



Breast Imaging & You



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MIC is committed to excellence in breast imaging.

MIC offers our patients the most advanced breast imaging which can detect cancers at a very early stage.

Our standard of care is world-class with Digital Breast Tomosynthesis (DBT) for all screening and diagnostic mammograms and Automated Breast Ultrasound (ABUS) as part of our screening protocol for women with dense breast tissue.

Your breast health is important to us and we hope you use the information in this booklet and on our website **mic.ca** to learn more about our breast imaging services, the importance of regular screening mammograms and some of the causes of breast pain. At the end of the booklet, you will find a chart to keep track of your breast imaging.



+ Your healthcare practitioner

+



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Accurate imaging, early detection and better outcomes

Breast Imaging

Breast imaging uses diagnostic imaging equipment to look at the tissue inside your breasts and assess whether there are any abnormalities.



Why is it so important?

Breast imaging can help detect breast cancer at the very early stages – often two years before you or your health care practitioner might notice a lump or other symptom. In addition, breast imaging gives your healthcare team information to help:

- Assess breast symptoms such as lumps, tenderness or nipple discharge.
- Identify the type, location and stage of breast cancer.
- Determine the results of cancer treatment.
- Evaluate breast implants.

MIC's breast imaging team

MIC's team is made up of skilled technologists and radiologists who specialize in breast imaging.

Our experts review every image and provide a report to your healthcare practitioner, usually within 24 hours.

Our Breast Imaging Services



DBT Mammography

Screening and diagnostic mammograms using the most advanced technology available: Digital Breast Tomosynthesis (DBT) for all patients.



Breast Ultrasounds

Screening ultrasounds using Automated Breast Ultrasound System (ABUS) for women with dense breast tissue.

Diagnostic ultrasounds to check abnormal results from a mammogram or to screen women who are pregnant or should not be exposed to x-rays.



Breast interventions

Breast interventions such as cyst aspiration or image-guided biopsies further explore any abnormalities found during these exams.



Breast MRIs

Very detailed images of the breast using our powerful 3T MRI scanner to supplement mammograms and ultrasound.

MIC performs over **35,000** DBT mammograms each year



DBT mammograms can show changes in your breasts up to **2 years before** you might find a lump



1 in 8 women will be diagnosed with breast cancer in their lifetime

DBT Mammograms

MIC uses Digital Breast Tomosynthesis (DBT) for all mammograms. DBT is an advanced form of mammography that combines a low-dose x-ray system and computer reconstructions to create three-dimensional (3-D) images of the breasts.



DBT has been shown to improve cancer detection rates while reducing the number of patients recalled for additional imaging and biopsies.

During your exam, one of our technologists will place your breast on a detector platform and it will be gradually compressed with a plastic paddle. This helps to:

- Even out the breast thickness so that small abnormalities are less likely to be hidden by overlapping breast tissue.
- Lower the radiation dose since a thinner amount of breast tissue is being imaged.
- Hold the breast still during imaging.

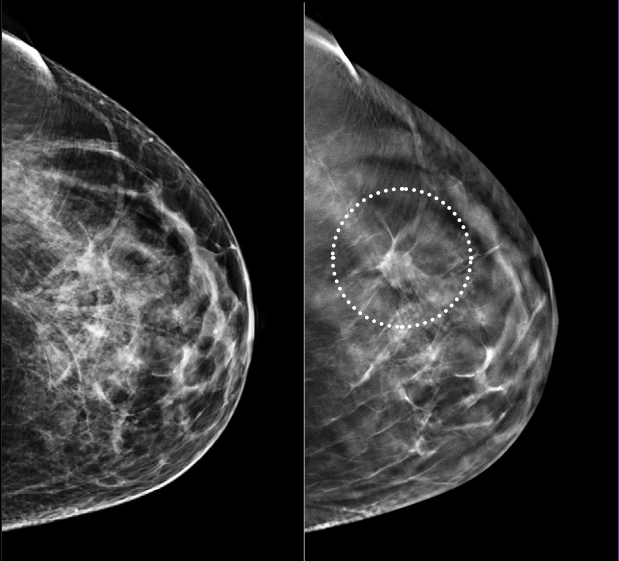
Your breast will remain compressed while the x-ray tube moves from one side of your breast to the other in an arc, capturing multiple images from different angles.

Screening DBT Mammograms

Mammograms are used as a screening tool for early detection of breast cancers in patients who are not experiencing any problems or symptoms with their breasts. Screening mammography can show changes in the breast up to two years before a patient or practitioner can feel them. DBT screening mammography has been shown to improve accuracy and reduce the need for further imaging in women of all breast densities.

Diagnostic DBT Mammograms

Diagnostic mammograms are used to evaluate a patient who has either had breast cancer or is experiencing symptoms such as a breast lump, pain or nipple discharge. Diagnostic mammograms may also be used to check an area of concern on a screening mammogram. In these circumstances additional imaging will be performed.



Conventional 2D mammogram

DBT 3D mammogram: Cancer detected



Breast cancer screening

About 1 in 8 women in Alberta will be diagnosed with breast cancer during their lifetime. Screening mammograms are a straightforward, simple procedure and the best way to find breast cancer early, when treatment may work better.

The risk of breast cancer increases as you get older and Alberta's *Screening for Life* program uses the following guidelines for screening mammograms depending on your age and other factors:

Under 40

If you are under 40, the risk of breast cancer is much lower and generally, there is no benefit in having screening mammograms. Talk to your healthcare practitioner if you are concerned that you may have an increased risk of breast cancer.

Ages 40-49

If you are between 40 and 49, talk to your healthcare practitioner about your breast cancer risk and whether you should start screening mammograms. If you decide to start having screening mammograms, then you should have one each year.

Your healthcare practitioner will give you a referral for your first screening mammogram. After that, you can book your own yearly appointments without a requisition form.

Ages 50-74

If you are between 50 and 74, it's important to have regular screening mammograms since the risk of breast cancer increases as women get older. You should book a screening mammogram every two years and check with your healthcare practitioner to make sure this schedule is right for you.

Over 75

Talk to your healthcare practitioner to decide whether you should continue to have regular screening mammograms as part of your breast health routine.



More than 3 out of 4 women diagnosed with breast cancer in Alberta are 50 or older.



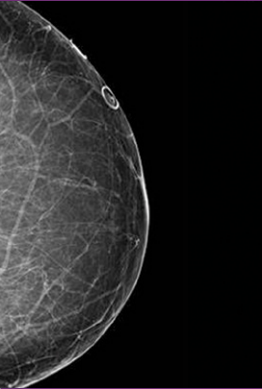
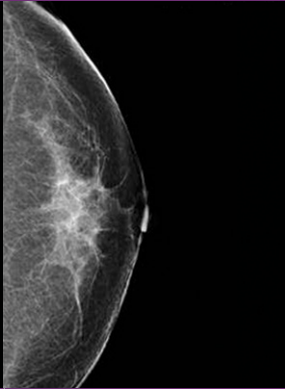
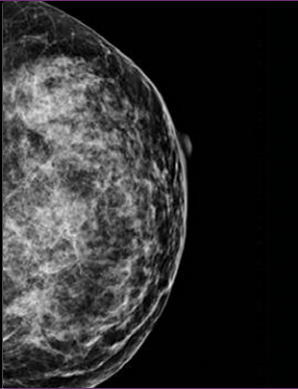

of women who develop breast cancer have no family history.

Breast cancer screening saves lives. To learn more, visit: screeningforlife.ca

Dense breast tissue

When we talk about dense breasts, we are referring to the type of tissue found inside your breasts. While some breasts are made up almost entirely of fatty tissue, others are made of thick, fibrous tissue and milk glands – or dense tissue.

MIC's radiologists use the following classification developed by the American College of Radiology to describe breast tissue:

			
a. The breasts are almost entirely fatty.	b. There are scattered areas of fibroglandular density.	c. The breasts are heterogeneously dense (more than 50% dense tissue) which may obscure small lesions.	d. The breasts are extremely dense (more than 75% dense tissue) which lowers the sensitivity of mammography.



When you have a screening mammogram at MIC, your radiologist will include a description of your breast tissue in the report we send to your healthcare practitioner.



Automated Breast Ultrasound for women with dense breast tissue

Dense breast tissue can make it harder for radiologists to find cancer on a mammogram since it can mask the appearance of tumors and may slightly increase your breast cancer risk.

To get a better look at dense breast tissue, our screening protocol is a Digital Breast Tomosynthesis mammogram supplemented by an Automated Breast Ultrasound (ABUS).

This combination of advanced technologies has been proven to increase detection of breast cancer by up to 36% in women with dense breasts compared to using only mammography.



How does ABUS work?

The Automated Breast Ultrasound System (ABUS) uses a wide transducer that automatically scans your breast creating hundreds of 3-D breast tissue images. This gives our radiologists a much more complete picture of dense breast tissue, allowing them to view abnormalities more clearly.

ABUS looks at dense breast tissue differently to find small cancers that cannot be seen on a mammogram.



Factors affecting breast density include: age, family history, pregnancy, and hormone therapy.

Abnormalities and further testing



If your radiologist finds an abnormality on your mammogram, they may request additional testing. There is no question that this can be stressful, but 9 out of 10 women who go for extra tests do not have breast cancer.

Some common breast abnormalities that are not cancer include:

- Fluid-filled sacs (cysts). Up to 60% of women will have these at some point in their lives.
- Small solid nodules (fibroadenomas).
- Small calcium deposits (benign calcifications).

While only a very small number of abnormalities will be cancer, you should follow the recommendations of your MIC radiologist for additional testing. These follow-up tests are the only way your radiologist can determine whether there are any abnormalities requiring further investigation.

→ **90%**
of women who
have additional
tests do not
have breast
cancer



Diagnostic mammography

Your radiologist may ask the technologist to obtain additional images through mammography. This is called a diagnostic mammogram and it will often be performed before your appointment is over.



Diagnostic breast ultrasound

Your radiologist may want to look more closely at a targeted area in your breast tissue and may request a diagnostic breast ultrasound. This is a safe, painless procedure which uses high-frequency sound waves to produce pictures of the internal structures of your breast and axilla (armpit).

Your practitioner may request a diagnostic ultrasound if you have a lump or you are having pain and tenderness that is not usual for you. It can also be used as a screening tool for women who are pregnant or should not be exposed to x-rays (necessary for a mammogram).



Breast Magnetic Resonance Imaging (MRI)

MIC's powerful new 3T MRI scanner produces very detailed pictures of the structures of the breast to supplement mammograms and ultrasound, particularly for women at high risk for breast cancer due to family history. The 3T MRI helps our radiologists determine the extent and staging of cancer, diagnose breast implant rupture and assess the effectiveness of cancer treatment.

Breast MRI in community clinics is not insured by Alberta Health Care.



Breast interventions

If your healthcare team has been unable to determine whether an abnormality is harmless through mammography and ultrasound, the next step is to test some of the tissue for cancer cells.

A breast biopsy is a procedure used to find out more about lumps or abnormalities that have been detected in your breast tissue.



To perform the biopsy, your MIC radiologist will use either ultrasound or a special mammography machine to guide a fine needle to the suspicious area in your breast and obtain a tiny tissue sample. This sample is then sent to a laboratory to determine whether the growth is benign or cancerous and the results will be sent to your healthcare practitioner.

If your testing shows you have a cyst in your breast tissue, your MIC radiologist can perform a simple procedure to remove the fluid. This can help relieve any discomfort you may have from the cyst.



Ultrasound-Guided Core Biopsy

Ultrasound is used to guide a special hollow needle to the abnormality in your breast and take a tiny cylinder-shaped (core) sample of tissue.

Tomosynthesis or Vacuum Assisted Breast Biopsy

A special mammography machine is used to guide a needle to the abnormality in your breast to take a small tissue sample.

Wire Localization Procedure

Ultrasound is used to insert a fine wire in your breast to mark the exact location of the area of concern before a surgeon removes the lump or abnormal tissue.

Cyst aspiration

Ultrasound is used to guide a very thin needle and syringe to the abnormality in your breast to remove fluid, usually to relieve symptoms such as pain.

All procedures are performed under local freezing.

Breast Pain

70%

Breast pain is one of the most common breast problems and affects up to 70% of women at some point in their lifetime.

Many women have breast tenderness and pain, also called mastalgia. It may come and go with monthly periods (cyclic) or may not follow any pattern (non-cyclic).

Breast pain can get worse with changes in your hormone levels or the medicines you are taking. Stress can also affect breast pain. You are more likely to have breast pain before menopause than after menopause.

Cyclical breast pain

Very common
Usually in both breasts
Caused by monthly hormonal changes
Feels like heaviness or soreness in breast that radiates to armpit and arm
Pain is most severe before menstrual period
Found more often in younger women
Generally does not need treatment and goes away after menopause

Non-cyclical breast pain

Not as common
May only be felt in one breast
Not caused by monthly hormonal changes
A sharp, burning pain that occurs in one area of the breast
Pain is not related to menstrual period
Most common in women ages 30-50
Some pain may be caused by a cyst or benign growth (fibroadenoma). Treating the cause may relieve the pain.

Does breast pain indicate breast cancer?

Breast pain is not a common symptom of breast cancer. However, in some cases painful lumps are caused by breast cancer.



Treatment of breast pain

You should discuss your symptoms with your healthcare practitioner if your breast pain becomes severe or lasts longer than three weeks. Your practitioner may recommend one of the following:

Over the counter pain relief

- You may be able to relieve breast pain by using a non-prescription medicine such as: Acetaminophen (e.g. Tylenol) or non-steroidal anti-inflammatory drugs (NSAIDS) including ibuprofen (e.g. Advil or Motrin), naproxen (e.g. Aleve), or aspirin (e.g. Entrophen).
- If you are pregnant or trying to become pregnant, talk to your doctor before using any medicine. Do not take aspirin if you are younger than 20 because of the risk of Reye syndrome.

Breast imaging

- A mammogram and/or ultrasound to rule out another cause for your breast pain such as cysts.

Prescription medicines

- Birth control pills (oral contraceptives) may help reduce cyclic breast pain and breast swelling before periods. However, breast pain is also a known side effect of birth control pills.

You may also be able to relieve breast pain by:

- Taking magnesium supplements in the second half of your menstrual cycle.
- Eating a very low-fat diet.
- Wearing a well-fitted, supportive bra.
- Reducing the amount of caffeine you consume.

To learn more, visit **MyHealth.Alberta.ca**

Keep track of your breast imaging

Knowing your breast imaging history helps make you an active partner in your health care and gives MIC the information we need to compare your images and make note of any changes. This chart can help you keep a record of your breast imaging and when to schedule your next appointment.



Type of procedure	Procedure date	Referring Practitioner	Procedure Clinic	Notes/results	Next appointment



❖ Taking control of your breast health

No matter how old you are, you need to know what looks and feels normal for you. Follow the screening and testing recommended by your MIC radiologist and your healthcare practitioner.

If you notice any unusual changes in your breasts, talk to your healthcare practitioner.

How to book an appointment

MIC offers breast imaging at clinics throughout the Edmonton area.
To book an appointment at a location convenient to you, contact us at:



Central Booking

Ph: 780.450.1500

Fax: 780.450.9551

Toll Free 1.800.355.1755

When you call, please have available:

- Your Alberta Health Care Insurance card
- Your exam requisition with your healthcare practitioner's exam instructions

Note: MIC accepts all diagnostic imaging requisitions.

mic.ca

