



**Wrightington, Wigan and
Leigh Teaching Hospitals**
NHS Foundation Trust

Contrast Enhanced Mammography

Contrast-Enhanced Mammography

Patient Information

Breast Screening

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Introduction

This leaflet gives you information about having a contrast-enhanced mammogram (CEM) and what to expect after the test. It aims to answer common questions and explain the procedure for you and those supporting you.

This leaflet does not replace discussion with the breast unit staff. If you have any questions or concerns, please speak to a member of the team or contact:

Breast Screening Department:

Telephone: **0300 707 5899**

What is a Contrast-Enhanced Mammogram (CEM)?

A contrast-enhanced mammogram is a type of breast x-ray which looks more closely at areas of concern within the breast.

The test is similar to a standard mammogram (breast X-ray); but before the X-ray is taken a special dye (contrast medium) is injected into a vein in your arm. This dye helps highlight changes in the breast tissue, making it easier for the doctor to assess specific areas. The examination is carried out by specially trained radiographers and, as with routine mammography, it will always be performed by a female Radiographer.

How does it work?

The Radiographer will explain the procedure and answer any questions you may have.

You will be asked to complete a questionnaire to make sure you can safely have the procedure. The Radiographer will then insert a small needle attached to a plastic tube (cannula) into a vein in your arm. Once this is in position, the contrast dye will be injected through this tube. You may feel a warm sensation for a short while as the dye makes its way around your body.

The Radiographer will then position you for a mammogram. Two X-ray images of each breast are usually taken, although more images may need to be taken depending on individual circumstances. In some cases, a breast doctor may recommend taking a biopsy using CEM to guide the procedure.

Once the images have been taken, the scan is complete; however, the cannula will remain in your arm for about 15 minutes before the radiographer will remove it. The scan itself should take no longer than 30 minutes, but the total appointment time will be around one hour.

Why am I having CEM?

Your recent breast imaging has shown an area of concern that the Breast Team would like to assess in more detail. A contrast enhanced mammogram can provide additional information to help with this assessment.

What are the risks associated with CEM?

Radiation

CEM uses X-rays, which involve a small amount of radiation. The radiation dose from CEM is slightly higher than that of a standard mammogram but is still well within safe limits.

A risk benefit balance is always considered, and the benefit of having the examination is felt to be greater than the small risk from the radiation.

Contrast Injection

The contrast dye used is generally safe and most people experience no side-effects; however, a small number of people may experience an allergic (anaphylactic) reaction or other aftereffects. Before the injection, the radiographer will ask you a series of questions about your medical history to reduce the risk of any problems. You will be asked to complete a pre-screening questionnaire.

Contrast leaking into the arm (extravasation)

Very occasionally, some of the contrast dye can leak into the tissue around the injection site. This usually settles without causing serious problems.

To reduce any swelling around the injection site or potential complications:

1. Raise your arm above the level of your heart to help the swelling go down (you could try sitting with your arm on a cushion or pillow on the arm of a chair).
2. For the first 6 hours after the injection, apply light pressure to the swollen area for 1 minute every half an hour until the swelling goes down.

The swelling or redness can last for approximately 1-2 days. It is common to feel a dull ache at the site of injection.

The contrast dye will slowly be absorbed back into your bloodstream, and then it will be passed out of your body in your urine. Your arm should return to normal within 2-3 days.

If you experience any of the below symptoms, please contact the department or your General Practitioner (GP):

- Numbness or tingling in your arm or hand
- Redness or streaks at the site of injection
- Blisters at the site

- Increased pain that does not get better over time
- Coolness of the arm or hand
- Any increase in the size of your arm

Contraindications:

The Radiographer will review your questionnaire before the examination. We will not offer you CEM if you have any of the following risk factors:

- You are allergic to iodine
- You have renal (kidney) failure or impaired kidney function
- You have diabetes and / or take metformin
- You are pregnant

If any risks are identified, a doctor will carefully weigh up the risks and benefits before deciding whether the scan should go ahead.

What are the benefits of having CEM?

The contrast dye helps show more detail than a standard mammogram. This can be particularly helpful for women with dense breasts, where changes can be harder to see. CEM can highlight areas of change more clearly and may help guide a biopsy if one is needed.

What happens after the examination?

- You will be asked to wait in the department for up to 30 minutes after the scan.
- Drink plenty of fluids afterwards. We advise that you drink around 2 litres of water to help your kidneys clear the dye. **Please ignore this is your doctor has advised to limit your fluid intake.**
- If you are currently taking **Metformin and have an eGFR<30 or have an acute kidney injury, the contrast media can occasionally affect your kidneys.** If you normally take Metformin, we will advise you to stop taking your Metformin after the injection of contrast dye. We will provide you with a form to have a blood test 48-72 hours after the injection. This is to check the renal function has not deteriorated before you re-start your metformin treatment. Contact the department the day after your blood test and we will advise you regarding the re-starting of your Metformin. Please note if the renal function has deteriorated, we may ask you to see your GP or come to the hospital emergency department for further advice.

Relatives and Escorts

You can bring a relative or friend with you to the Breast Imaging Department, but they will not normally be allowed in the examination room.

Children / vulnerable adults

Please be aware that the department does not have the facilities to supervise children / vulnerable adults. If you need to bring a child or vulnerable adult with you, you must bring an appropriate adult to supervise them whilst you are having the examination.

Interpreters

If you require an interpreter, please contact the department in advance, so that this can be arranged. (Please note, hospital policy states that relatives cannot act as interpreters).



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