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 might I need a CEDM?

Your doctor may recommend that you have a CEDM for:

- Screening for breast cancer. CEDM may be useful especially for women who are at increased risk for getting breast cancer and for women who have dense breasts.
- Evaluating 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 IV contrast. Most reactions are mild, such as hives. Some people can have more serious reactions, such as
having trouble breathing or swelling of the face.

IV contrast can also affect how your kidneys work. Tell your doctor 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 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.

A CEDM uses slightly more radiation than a regular mammogram while 3D mammograms use twice as much as regular mammograms. CEDM is also preferred over 3D mammograms for extremely dense breasts.

**Will I need to have other imaging or testing with CEDM?**
Just like with regular mammogram you may need to have additional tests to evaluate your CEDM findings. 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 may cause some mild nausea.

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

Your nurse or radiologist will insert an intravenous (IV) line in your arm to give you your IV contrast. Two to 3 minutes after you get your contrast, you will have your CEDM done.

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

Let your nurse or technologist know if you have pain at your IV site or if you feel any unusual symptoms such as itchiness, swelling, dizziness, difficulty 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 portion of the test.

You should plan to be at your appointment for about an hour and a half 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 an 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 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 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.