Contrast Enhanced Digital Mammogram

This information explains contrast enhanced digital mammograms (CEDM) at Memorial Sloan Kettering (MSK).

About Your CEDM

A mammogram is a test that takes x-ray pictures of your breast. A CEDM is a mammogram that uses iodinated contrast dye. This dye makes it easier to find new blood vessels that develop when cancers grow.

Why may I need a CEDM?

Your healthcare provider may recommend that you have a CEDM to:

- Screen for breast cancer. CEDMs may be useful especially for women who are at increased risk for getting breast cancer and for women who have dense breasts.
- Check any lumps in your breast(s) that were found during a physical exam.
What are the benefits of a CEDM?
CEDMs find breast cancers that can’t be seen on regular mammograms, especially in women with dense breasts.

What are the risks of a CEDM?
People who get CEDMs are exposed to slightly more radiation than people who get regular mammograms. This additional radiation is about the same as getting 1 extra mammogram picture taken (5 pictures instead of 4).

Some people can have an allergic reaction to intravenous (IV) contrast dye. Most reactions are mild, such as hives. Some people can have more serious reactions, such as having trouble breathing or swelling of the face. If you’ve had a reaction to contrast dye in the past, tell your healthcare provider.

IV contrast dye can also affect how your kidneys work. Tell your healthcare provider if you have any problems with your kidneys.

Who shouldn’t get a CEDM?
CEDMs aren’t safe for everyone. You can’t get a CEDM if you:

- Have ever had an allergic reaction to iodinated contrast dye in the past.
- Have kidney disease or poor kidney function.
- Are pregnant or breastfeeding.
What are the differences between CEDM and a 3D mammogram?

A CEDM is different from 3D mammograms (also known as tomosynthesis). 3D mammograms use multiple thin images to evaluate the breast. This is similar to what a computed tomography (CT) scan does.

Your healthcare provider may also recommend you have a CEDM instead of a 3D mammogram if you have dense breasts.

Will I need to have other imaging or testing with CEDM?

Just like with a regular mammogram, you may need to have additional tests after your CEDM. These may include an ultrasound, magnetic resonance imaging (MRI), or a biopsy.

Before Your CEDM

Creatine blood test

If you’re older than 70 years of age or have diabetes, you will need to have a blood test called a serum creatinine before your CEDM. This test checks to see how your kidneys are working. You will need to have a serum creatinine test within 3 months (12 weeks) before your CEDM.

Metformin

If you’re taking metformin (a medication for diabetes), you may need to stop taking it for 2 days after your test depending on your creatinine results. Your radiology team will give you more information.
The Day of Your CEDM

- You can eat a light meal (such as a sandwich or soup) on the day of your CEDM. The contrast dye may cause some mild nausea.

- Don’t put on any deodorant, lotion, cream, powder, talc, oils, perfume, or cologne before your CEDM.

- Your healthcare provider will insert an IV line in your arm to give you your IV contrast dye. Your CEDM will start 2 to 3 minutes after you get your contrast dye.

- You may feel a warm sensation as you’re getting the IV contrast dye. This is normal.

- Let your healthcare provider know if you have pain at your IV site or if you feel any unusual symptoms such as itchiness, swelling, dizziness, trouble breathing, or feeling like you’re going to faint.

- A CEDM takes about 20 minutes longer than a regular mammogram. This extra time is needed for the contrast dye portion of the test.

- You should plan to be at your appointment for about 90 minutes for the CEDM, in case other tests are needed.
After Your CEDM

- If you’re going home after your CEDM, your nurse will remove your IV and place a bandage (Band-Aid®) over the area. You can remove the bandage after 1 hour as long as there is no bleeding.

- Most people get the results from their CEDM the same day as their test. Your radiologist will tell you if you need any more imaging tests (such as an ultrasound or MRI) or a biopsy.

- Drink 6 to 8 (8-ounce) glasses of water in the 24 hours after your CEDM. Drinking water will help remove the contrast dye from your body.

- If you stopped taking metformin, your radiology team will let you know when you can start taking it again.

If you have any questions, contact a member of your healthcare team directly. If you're a patient at MSK and you need to reach a provider after 5:00 PM, during the weekend, or on a holiday, call 212-639-2000.

For more resources, visit www.mskcc.org/pe to search our virtual library.