

# EMS *for* WOMEN

ELITE MEDICAL SERVICES

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#EMSforWomen #EMSGoesPINK #EMS\_pinkRibbon #EMSpinkOctober #EMSagainstBreastCancer  
#EMS\_breast\_cancer\_awareness

*THINK PINK: CANCER IS A WORD, NOT A SENTENCE*

*A message from Dr. Davide Maged MSc, PhD*

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*Dedicated to my beloved and fighter wife Alessandra... Thank you for making it!*



Breast cancer continues for women to be the "n.1 big killer". Paradoxically, despite the constant annual growth of the incidence of this pathology, there is however a slow but continuous and progressive decrease in mortality. And this thanks to an ever more correct information and a greater sensitization of the woman to the early diagnosis, which has proved to be strategically decisive and successful in terms of healing and better quality of life.

It is estimated that in Egypt in 2019 there will be over 50,000 new cases of breast cancer. The increase in the incidence of breast cancer has been over 15% in the last five years. In particular, breast cancer has increased among young women and between the ages of 35 and 50 about 30%. This is an age group "excluded" from the screening program currently required by the National Health Service which is reserved for women aged between 50 and 69 years.

This is why personally and Elite Medical Services, with its "pink ribbon campaign" held each year in October, we promote the culture of prevention as a way of life, so that all women can undergo periodic breast examinations, advising them to start from 30 years of age to carry out adequate clinical-radiological checks (visit, ultrasound and sometimes for particular cases mammography). Also because breast cancer is not to be considered as a single disease, presenting different biological behavior and prognoses, and correctly identifying the biomolecular characteristics of the tire opens up new therapeutic possibilities, more and more appropriate and targeted. The availability today of innovative therapies and increasingly sophisticated imaging techniques has "encouraged" women to undergo periodic clinical-radiological checks for effective prevention and early diagnosis, guaranteeing a longer-lasting and better quality of life.

Today the healing of breast cancer has been around 80-85%.

But we also know that an early diagnosis of breast cancer would result in more than 95% healing.

Thanks to the spread of the culture of early prevention and with the help of research and new interventional-therapeutic strategies, we can say that winning Cancer is possible. In this spirit we feel we are declaring a winning war against cancer, without deaths or prisoners: a hymn to hope and life in a difficult war, not short, but certainly victorious if we know how to take care of ourselves and our environment. This is because today we know the importance of environmental factors, so much so that we define cancer: an environmental disease on a genetic basis.

We will therefore work together so that the approximately 3 million men and women with a lived cancer can serenely coexist with this disease, as if it were a chronic pathology (comparable to arthritis, diabetes, hypertension) and because healing was possible we can get closer and closer to our final goal: zero mortality from cancer!

***Dr. Davide Maged***

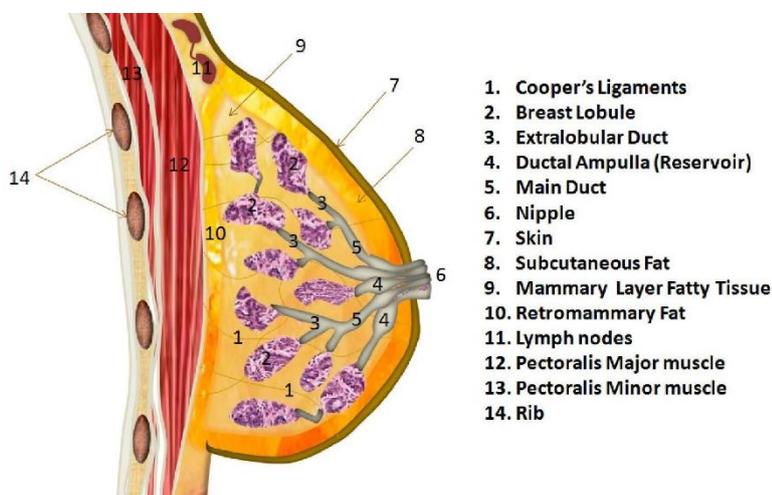
## *Index*

<i>The Breast Structure</i>	<i>page 1</i>
<i>Learn about Breast Cancer</i>	<i>page 1</i>
<i>Breast Cancer</i>	<i>page 2</i>
<i>The Preneoplastic Lesions</i>	<i>page 3</i>
<i>Can Breast Cancer be prevented?</i>	<i>page 3</i>
<i>Genetic tests and Breast Cancer</i>	<i>page 4</i>
<i>Modifiable risk factors and lifestyle habits</i>	<i>page 5</i>
<i>What are the tests to find out about breast cancer early?</i>	<i>page 6</i>
<i>Definition of interventions</i>	<i>page 12</i>
<i>And after the therapies?</i>	<i>page 13</i>
<i>Pink October Team</i>	<i>page 14</i>

## The Breast Structure

For women, the breast is an organ that performs three noble functions: aesthetic, sexual and maternal. It consists of the glandular, adipose ("fat") and fibrous tissues. The latter acts as a scaffold to the gland, rich in blood, lymphatic and nerve bundles. The mammary gland thus formed is externally coated by the skin, supported posteriorly by the pectoralis major muscle. Breast milk is produced in the breast at the level of small glandular structures called lobules and transported to the nipple through the mammary ducts.

The development and changes of the mammary gland occur mainly following the stimulation of female hormones, estrogen and progesterone, depending on the hormonal phase and the age of the woman.



Generally the glandular component is very represented in young and premenopausal women. On the contrary, in post-menopause and with advancing age, the fatty tissue of the breast tends to increase. This means that mammography, in young women and more generally in women with dense breasts, is more difficult to interpret, making integration with breast ultrasound necessary.

Even in the male breast there is a minimal component of glandular tissue which, rarely, can be a site of cancer (1% compared to women).

## Learn about Breast Cancer

Cells that make up the mammary gland reproduce accounts both to generate the replacement with new cells and to repair damaged ones.

The process of cellular reproduction and growth is very sophisticated and regulated by some genes. In normal conditions, this process takes place according to a physiological program, in a precise and regular manner.

However, aging and any environmental factor can damage these genes, causing uncontrolled growth of the cells that make up the internal lining of the ducts (galactophores and lobules) and the consequent development of a tumor (carcinogenesis). The process of carcinogenesis occurs slowly over many years. The diagnostic and radiological tests available today for an effective early diagnosis allow the tumor to be identified at an early stage of its growth, when the tumor does not show itself and is not palpable (preclinical lesion) or even in a phase that precedes the development of infiltrating tumor (preneoplastic lesion).

## Breast Cancer

It is the most frequent tumor of the woman and its incidence is particularly high in western countries with a more advanced economy. In Italy one woman out of 8 gets cancer of the breast.

It is estimated that in Italy they are diagnosed further 50,000 cases of breast cancer a year. In the last five years the increase in incidence of this disease was equal to 15%.

Particularly among women of age between 25 and 45 years, it is estimated that the increase was around 30%. Fortunately, however, for over 15 years there has been a progressive reduction in mortality. Most (about 70%) of breast cancers originate from the cells of the ducts (ductal carcinoma), while a lower percentage from the breast lobules (lobular carcinoma). A more important distinction is that between infiltrating carcinoma (that is, capable of invading the surrounding tissues and being able to eventually diffuse at a distance, giving rise to metastases) and carcinoma in situ (not able to develop metastases).

- **Carcinoma in situ:** neoplastic cells are confined within the mammary ducts or lobules and do not infiltrate the surrounding tissue. For this reason, carcinoma in situ does not give metastasis and does not require chemotherapy.
- **Infiltrating carcinoma:** cancer cells pass the ductus and lobule wall and, infiltrating the lymphatic and blood vessels present in the connective support tissue, can spread to the lymph nodes or other organs and / or systems.

Some biological characteristics of the breast tumor help to better define the prognosis (prognostic factors) and to choose the most effective medical treatments (predictive factors).

- **Estrogen and progesterone hormone receptors:** tumor cells in most cases have structures that bind estrogen and progesterone hormones, stimulating growth. The presence of hormonal receptors is considered an element that favorably influences the prognosis, since tumor cells retain a common characteristic of healthy breast cells, which is a hormone-dependent organ as it undergoes hormonal regulation. All tumors with estrogen and / or progesterone receptors can be effectively treated with drugs that interfere with the production or hormonal action (hormone therapy).
- **Degree of cellular differentiation (grading):** indicates how much the cancer cell resembles the healthy counterpart. A well-differentiated tumor has a better prognosis than a poorly differentiated one.
- **Proliferation index:** it is expressed by a percentage that indicates how “active” the growth of that particular tumor is. The higher this index, the faster the growth rate of the tumor may be.
- **HER2:** it is a protein present on the surface of tumor cells that regulates its growth and against which targeted therapies (biological therapies) have been developed. The increased presence of the HER2 receptor is indicative of greater aggressiveness of the disease and therefore today it is considered as one of the selection criteria to recommend specific bio-chemotherapeutic treatments.

Scientific research is constantly discovering new genes and proteins that can play key roles in tumor transformation processes. A better understanding of the biology of mammary tumors will allow us to further improve the characterization of the disease, its susceptibility to treatments and to personalize more and more effective treatments.

## *The Preneoplastic Lesions*

The spread of screening programs and new and accurate media Gnostics has caused that more and more frequently lesions are identified that do not indicate the presence of a carcinoma, but of an initial alteration of the mammary cells.

These are pathological forms that may in some cases precede breast cancer (preneoplastic).

From the radiological point of view, they often appear with the presence of microcalcifications or non-palpable lesions that require an in-depth diagnostic analysis with micro-biopsy.

Those that pay more attention today are represented by:

- Atypical ductal hyperplasia
- Lobular intraepithelial neoplasms (LIN)

Preneoplastic lesions can represent a risk condition for the development of a tumor or, in a minority of cases, they can be a sign of the presence of a carcinoma in the surrounding tissue.

For this reason, when they are found for a micro-biopic examination, surgical removal of the affected area or a closer monitoring over time may be necessary, according to methods suggested by the specialist breast specialist.

## *Can Breast Cancer be prevented?*

The answer is partly affirmative. Preventive strategies are based on two approaches very precise and integrated: primary and secondary prevention.

Primary prevention aims to identify and remove the causes that contribute to the development of a tumor (risk factors). Pharmacological prevention is a promising way of primary prevention, even in breast cancer.

Its purpose is to prevent the appearance of the tumor thanks to the woman's intake of substances that prevent or interrupt the process of carcinogenesis (eg derivatives of vitamin A in no smokers or substances with hormonal action). Although the results of the pharmacological prevention of breast cancer are encouraging, to date however this approach is not yet considered a standard.

Indeed, there is no unanimous agreement on the use of these substances for preventive purposes. On the other hand, it is certain that in most diseases, including neoplasms, healthy eating and living habits helping prevention. Secondary prevention, which aims to obtain the earliest possible diagnosis, is fundamental. The discovery of the tumor (usually with mammography and ultrasound) in its initial phase allows less aggressive therapies and greater chances of recovery. Today it is the winning weapon in the fight against breast cancer.

## *Breast cancer prevention: how to reduce the risk*

The main risk factors for the onset of breast cancer cannot be changed. Others, if removed, can significantly reduce the risk of developing breast cancer.

### *Non-changeable risk factors*

The following factors increase the risk of developing breast cancer.

- **Age:** the probability of developing breast cancer increases with the age of the woman (although around 60% of breast cancers today are diagnosed in women under the age of 55).
- **Reproductive history of women:** prolonged exposure to estrogen and progesterone, as seen in the early menarche (before the age of 11) or in the late menopause (over 55 years); nulliparity (no pregnancy) or first pregnancy over 35 years; not breastfeeding.
- **Familiarity:** presence in the family of several members (mother, sister, aunt, grandmother etc.) with a history of breast and / or ovarian cancer.
- **Previous neoplasms and treatments:** cancer of the other breast, uterus (endometrium) or ovary, preneoplastic lesions of the breast; previous radiotherapy of the thoracic wall (eg for lymphomas in young age).
- **Mutations of specific genes:** some mutations of specific genes (BrCa1 and BrCa2), if inherited, increase the risk of developing breast and the ovary cancer.

## *Genetic tests and Breast Cancer*

As with other cancers, breast cancer is in most cases of "sporadic" origin. This means that the damage to the genes that will lead to the development of the tumor disease is not "inherited", but takes place in the individual during life due to various endogenous and exogenous factors (see paragraph: risk factors). In 8% of cases, breast cancer develops following mutations of specific genes, such as those affecting the BrCa1 and BrCa2 genes, "inherited" with the genetic makeup received from parents. It has been documented that women with specific mutations in these genes have a greater risk of developing breast and / or ovarian cancer during their lifetime. In particular, women who inherited the BrCa1 mutation have a 45-80% chance of developing breast cancer during their lifetime and 20-40% ovarian cancer. Women with BrCa2 mutation have a 25-60% risk of developing breast cancer and 10-20% of developing ovarian cancer.

From this it follows that having inherited the mutation does not mean that you have inherited the certainty that cancer will develop in a moment of your life. Instead, we are faced with a family predisposition, having inherited a greater risk of developing the disease than those who are not carriers of the mutation.

The genetic test therefore does not provide the diagnosis of cancer, but increases the information on the risk of getting cancer over the course of life. The current possibility of carrying out such tests leads many women to ask for it to be carried out, especially if one or more family members have developed a tumor.

In reality, the presence of one or more cases of cancer in a family (familiarity with a tumor) does not necessarily indicate the presence of an inherited genetic mutation.

## *Modifiable risk factors and lifestyle habits*

- **Hormonal replacement therapy:** drugs based on estrogen and progesterone, taken after menopause to alleviate the ailments, they may slightly increase the risk of developing breast cancer. The risk is proportional to the duration of the treatment.
- **Obesity:** the risk of breast cancer is higher in women who develop a condition of obesity or overweight after menopause. Excessive weight during puberty is also associated with an increased risk of developing breast cancer during adulthood. In fact, they come in excess fatty tissue produced greater amounts of insulin and stored estrogen capable of stimulating cell proliferation.
- **Poor physical activity:** regular exercise reduces the risk of developing breast cancer. It helps to maintain body weight, promotes the increase in immune defenses and restores balanced hormonal relationships to the body.
- **Low consumption of fresh fruit and vegetables:** a high calorie diet, rich in fats and refined sugars or with frequent consumption of red meats, increases the risk of developing breast cancer as well as other diseases.
- **Alcohol:** the risk of breast cancer increases in proportion to the quantity of alcohol consumed.
- **Smoking:** even breast cancer seems to increase in smokers.

Changing lifestyles means eliminating those risk factors on which 20% of breast cancers depend. For this reason, the scientific world considers lifestyle control – practicing regular physical activity, controlling body weight, limiting alcohol consumption, carefully choosing one's diet and regulating hormone therapy after menopause are valid tools for the prevention of breast cancer, effective and recommendable as well as tests and substances commonly used for early diagnosis.



- if there is a documented and significant familiarity it is advisable to turn to specialized facilities to undergo genetic counseling and receive adequate information and indications;
- the studies carried out in recent years have made it possible to better clarify the role of hormone replacement therapy (TOS), that is of those hormonal drugs used in menopause to alleviate the symptoms and complications related to this particular phase of life, as a possible risk factor. The use of the TOS it must be justified and in any case recommended by the doctor.

### What else can you do to reduce your risk?

Many women know that breast cancer can occur even in the absence of specific risk factors, for causes that are not yet known.

Here is the importance of early diagnosis, which is implemented also paying attention to any changes presented by the breast, participating in mammography screening programs and undergoing periodic clinical-radiological checks.

### What are the signs that should lead to a medical examination?

Unfortunately, still today many women, inadequately informed of the advantages deriving from early diagnosis in the absence of symptoms, do not undergo preventive controls and discover, often with their own hands, the presence of a nodule. For this reason it is necessary that women also know signs and symptoms with which a breast cancer can occur. In most cases, breast cancer manifests itself as a lump, variably hard on palpation.

However, other signs must be remembered:

- skin retraction;
- localized or diffuse redness;
- retraction or modification of the nipple;
- nipple discharge;
- appearance of a nodule in the axillary area.

None of these signs or symptoms is certainly indicative of the presence of breast cancer. For this reason, any change that the woman finds in her breast must induce her to request a check from her doctor and / or a specialist.

Persistent localized pain

### *What are the tests to find out about breast cancer early?*

It is important to discover the tumor as early as possible. Discovering a tumor when it measures less than one centimeter, the probability of recovery is over 90%, the interventions are conservative and do not cause serious cosmetic damage to the woman.

The most important tests for the diagnosis of breast cancer are:

1. Palpate both breasts in a rotational (circular) direction with joined and flat fingers
2. Don't forget the palpation of the armpit and nipple
3. Look in the mirror if there are any irregularities in the skin
4. Highlight with a slight squeezing of the nipple if there are secretions

## Self-Examination

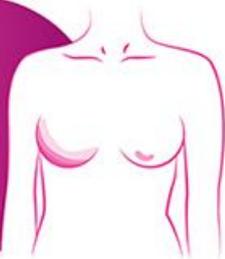
It is the exam that the same woman should perform every month, from a young age (20-25 years).

It consists in the observation in the mirror of one's own breasts and in the palpation of the same. The examination methodology is simple, but it is good that a doctor teaches it. It is particularly important that the woman understands that the purpose of self-examination is not the diagnosis but only the "knowledge" of the characteristics of her own breasts and therefore the identification of any changes that have occurred over time and / or persist, to be communicated promptly to the own doctor. It is also useful to highlight with a slight squeezing of the nipple if there are secretions.

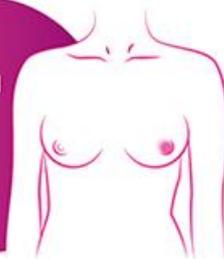


## BE BREAST CANCER AWARE HOW DO I CHECK MY BREAST

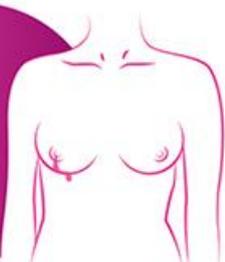
A Lump, or thickening that feel different from the rest of your breast



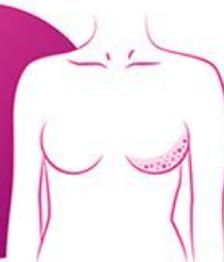
Your nipple becomes inverted (pulled in) or changes shape



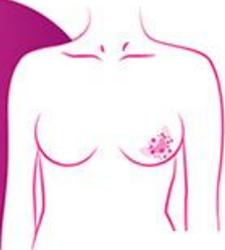
Discharge (liquid) from your nipple



A change in skin texture, such as dimpling



A rash or redness on the skin or around your nipple



Swelling in your armpit or around your collarbone



## **Mammography**

It is the most suitable and valid technique in diagnosing, with a rather simple methodology, the majority of early breast cancers, even before they are palpable.

For this reason, mammography is currently the most appropriate technique that can be used as a basic test in a screening program and which should never be waived in the case of suspected carcinoma, whatever the age of the woman. The risk of developing a tumor induced by radiation caused by mammography is only hypothetical.

## **Ultrasound**

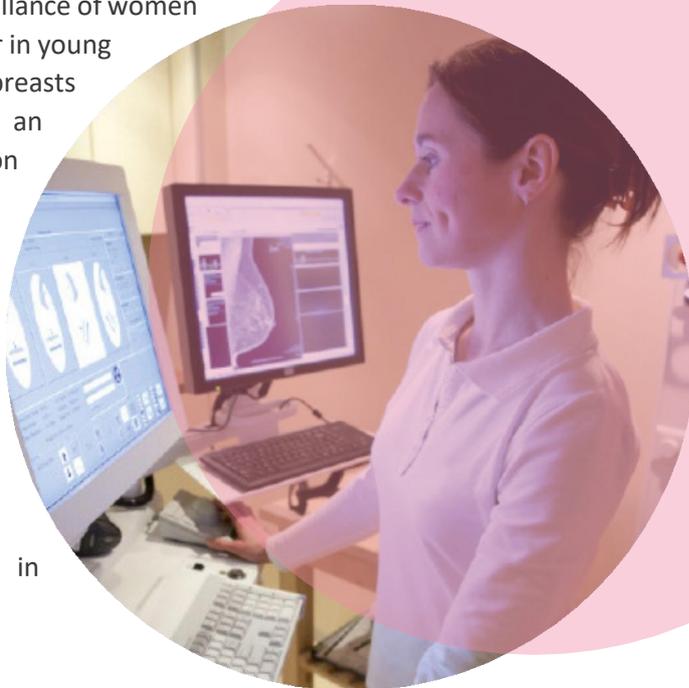
Despite the continuous imaging revolution and the rapid evolution of technology, ultrasound should not be used as the sole test for the early diagnosis of non-palpable breast tumors. Moreover it offers sometimes irreplaceable contributions in the diagnosis of benign nodular lesions.

At the present state of knowledge, therefore, except in particular cases (eg. young age) it is advisable that the ultrasound is used above all in association with mammography and possibly, for particular cases, to mammary magnetic resonance.

## **Mammary Magnetic Resonance (Breast MRI)**

The role of RMM for the early diagnosis of breast cancer is today limited to the diagnostic surveillance of women carrying alterations of BRCA genes or in young women with dense and / or strong breasts having risk factors. The RMM is an examination that is used in the opinion of the radiologist or breast specialist, in addition to mammography and ultrasound, in cases where there is a discrepancy between previous examinations or in the presence of an established carcinoma, for a better local staging. However, the exam may give falsely suspicious results.

It should therefore be performed in breast care centers.



### *Mammography or breast ultrasound?*

Mammography is the preferred exam for breast cancer research especially in women over the age of 40. It represents the optimal investigation to identify the presence of microcalcifications, which can sometimes be the expression of tumoral or preneoplastic lesions. The use of the 3D technique with tomosynthesis is now preferable to the traditional one, because the image quality is better and the use of X-rays is further reduced. Mammography, however, may have diagnostic limits for breast density, a characteristic of young women and more generally of childbearing age. In these cases the study is completed with a mammary ultrasound scan and, sometimes, a mammary magnetic resonance. Ultrasonography is the most useful examination to distinguish a solid nodule from a fluid-content cyst and allows a better characterization of the nodule and its vascularization through color-doppler evaluation.



### Withdrawals with needle

In the case a nodule is found, in order to deepen the research and diagnosis, the needle aspiration technique is used. They can be performed, usually under ultrasound guidance, either with a fine needle ("needle aspiration", which allows the cytological examination of the aspirated material) or with a needle of slightly larger dimensions ("core-biopsy", which allows the histological examination of tissue fragments removed). The so-called "vacuum assisted biopsy" is a type of minimally invasive biopsy, performed under local anesthesia, which unlike the previous one allows to take more tissue frosts and to have a better histological characterization with a single needle introduction. The procedure is ambulatory, it does not require a sedation but only a simple local anesthesia, and is performed using a dedicated instrument with the aid of an ultrasound or mammograph. This type of diagnostic assessment is the most widely used for the study of micro-calcifications.

All the procedures described above are ontologically safe - the absence of danger of dissemination of tumor cells is scientifically demonstrated - and they have a purely diagnostic function. This means that if there is a tumor or preneoplastic lesion it is necessary to proceed in any case with a limited surgical intervention.

The cytological or histological examination is indicated for the woman who presents lesions worthy of in-depth diagnosis to the mammogram or ultrasound, to confirm or exclude the presence of a carcinoma. If a time to acquire this information was necessary to resort to a surgical intervention, today it is possible to have a diagnostic confirmation through safe, reliable and minimally invasive procedures, constituted by the withdrawals of tissue sample through specialized needles (true cut biopsy) that is practically painless.

### Other clinical-diagnostic tests

Once the diagnosis of breast cancer has been made, other tests are useful to define the extent of the disease (staging). They include a standard chest x-ray, an abdominal ultrasound and the dose of tumor markers in the blood (CEA and Ca15-3). However, the latter are not useful for the early diagnosis of the tumor, because their value in the blood does not change in the initial stages but only, and not always, in the case of the appearance of metastases in distant organs. In some cases it may also be necessary to perform a bone scan. In the case of advanced disease, computerized axial tomography (CT) and positron emission tomography (PET-CT) can be used as in-depth examinations and to evaluate the effectiveness of therapies.

### Which therapies could you need?

Breast cancer is actually a heterogeneous group of diseases for which we now have a wide range of complementary and variously integrated therapeutic options, including surgery, radiotherapy and medical therapies (hormonal therapy, chemotherapy, biological therapies or molecular targets).

The patient who receives a diagnosis of breast cancer will be followed by a team of medical specialists composed of a radiologist, a breast specialist, histopathologist, oncologist, radiotherapist, plastic surgeon and psychologist, who will evaluate in detail, on the basis of the size and biological characteristics of the tumor, the most effective strategy in terms of cure, healing and better quality of life.

## Surgery

Surgery is still the primary and irreplaceable weapon for the treatment and healing of breast cancer. The intervention techniques are essentially two: the conservative and the radical. The conservative surgical technique (quadrantectomy or lumpectomy), applicable in the case of small tumors, consists in removing only the tumor and a limited part of the surrounding healthy breast tissue.

This technique allows a good aesthetic result, guaranteeing however the radicality of the treatment.

The destructive technique (mastectomy), less and less frequent, consists in total breast removal. In these cases, surgery is increasingly associated with reconstructive surgery techniques performed, when possible, in the same surgical session. Attention must be also given to the study of axillary lymph nodes (armpit lymph nodes), structures that filter lymph from the mammary gland, as an essential part of the surgical treatment. In the past these lymph nodes were always completely removed for histological examination. The methodology of choice today, when indicated, is the sentinel lymph node technique that removes and histologically examines the lymph node or those that are the first to be found on the possible route of lymphatic diffusion of the tumor. This reduces hospitalization time and possible complications, such as swelling of the arm (lymphedema).

## Radiotherapy

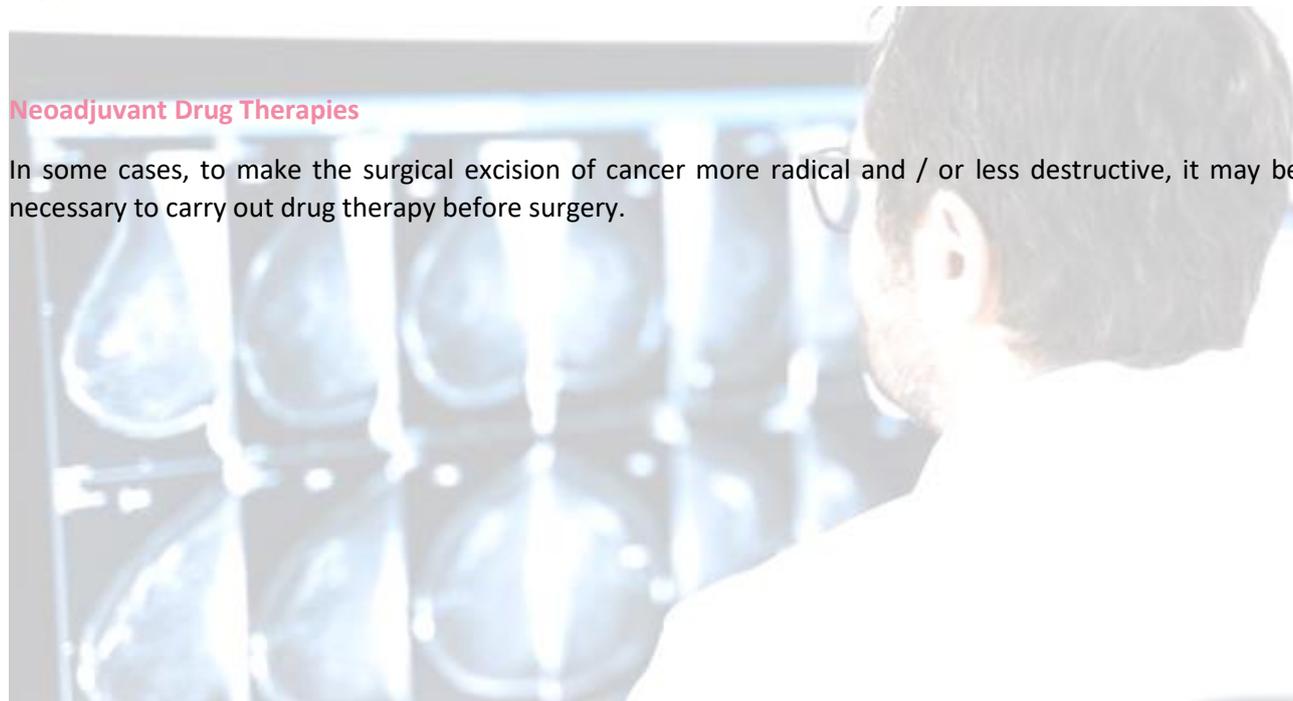
It is generally associated with conservative surgery to decrease the risk of local recurrences and the side effects are limited.

## Pharmacological Therapies

Medical therapies have the purpose of eliminating any cancer cells (metastasis) left over from surgery and radiotherapy, reducing the risk of disease recurrence and increasing the chances of recovery (therapies with an "adjuvant" purpose). Medical therapies include chemotherapy, hormone therapy and biological therapies, otherwise combined or associated in relation to the stage of the disease and the biological characteristics of the tumor.

## Neoadjuvant Drug Therapies

In some cases, to make the surgical excision of cancer more radical and / or less destructive, it may be necessary to carry out drug therapy before surgery.



## Definition of interventions

**Conservative surgery:** limited removal to a part of the breast, glandular resection, quadrantectomy, generally followed by a radiotherapy.

**Mastectomy:** complete removal of the mammary gland with the nipple, the overlying skin and axillary lymph nodes (radical mastectomy), or with preservation of the external skin envelope).

**Sentinel Lymph node Biopsy:** removal of the lymph node or lymph nodes that receive first lymph from the tumor and which cells could be found involved through the lymphatic system. Removal of other lymph nodes can be avoided

**Axillary dissection:** complete removal of the axillary lymph nodes (1st, 2nd, 3rd level), necessary in case of ascertained or evident axillary metastases to the preoperative clinical and radiological examination.

**Breast reconstruction:** plastic surgery performed with the aim of restoring the shape and volume of the breast removed after mastectomy. It can be performed in the same surgical session (muscle flaps) by inserting prostheses or with own tissues. The choice of intervention depends on the clinical situation, on the therapies needed in the post-operative period, on the psychophysical and constitutional characteristics of the patient.

**External beam radiotherapy:** standard treatment that completes the local therapy of breast carcinomas after conservative surgery, to reduce the risk of recurrence disease in the remaining breast tissue. The breast is irradiated from the outside and the total radiation is divided, for a duration not exceeding 4-6 weeks.

**Partial breast radiotherapy:** involves the sun irradiation of the area containing the neoplasm (small in size) and in external beam radiotherapy. This implies a shorter duration of the treatment of the patient.

**Radiotherapy after mastectomy:** external radiotherapy required to reduce the risk of tumors recurrence on the chest or on the lymph nodes (species of the internal mammary). In all cases, radiation therapy does not cause any particular disturbances or hair loss. Its effects are mainly due to thickening and redness of the skin of the breast.

**Intraoperative radiotherapy (IORT):** this is a technique in which a single dose of radiation is administered during surgery directly on the tumor bed. Among the advantages of this technique is that of being able to deliver radiation directly to the target, sparing adjacent healthy structures and / or those below.

**Hormone therapy:** uses drugs that block the action or production of estrogen. It is used as a single treatment or after chemotherapy in cases where the tests performed on the tumor show the presence of estrogen and progesterone receptors. Hormonal therapies are generally well tolerated and lack the classically described side effects for chemotherapy.

**Chemotherapy:** uses drugs that are administered cyclically after surgery (adjuvant chemotherapy), or before this (neoadjuvant chemotherapy) in locally advanced cases or to reduce tumor size. The benefit of chemotherapy on healing can be significant even in the early stages of the disease.

**Biological therapies:** they use drugs that act in a targeted, selective way, mainly interfering with the mechanisms that regulate tumor growth. For this reason the toxicity of these drugs compared to the most common chemotherapy is generally reduced, while maintaining the maximum therapeutic benefit. An example is represented by drugs that act selectively on the HER2 receptor, indicated when the tumor has high levels of this protein.

## *And after the therapies?*

You can heal breast cancer. And today we must! In fact, they are more and more women who, after having overcome the illness, resume their role as women, wives, companions, mothers and workers.

To all of them another type of prevention should be addressed, which takes into account the specific problems generated by the experience of the "lived" disease. One of the major concerns of those treated for breast cancer is that the disease can recur. A great deal can also be done to prevent recurrence: women treated for breast cancer should contact their doctor to perform periodic clinical-radiological checks and to counter the possible side effects of medical and surgical treatments. Finally, rehabilitation that should no longer be just physical, but also social, occupational and psychological. We must not be afraid to resort to psychological support to overcome an event that is so shocking and destabilizing: winning cancer means above all breaking taboos!

The results of recent scientific studies show that even after the diagnosis of breast cancer, adopting "healthy" lifestyles is more than useful. Also in this phase it is advised to:

- maintain an adequate body weight
- prefer a diet rich in fresh fruit, vegetables and extra virgin olive oil
- perform constant and regular physical activity
- limit alcohol consumption
- avoid smoking

**These few rules improve the disease prognosis and help you live longer and better.**



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**References:**

*Available upon request*