

Patient advice sheet

Contrast-enhanced spectral mammography (CESM)

A Contrast Enhanced Spectral Mammography Test (CESM) is a type of mammogram (breast x-ray) carried out using a special dye (contrast media) which shows up on X-Rays.

This examination is used to highlight any areas of concern in your breast.

The dye is injected into a vein immediately before the mammogram images are taken.

The images will give the specialist doctors (Radiologists) more information about your breast condition.

Pregnancy and contrast media

If there is any chance of you being pregnant, let the Radiographer know before performing the scan.

It could result in the scan being cancelled, re arranged or an alternative examination being untaken.

What happens during the CESM procedure?

The staff will explain the procedure in detail to you to ensure that you are happy to go ahead with the examination, please feel free to ask any questions.

You will be asked to complete a health questionnaire before you come into the examination room; this is to ensure that you have no health issues that would prevent you from having a CESM examination.

When you enter the X-Ray room you will be asked to take a seat and make yourself comfortable. A tight band (tourniquet) will be placed around your arm and a small plastic tube (cannula) will be inserted into a vein usually in the crease of your elbow or back of your hand. This should not be painful, but you will feel a sharp scratch. Once the cannula is in place you will be given an injection of the X-Ray dye, this may make you feel a bit warm, have a metallic taste in your mouth and feel like you are wetting yourself when it is first injected, this is quite normal and nothing to worry about.

The Radiographer will then ask you to remove your gown and she will position you for your mammogram. Your breasts will be placed onto the mammography machine and compressed (squashed) firmly with the plastic plate on the machine. This may feel a little uncomfortable, but it only lasts for a few seconds. The compression is important as it keeps the breast still and helps us to get clearer pictures.

If you have tender breasts, please let the Radiographer know before she applies the compression.

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After your mammogram with the cannula still in place, you will be asked to wait until the images have been checked. Once this is done the cannula will be removed.

What are the risks of CESM

Mammography uses X-Rays to produce an image of the breasts. All X-Rays involve radiation, the amount of radiation used in mammography is very small, equal to the amount of natural radiation we all receive from the environment over a couple of months. The amount of radiation in CESM is slightly higher than for a normal mammogram but is still well within the accepted safety limits. The radiation dose is equivalent to the radiation you would receive on a flight to Australia.

If you might have breast cancer, then the risk of not having the examination is greater than the risk from radiation.

The X-Ray dye you will be injected with is very safe and is used widely in X-Ray departments every day. The health questionnaire you complete will help the Radiographer assess if there is any risk to you, for example if you have any allergies particularly an allergy to iodine as this is in the dye. The Radiographer will refer to the Radiologist if there are any queries.

About 3% of patients will experience a mild reaction such as a rash which does not require any treatment and goes away by itself. 1 in 2500 patients will experience a severe reaction which requires further treatment. The Radiographers are trained to notice the signs of a reaction and will give treatment immediately, if required.

Very occasionally the dye can leak out of the vein into the fleshy tissue around the injection area (extravasation). This can be very uncomfortable but the staff are trained to position the needle carefully and to watch the area for any signs that the dye may be leaking.

The X-Ray dye can affect your kidneys however this is in less than 1 in 100 people. You may be given a blood test to check how your kidneys are working if this is thought to be an issue for you. Your doctor will discuss this with you. If necessary, the blood test can be done on the day of the examination in the Breast Unit.

When should I not have CESM

If you have any of the following you should not have CESM:

- Breast implants
- Allergy to Iodine
- Kidney failure
- You are unable to tolerate a mammogram for any reason
- You are unable to give informed consent

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How do I prepare for CESM

There is no special preparation for a CESM, you should continue to take any prescribed medications and eat and drink as normal. Please let the breast unit know if you have diabetes so we can arrange your appointment for a suitable time.

What will happen after CESM

After your CESM you may require further tests such as ultrasound or possibly a breast biopsy. This will depend on the results of the CESM and your doctor will discuss this with you so you can be involved in deciding the best tests and treatment for you.

Most women feel fine after the procedure, you may eat and drink normally and resume your usual activities however if you do feel concerned or unwell, please contact us.

Breast Unit, 9am – 5pm Monday – Friday: **01494 425689**.

Weekends or after 5pm please contact out of hours GP or 111 for advice using this leaflet to explain the procedure you have had.

Please remember that this leaflet is intended as general information only. We aim to make the information as up-to-date and accurate as possible, but please note that it is subject to change. Please therefore always check specific advice on any concerns you may have with your doctor.

How can I help reduce healthcare associated infections?

Infection prevention & control is important to the well-being of our patients and for that reason we have infection prevention & control procedures in place. Keeping your hands clean is an effective way of preventing the spread of infections. Please follow our infection prevention and control guidelines when visiting our healthcare sites. Further information is available on our website.

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If you would like a copy of this information on audiotape, in large print or translated, please call the Patient Advice Liaison Service on 01296 831120 or email bht.pals@nhs.net