

Breast cancer

For Listuguj Community
Health Service team



General objectives



- Learn more about breast cancer
- Acquire the knowledge needed to assist patient with breast cancer screening
- Understand the stages of clinical investigation following a positive result
- Work interprofessionally with physician, surgeon, technologist and coordinator

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What is breast cancer?



Risk and protective factors



PQDCS



Tests (mammogram, ultrasound and biopsy)



Treatment

Introduction



What is breast cancer

Breast cancer is a disease characterized by the uncontrolled growth of abnormal breast cells, which then form tumors. If left unchecked, tumors can spread throughout the body, with fatal results.

Mammary cancer cells originate in the milk ducts and/or milk-producing lobules. The earliest form (in situ) is not life threatening, and can be detected at an early stage. Cancer cells can spread to neighbouring breast tissue (invasion), causing tumours to form masses or thicken.

Invasive cancers can spread to surrounding lymph nodes or other organs (metastasis). Metastases are potentially fatal.

Type of breast cancer

Usually classified by :



1.

Type of
tissue in
which the
cancer start



2.

Extent of
the cancer's
spread



3.

Type of
tumor
receptors on
the cancer
cells

1. Type of tissue

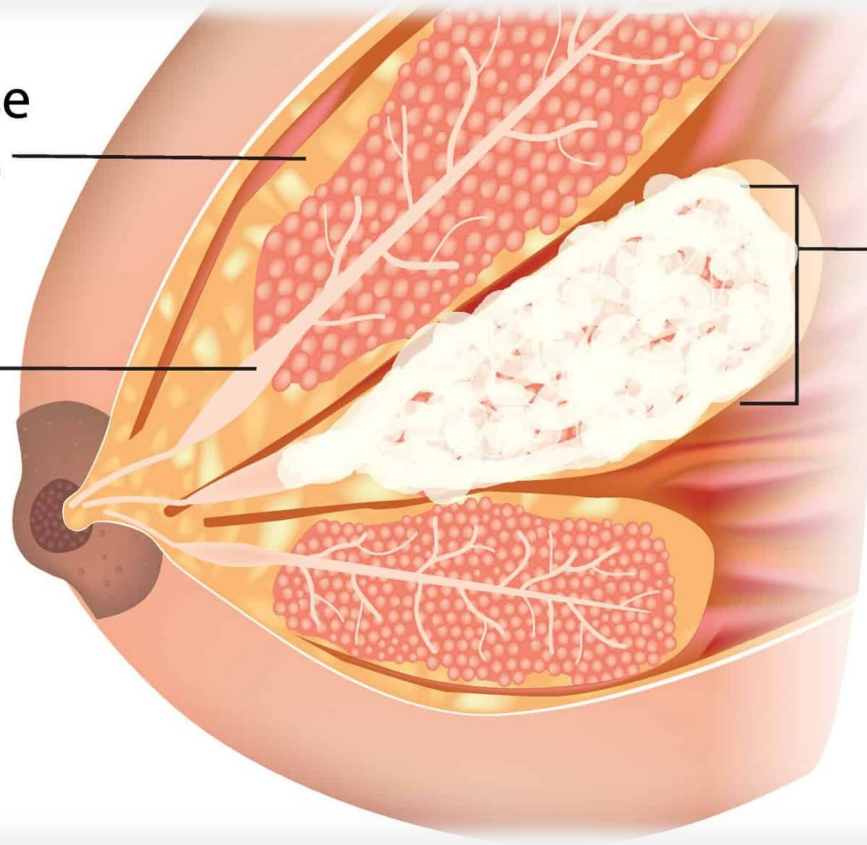
Called sarcoma (rare)

Adipose
tissue
(Fat)

Ducts

Lobules

Called lobular carcinoma



Called ductal carcinoma

2. Extent of spread

- Breast cancer can stay within the breast or spread to other parts of the body.
- Cancer cells tend to move into the lymphatic vessels in the breast. Most of these vessels drain into the axillary lymph nodes (in the armpit).
 - Lymph nodes help filter and destroy abnormal or foreign cells, such as cancer cells.
 - If cancer cells pass beyond these nodes, the cancer can spread to other parts of the body.
- Common sites of metastasis include: **bones, brain, lungs, liver, skin**
- Breast cancer can reappear in these areas years or even decades after diagnosis and treatment.

2. Extent of spread

Carcinoma in situ : Means that the cancer is in place but has not invaded the surrounding tissues or spread to other parts of the body

Ductal carcinoma in situ	Lobular carcinoma in situ
- Confined in the milk ducts - Represent 85% of carcinoma in situ and at least half of breast cancer - Can become invasive	- Develops within the milk producing glands or lobules - Usually can not be seen on a mammogram and is detected only by biopsy - Women who have lobular carcinoma in situ have 1 to 2% chance of developing invasive breast cancer in the future

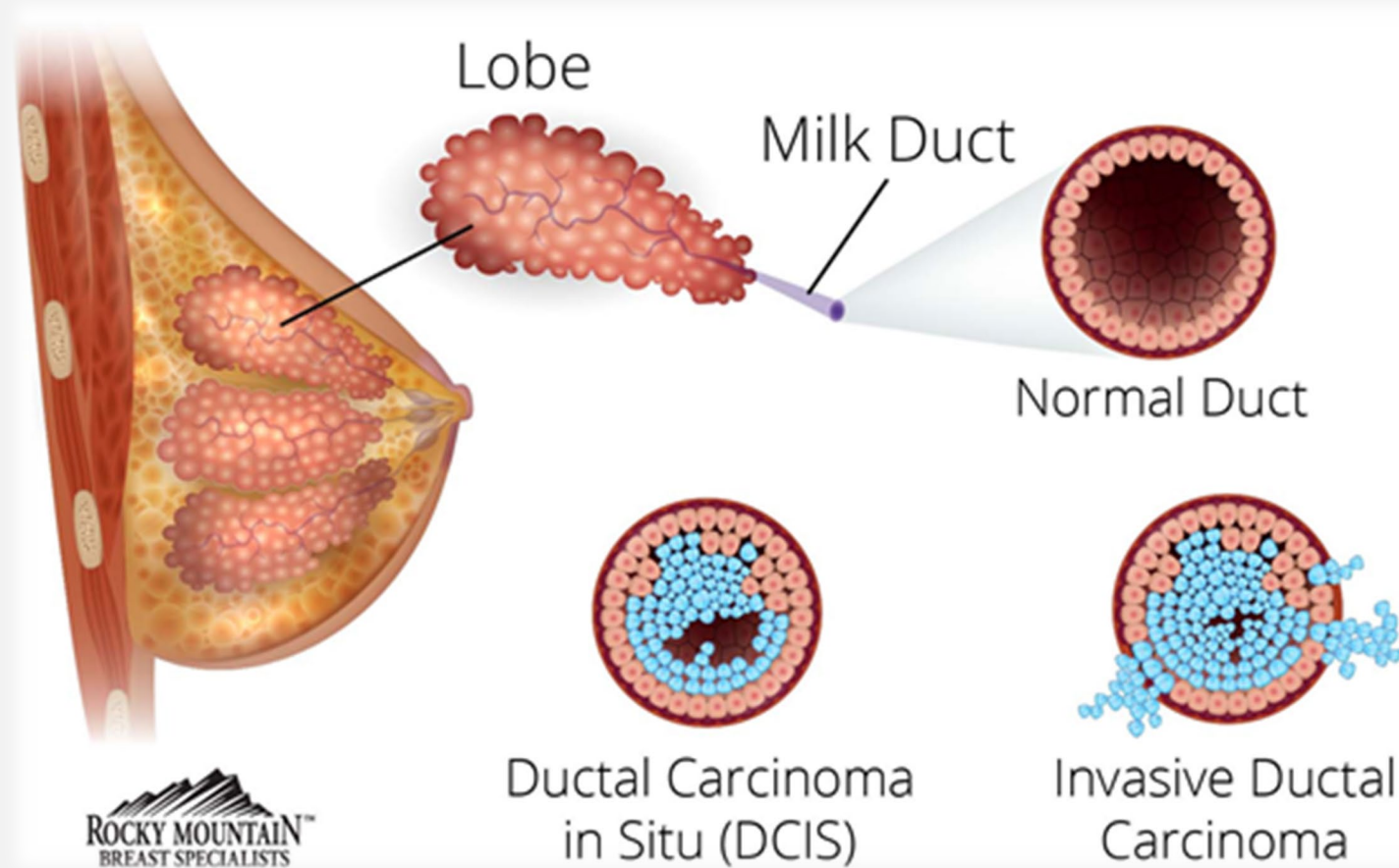
2. Extent of spread

Invasive cancer :

- Localized : confined to the breast
- Regional : invaded tissues near the breast, such as the chest wall or lymph nodes
- Distant (metastatic) : spread to other parts of the body

Invasive ductal carcinoma	Invasive lobular carcinoma	Rare types of invasive breast cancer
- Begins in the milk ducts but breaks through the wall of the ducts - Accounts for about 75% of invasive breast cancer	- Invaded surrounding breast tissue - More likely than other to occur in both breast	- Medullary carcinoma - Tubular carcinoma - Metaplastic carcinoma - Mucinous carcinoma

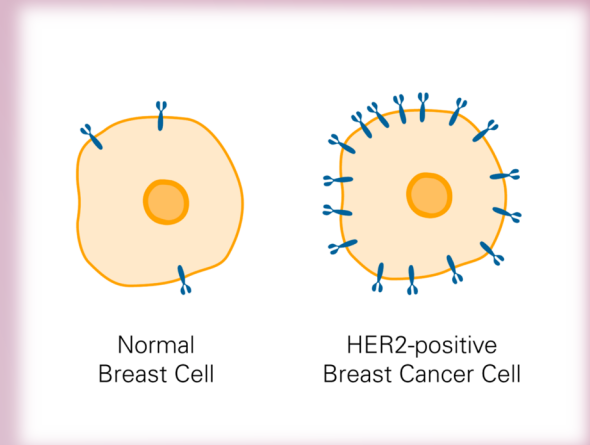
Difference between in situ and invasive carcinoma



3. Tumor receptors

All cells, including breast cancer cells, have molecules on their surfaces called receptors. A receptor has a specific structure that allows only particular substances to fit into it and thus affect the cell's activity. Whether breast cancer cells have certain receptors affects how quickly the cancer spreads and how it should be treated.

- **Estrogen and progesterone receptors:** Some breast cancer cells have receptors for estrogen.
 - The resulting cancer, described as estrogen receptor–positive, grows or spreads when stimulated by estrogen. Approximately 80% of postmenopausal and 20% of premenopausal women with breast cancer have estrogen receptor–positive cancer. Some breast cancer cells have receptors for progesterone.
 - The resulting cancer, described as progesterone receptor–positive, is stimulated by progesterone. Approximately 70% of all breast cancers are progesterone receptor–positive.
 - Breast cancers with estrogen receptors and possibly those with progesterone receptors grow more slowly than those that do not have these receptors, and the prognosis is better.
- **HER2 (also called HER2/neu) receptors:** Normal breast cells have HER2 receptors, which help them grow. (HER stands for human epithelial growth factor receptor, which is involved in multiplication, survival, and differentiation of cells.) In about 15% of breast cancers, cancer cells have too many HER2 receptors. Such cancers tend to be very fast growing.



High socio-economic status

Large stature at adulthood

Physical inactivity

Personal history of breast cancer

Obesity

Family history of breast cancer

Alcohol

Risk factors

Gene mutation

Atypical hyperplasia

Dense breasts

Oral contraceptive

Genetic disorders

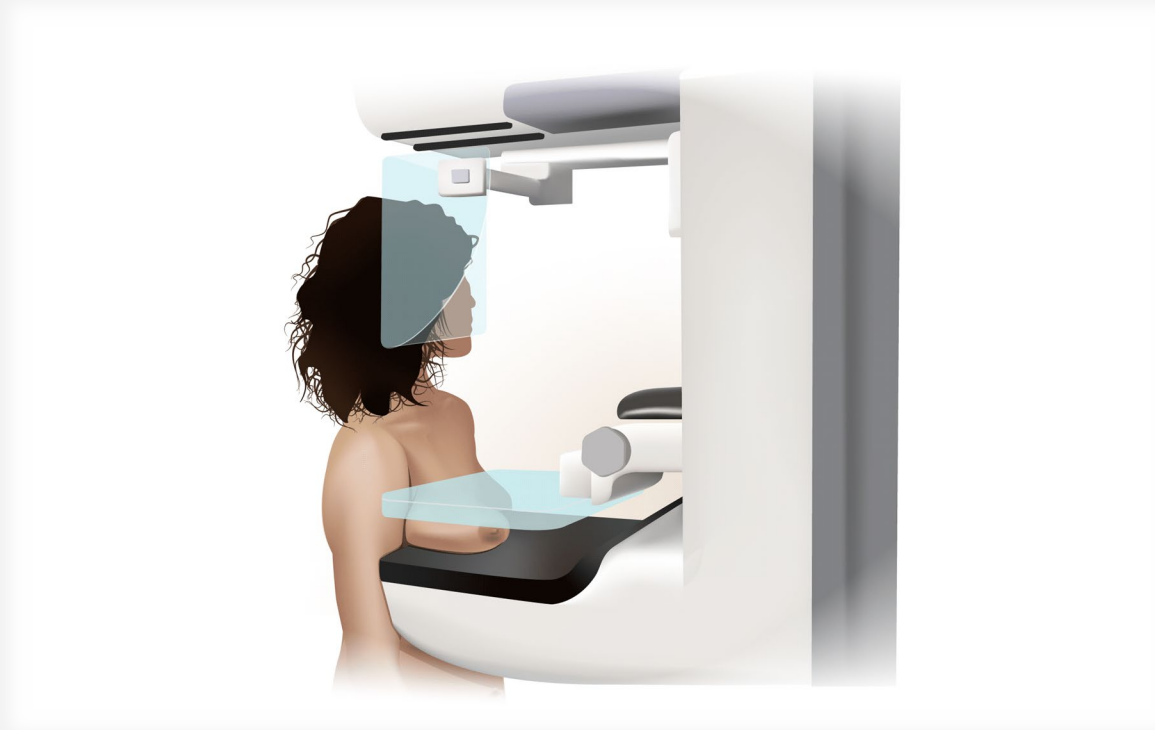
Hormone replacement therapy

Exposure to ionizing radiation

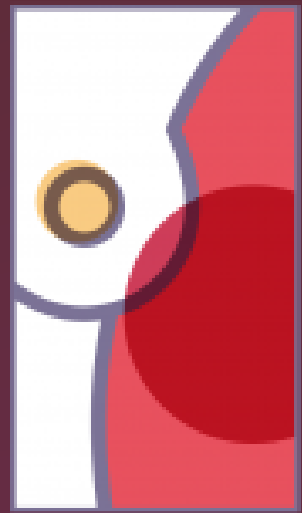
Reproductive history

Protective factor

Mammogram



PQDCS : Screening program



PROGRAMME
QUÉBÉCOIS
DE DÉPISTAGE
DU CANCER
DU SEIN

- The Ministère de la Santé et des Services sociaux launched the Programme québécois de dépistage du cancer du sein (PQDCS) in May 1998.
- The PQDCS invites Quebec women aged 50 to 74 to undergo breast cancer screening mammography every 2 years.
- The goal of the PQDCS is to reduce breast cancer mortality among women aged 50 to 74 by at least 25%. The results obtained since the conception of the PQDCS are consistent with this objective, and support the continuation of the program's activities.

Eligibility criteria and exclusion criteria



- Between the ages of 50 to 74
- Covered by Quebec's public health insurance plan



- Already had breast cancer : these women need to have personalized medical follow-up

Women under 50 or over 74 should discuss the advantages and disadvantages of mammography screening with their doctor. Depending on their personal risk of breast cancer, the doctor may prescribe a screening mammogram or any other relevant medical exam.

How does the program works?



Letters

Letter is send every 2 years and women are free to decided if they want to participate or not.

Letters do not always reach their destination due to address changes. That is why we want them sent directly to the Health Center so that no one is forgotten or falls between the cracks.



Take and go to your appointment

Patient can call either at he appointment center in Maria hospital or call Tanya to get help to take their appointment.

Patient need to bring with them their Health insurance card and the invitation letter or a prescription from a doctor



Give your consent

Patient need to fill out and sign a consent form before having their mammogram



Have your mammogram

Everything will be explain by the technician who will receive you



Receive your result by mail

Letter is send after the report as been send to the family doctor. Inside of it it will say if is this normal or abnormal.

We also want the results letters to be sent directly to the Health Center to avoid communication issues.

How does a mammogram works

1. Preparing for your mammogram

- Avoid using these product the day before you mammogram (it can distort the image)
 - Antiperspirant
 - Deodorant
 - Powder
 - Cream
 - Perfume
- Wear a 2 pieces outfit because you only need to remove your top.



How does a mammogram works

2. Mammogram procedure

- Mammography is performed by a medical technologist. Most of the time, 2 x-rays are required for each breast : a frontal and lateral image.
- Your breast is compressed between 2 plates for a few seconds while each image is taken.
- In general, any discomfort or pain, ceases as soon as the breast is no longer compressed.



How does a mammogram works

3. Mammogram analysis

- The mammogram is always analyzed by a radiologist
- These are the 2 possible outcomes
 - The radiologist detect no abnormalities : *mammogram is normal*
 - The radiologist detect an abnormality or has a doubt when reading it : *mammogram is abnormal*
 - This means that you will have to undergo further test, but it does not mean you have cancer. In majority of cases, further test do not reveal cancer



Investigation tests

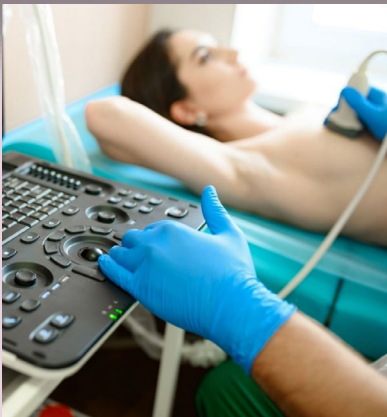
Ultrasound

Is a complementary exam. Painless and effective, it can determine the nature of the lesion observed.

Mainly use for :

- Establish the nature (liquid or solid)
- Replace mammography when it is contraindicated
- Provide a visual guidance for a breast biopsy

[Mammographie et échographie mammaire : différences | Biron](#)



Biopsy

The purpose of a biopsy is to determine whether cancerous cells are present and the only way to find out is to analyze a sample of the tumor. It can be :

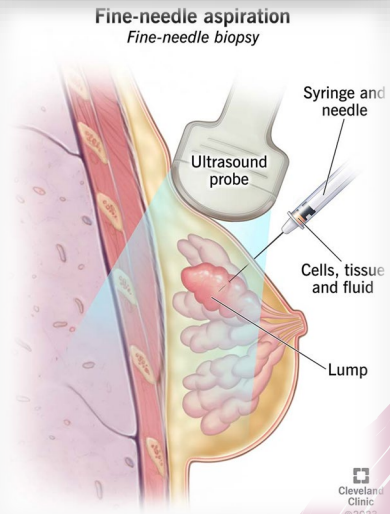
- Malignant : is cancerous and can metastasize
- Benign : is a non-cancerous tumor that can be surgically removed and there is usually no recurrence.

[La biopsie mammaire : pour un diagnostic final – Ruban rose](#)

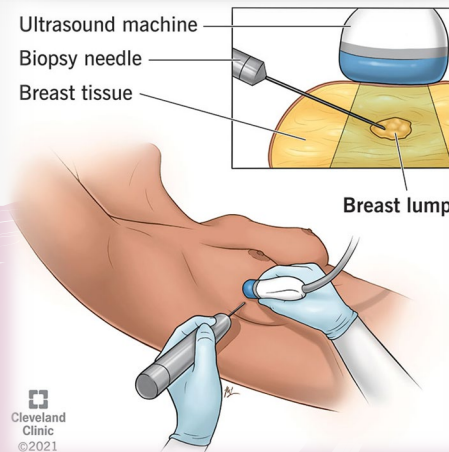


Types of biopsy

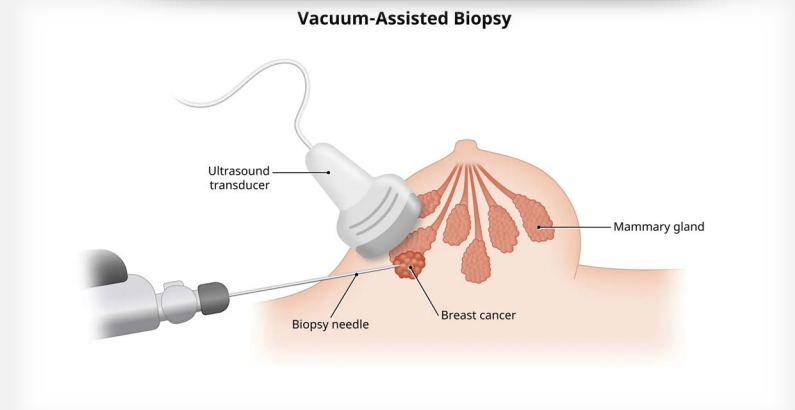
Fine-needle biopsy : removes a small quantity of tissue or liquid. It is used to determine whether the lesion observed is cyst or not.



Trocar Biopsy : this is without aspiration and used a hollow needle. Usually three to four passes are made under ultrasound guidance.



Suction biopsy : A large needle is used, and sampling is performed with the aid of suction. This approach allows more tissue to be removed, and can also be performed under ultrasound guidance or stereotactic.



How does a biopsy works

There are different types of biopsy, but the procedure generally takes about 30 minutes. Depending on the guidance technique used, the area to be analyzed will be identified, then the skin will be disinfected and a local anesthetic applied.

- A small incision of 4 to 5 millimeters will be made in the skin.
- Your doctor will then guide the needle towards the tumour. Once the needle is in position, the required samples are taken. At this stage, some machines make a sharp clicking sound. The procedure is not painful, since it is performed under local anesthetic, but the noise can sometimes be surprising.
- A bandage will be applied by the technologist after the examination.
- In some cases, the medical team may use what is known as a Harpoon to find the exact location of the anomaly. This is a curved wire that protrudes slightly from the skin, identifying the site where the sample was taken.
- Once the breast biopsy is complete, the samples are sent to the laboratory for analysis.
- After the biopsy, the technologist will give you instructions to follow for the next few days. You'll be able to resume your daily activities, but avoid strenuous arm exercises and showers for 48 hours.



Breast cancer treatment



Surgery

May involve removing only the cancerous tissue (lumpectomy) or the entire breast (mastectomy). Lymph nodes may also be removed to assess the cancer's ability to spread



Radiotherapy

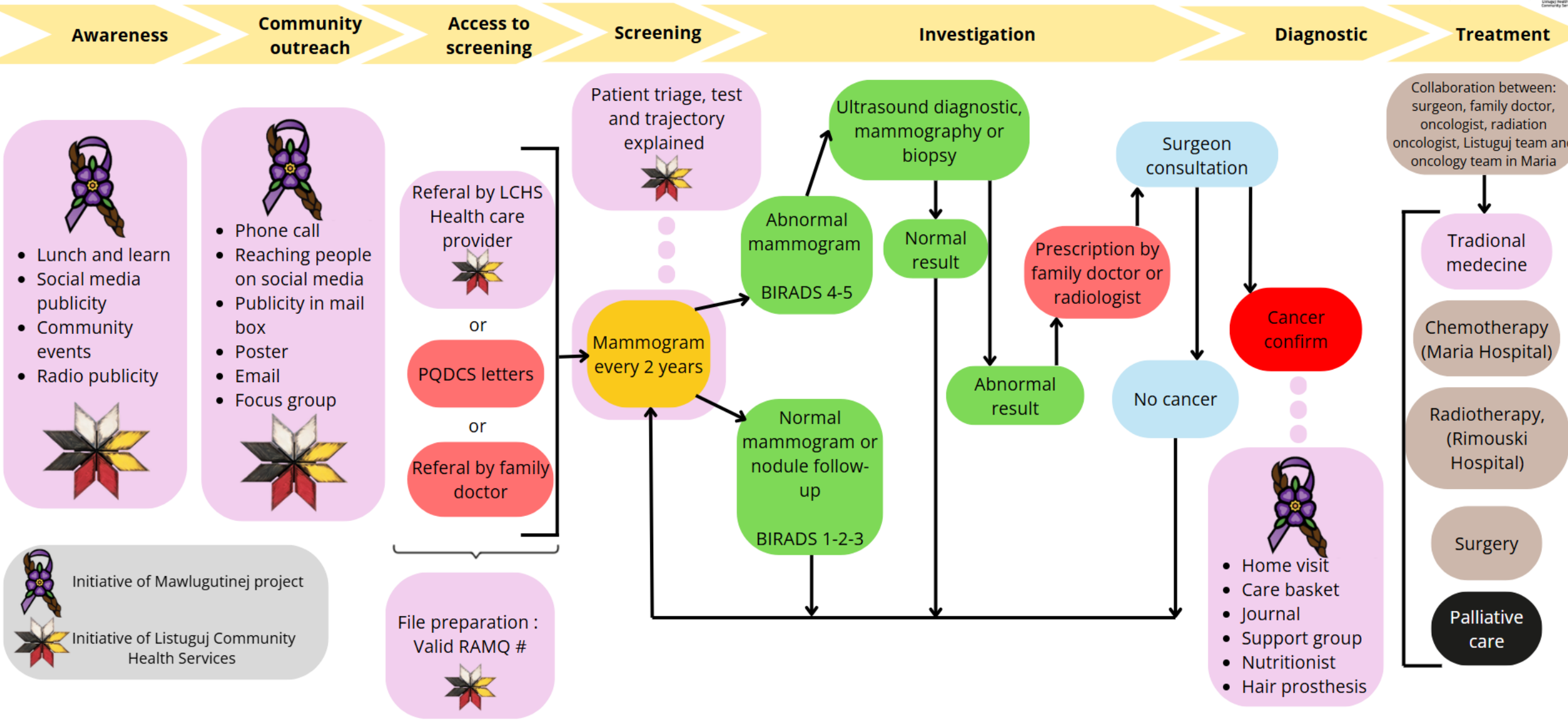
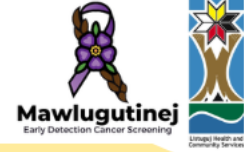
Is directed against microscopic residual cancers remaining in the breast tissue and/or lymph nodes to minimize the risk of cancer recurrence in the chest wall.



Drugs

Hormone therapies, chemotherapy or biologically targeted therapies in particular.

BREAST CANCER SCREENING TRAJECTORY IN LISTUGUJ





Thank you
