

What is a Contrast Enhanced Mammogram (CEM)?

Your doctor has referred you for a Contrast Enhanced Mammogram (CEM) because a lump or area of breast tissue requires further imaging.

A CEM includes an injection of iodinated contrast and may be performed at the same time as your usual mammogram, or it may be an additional mammographic examination. Iodinated contrast contains iodine and is sometimes called “x-ray dye”. It is the same contrast used in CT scans. The contrast makes it easier for our specialist doctor (radiologist) to see cancers because of the new blood vessels that develop in some lesions.



How long will the procedure take?



The Contrast Enhanced Mammogram takes about 30 mins which is 15 mins longer than a conventional mammogram. This is due to the insertion of a cannula into your arm as well as allowing time for the mammogram. Please allow for the examination to take up to 1 hour as you will be required to wait up to 30 mins after the injection before the cannula is removed.

Is there any special preparation required?

When booking your appointment, it is essential that you inform our staff if you have any allergies, any problems with your thyroid, take diabetes medication containing Metformin, or are pregnant or breastfeeding.

If you take diabetes medication that contains **Metformin**, you may need to stop taking it for a few days before this CEM, but only if it is known that your kidney function is poor. It is very important that you do not stop any medications without consulting with our radiology clinical staff and your own doctor. They will give you specific instructions about when to stop and restart the medication. A simple blood test to measure your kidney function may be required before and after the CEM. You should continue with all other medications as usual.

What do I need to do on the day of the procedure?

On the day of your appointment, please wear a two-piece outfit, as you will need to have your upper body uncovered for the procedure. Do not wear talcum powder or deodorant on the day of your procedure as this can look like calcium spots on the mammogram (breast x-ray) and may affect the accuracy of your CEM.

On the day of your appointment, please ensure you bring:

- Your request form (if you have it)
- All previous relevant scans or x-rays
- Medicare and healthcare cards (e.g., DVA card or concession card)
- List of all medications

What happens during the examination?

Prior to the CEM, our clinical staff (radiographer or nurse) will discuss the examination with you, including the need for the injection of iodinated contrast and any risks specific to you. You will be provided the opportunity to ask questions.

An IV cannula (“drip”) will be put into a vein in your arm so that you can have the injection as part of the mammogram; this will be done by one of our clinical staff -a radiologist, radiographer, or nurse.

When having an injection of iodinated contrast into their vein, most patients will not notice any sensations, but some patients notice a very warm feeling that spreads throughout their body for about 20 seconds during and after the injection. This is often concentrated around the groin area, and you may think that you are passing urine, but you are not. It is very common and goes away quickly. Occasionally, patients feel nauseous

(like vomiting) for a short time during and after the injection. Please let the staff know if you experience any unusual symptoms such as dizziness, difficulty breathing or feeling as though you are going to faint.

You will have to wait for two minutes after the injection and then you will have the CEM images taken.

Are there any after effects from the injection of contrast?

Most people feel fine after an injection of iodinated contrast. However, once you have left our imaging centre if you become or feel unwell or notice anything wrong, go to your nearest Emergency Department or GP. Serious reactions to contrast very rarely occur more than 1 hour after the contrast is given.

What happens after the examination?

You will be able to eat and drink as normal following the examination.

If you are diabetic or have kidney problems, our staff will provide you with clear written instructions on ways to look after yourself following the injection of iodinated contrast. This includes information such as arranging a follow-up appointment with your GP to check how well your kidneys are working before you re-start your diabetic medication if you had to stop it.

You will be required to wait for up to 30 mins after the contrast injection before the cannula can be removed.

What are the benefits?

If there is an area of concern in your breast, CEM has been shown to find breast cancers that cannot be seen on regular mammograms, especially in women with dense breasts. The use of iodinated contrast will provide additional information to the radiologist who is going to interpret your imaging (the pictures taken when you have your mammogram). This additional information will often lead to a more accurate diagnosis. CEM may also be used to provide further detail for patients with inconclusive findings on other imaging examinations (e.g., MRI or ultrasound).

Are there any risks?

In referring you for this CEM, your doctor believes that the benefits of this examination for you are greater than the risks of having the injection of iodinated contrast. The risks and complications with contrast media can include but are not limited to the following:

- Leakage of contrast media outside the blood vessel.
- Kidney related side effects
- Allergic reactions

These risks are minimised by our staff asking you questions before giving the injection of iodinated contrast.

In the event that you may experience one of these side effects, the imaging centre will have personnel who are suitably trained and appropriate medication and equipment to treat a contrast reaction.

There is a slight increase in radiation dose compared to a conventional mammogram; it is similar to having five pictures taken instead of four.

When do I get the results?

The radiologist will send a report outlining the procedure to your referring doctor (this could be your family doctor, a breast surgeon, or a breast physician). It is important that you make a follow-up appointment with your referring doctor so that they can discuss the results with you.

I still have questions, who can I ask?

Medical information can be complex, and you may receive information that you do not fully understand. It is important for you to consider the risks and outcomes of the procedure as well as your personal needs before making a decision to undergo the procedure.

If you have read this information and are still unsure if this is the correct procedure for you; before making a booking, you should discuss your questions or concerns with your referring doctor in the first instance. Your regular GP and/or your family may also be a useful resource. Your referring doctor can answer questions about the risks and benefits of not having the procedure and other options for treatment.

If you have questions before your appointment about what is involved on the day, our staff would be happy to assist. Please contact the imaging centre where you have made your appointment.