal disorders is used specifically to image the anus and rectum. MRI is able to take a closer look at these areas allowing accurate information to allow the surgeon and oncologist, to decide the best treatment. MRI can also be used to identify the blood supply to these areas.

What does the equipment look like?

The MRI scanner is a large unit with a hole running directly through its centre, giving the appearance of a doughnut. It is however longer than a CT scanner. You will lie on a

table that can move up or down and can slide into and out of the centre of the cavity. The computer is not in the examining room, but in an adjoining control room.

How is the MRI scan performed?

The radiographer will ask you important questions before you are allowed to enter the scanner room. The MRI uses a very strong magnet and the radiographer needs to establish that it is safe for you to enter the room. You will be correctly positioned on the MRI table. Short initial scans will be obtained to plan the more detailed imaging. The scans are very noisy; you will be given ear plugs and can listen to music via headphones if you like. You will be asked to remain as still as possible and on occasion asked to hold your breath. A small cannula may be inserted into an arm vein and *contrast* injected into the vein.

You must tell the radiographer if you have any allergies to medications or whether you have a history of asthma, diabetes, heart disorder or kidney disease. These conditions may indicate a greater risk of an adverse reaction to contrast material.

What will I experience during the procedure?

MRI scanning is a pain-free procedure. You will however be placed into the machine which can feel a little claustrophobic. The radiographer will give you eye patches if you wish and reassure you during the procedure.

The examination usually takes 45-60 minutes, including preparation time.

Who interprets the results and how do I get them?

Dr Ian McCafferty, a radiologist, specifically trained to supervise and interpret radiology examinations, will analyze the images and send a signed report to your doctor. Dr Ian McCafferty may discuss preliminary results with you at the conclusion of your examination

What are the benefits vs. risks?

Benefits

- Very detailed images of the primary area of interest (better than CT)
- There is no radiation involved. The procedure is non-invasive

Risks

- MRI can be a little claustrophobic
- Women should always inform their doctor or radiographer if there is any possibility that they are pregnant

What are the limitations of MRI scanning?

- Movement can lessen the quality of a MRI study
- MRI scanning is generally not recommended in the first trimester (1st 13 weeks) of pregnancy

If you have a query?

If you have a query about having an MRI scan, please ring the Radiology Department (MRI department) between 9am and 5pm, Monday to Friday &, 9am and 12pm Saturday.