Prevention and Screening for Breast Cancer
1 What is breast cancer?

Breast cancer is a disease in which malignant (cancer) cells form in the tissues of the breast. It occurs in both women and men, although breast cancer in men is rare.

2 Is breast cancer common in Hong Kong?

Breast cancer is currently the most common cancer among women in Hong Kong. In 2016, there were over 4,100 newly registered cases of breast cancer for women, and over 65% of all breast cancer occurred in women aged 50 or above. It was also the third leading cause of cancer deaths among women in Hong Kong after lung and colorectal cancers, with more than 700 women dying from this cancer in 2017. Over the past three decades, after adjusting for population ageing, the age-standardised incidence rate was on a gradually increasing trend while the age-standardised death rate was relatively stable. Although the incidence rate has been increasing, it remained low when compared with those reported on some Western countries.

Age distribution of new breast cancer cases in women, 2016

Note: Percentages may not add up to 100% due to rounding.

<table>
<thead>
<tr>
<th>Age Range</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age 80 or above</td>
<td>7.5%</td>
</tr>
<tr>
<td>Age 70-79</td>
<td>9.8%</td>
</tr>
<tr>
<td>Age 60-69</td>
<td>22.4%</td>
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<tr>
<td>Age 50-59</td>
<td>30.1%</td>
</tr>
<tr>
<td>Age 40-49</td>
<td>23.5%</td>
</tr>
<tr>
<td>Age below 40</td>
<td>6.6%</td>
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</tbody>
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Who is at risk of breast cancer?

Like other cancers, the risk of developing breast cancer depends on a number of risk factors and varies among individuals. In fact, many of the risk factors for breast cancer are linked to lifestyle habits.

Lifestyle risk factors include:

- Lack of physical activity
- Alcohol consumption (please note that alcohol or alcoholic beverages have been confirmed to be a human cancer-causing agent, causing breast and other cancers)

Other risk factors include:

- Advancing age
- No childbirth, late first live birth ( > 30 years of age) or no breastfeeding
- Early menarche ( < 12 years of age) or late menopause ( > 55 years of age)
- History of breast cancer, ovarian cancer or endometrial cancer
- History of benign breast conditions (e.g. atypical hyperplasia) or lobular carcinoma in situ
- Receiving hormonal replacement therapy (HRT)
- Using combined oral contraceptives
- History of receiving radiation therapy to the chest before age of 30
• Carrier of certain gene mutations (e.g. BRCA1 or BRCA2) \(^1\) confirmed by genetic testing

• Family history of carrier of certain gene mutations (e.g. BRCA1 or BRCA2)

• Family history of breast cancer, especially for first-degree relatives (e.g. mother, sister or daughter) diagnosed with breast cancer before age of 50

**Please note:** If you have any of the above factors, it does not mean that you must have breast cancer – it only means that your risk of developing breast cancer may be higher than average.

More importantly, you can **Prevent or Lower Your Risks** of having breast cancer by the following measures:

• Have regular physical activities, do at least 150 minutes of moderate-intensity aerobic physical activities per week (e.g. climbing stairs or brisk walking);

• Avoid alcohol drinking;

• Maintain a healthy body weight and waist circumference – aim for a body mass index (BMI) between 18.5 and 22.9, and a waist circumference of not more than 80cm for women; and

<table>
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• Have childbirth at an earlier age and breastfeed each child for longer duration

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\(^1\) About 5% to 10% of breast cancer are thought to be related to gene mutations. The most common inherited mutation is mutation of BRCA 1 and BRCA 2 genes. Women with BRCA mutations have higher risk of developing breast cancer. Genetic testing can identify some women who have inherited mutations. However, women should seek medical advice before deciding whether they should receive a genetic testing.
4 What are the common symptoms of breast cancer?

The symptoms of breast cancer may not be easily noticed at an early stage. Any of the following changes in the breast can be a symptom of breast cancer:

- breast lump;
- a change in the size or shape of the breast;
- a change in skin texture of the breast or nipple (e.g. red, scaly, thickened or “orange-skin” appearance);
- rash around the nipple;
- in-drawing of the nipple;
- discharge from one or both nipples;
- new and persistent discomfort or pain in the breast or armpit; and
- a new lump or thickening in the armpit

5 How can I detect breast cancer early?

The earlier breast cancer is detected, the higher the chance of cure. Therefore, every woman should be breast aware. You should protect your breast the same way as caring your skin by being aware of any abnormal changes. In order to spot unusual changes early on, you need to be familiar with the normal look, feel and cyclical changes of your breasts. If you spot any irregular change in your breasts as described in the above question, you should inform your doctor as soon as possible. The doctor will ask you for relevant information and medical history. He/She will perform a physical examination on you and may carry out some other investigations.
6 What is breast cancer screening?

Screening means examining people without symptoms in order to detect disease or find people at increased risk of disease. It is often the first step in making a definitive diagnosis. For breast cancer screening, its purpose is to find women who have breast cancer, before they have any symptom, in order to offer them earlier treatment.

Mammography is widely used as a screening tool. It is an X-ray examination of the breasts. During mammography, the breast is pressed between 2 plates to flatten and spread the breast tissue, in order to obtain a clear image. Some women may find it uncomfortable or painful but the discomfort usually does not last long. Mammography screening is safe in general and only a very small dose of radiation is used in the procedure.

7 Should I screen for breast cancer if I do not have any symptom?

For women in general

At present, it is still not clear whether population-based breast cancer screening will bring more benefit than harm to general women population. The Hong Kong SAR Government’s Cancer Expert Working Group on Cancer Prevention and Screening (CEWG), based on a systematic review of scientific evidence, concludes that:

There is insufficient evidence to recommend for or against population-based mammography screening for asymptomatic women at average risk in Hong Kong.

More research and data are needed before introducing population-based breast cancer screening among local women without symptoms.

Population-based breast cancer screening refers to breast cancer screening which is offered systematically to all individuals without symptom in a defined target group (e.g. certain age groups).
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For high-risk groups

Breast cancer screening was proven to be beneficial for women who are at high risk of developing breast cancer. Therefore, the CEWG recommends women at higher risk, for example:

- being a confirmed carrier or have a family history of certain gene mutations (e.g. BRCA1 or BRCA2)
- with family history of breast cancer / ovarian cancer, especially with first-degree relatives (mother, sister or daughter) diagnosed with breast cancer before age of 50
- have personal risk factors (e.g. history of receiving radiation therapy to the chest before age 30, history of breast cancer or benign breast conditions)

Should seek advice from doctors about whether they should receive breast cancer screening, starting age and the frequency of screening.

For all women

Be Breast Aware

The CEWG advises that all women, whether they are at average risk or high risk of breast cancer, should be aware of the early symptoms of breast cancer (as described in question 4) and should visit their doctors promptly if these symptoms appear.
8 What should I consider if I go for a screening test for breast cancer?

Screening tests may detect cancer early and reduce the risk of dying from cancer. Overseas evidence showed that:

1 out of 2000 women who have mammography screening every year regularly for 10 years will avoid dying from breast cancer because the screening detects the cancer earlier.

Despite the potential benefits, you should be aware that all screening tests have their limitations and they are not 100% accurate. There are false positive and false negative results.

For example, a woman with abnormal mammography result may in fact not have breast cancer (false positive result). She will be subjected to unnecessary anxiety, further investigations and treatments which may be harmful. Overseas studies found that for women who have mammography screening every year regularly for 10 years,

200 out of 2000 women will be falsely alarmed, and
10 out of 2000 women will be treated unnecessarily.

On the other hand, a woman with normal mammography result may in fact have breast cancer (false negative result). According to overseas evidence, one in 5 female breast cancer patients may be missed by mammography. She will be falsely reassured and may delay seeking medical care even if she has symptoms.

Therefore, individuals considering a screening test should seek advice from doctors for assessment of need and obtain full information on potential benefits and risks of having the test for an informed choice.
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**POTENTIAL BENEFITS of having breast cancer screening**

- Early cancer detection may lead to higher rates of successful treatment
- Successful treatment may prevent more advanced cancer
- Treatment for early stage cancer may be mild and lead to less complication

**POTENTIAL RISKS of having breast cancer screening**

- It may miss cancer even when it is present and cause false reassurance
- It may cause false alarm, unnecessary anxiety and potentially risky investigations when there is no cancer
- It may find some cancers which will not spread or progress to invasive disease. Treating them may not be better than not treating them. However, doctors usually cannot be sure which one will or will not progress. Overseas studies estimated that mammography screening may lead to 30% over-diagnosis and over-treatment
What are the treatments for breast cancer?

Treatments for breast cancer may include one or a combination of the following:

- **Surgery** – Depending on the staging and type of the cancer, your doctor will discuss with you the most appropriate type of surgery, ranging from removal of the lump (lumpectomy) to removal of the whole breast (mastectomy) and surrounding tissues.

- **Radiation therapy** – It is a cancer treatment that uses high-energy X-ray or other types of radiation to kill cancer cells or keep them from growing.

- **Chemotherapy** – It is a cancer treatment that uses drugs to stop the growth of cancer cells, either by killing the cells or by stopping them from dividing.

- **Hormonal therapy** – It is a treatment that removes hormones or blocks their action and stops cancer cells from growing.

- **Targeted therapy** – It is a type of treatment that uses drugs or other substances to identify and attack specific cancer cells without harming normal cells.

How can I help myself if I have breast cancer?

You can face the disease positively in the following ways:

- Understand your illness and its treatment.
- Talk to someone trustworthy about how you feel.
- Cooperate with the health care professionals who are involved with your care.
- Take part in support groups to enhance the ability to self-care and for mutual support.
- Eat properly and adopt a diet as instructed by health care professionals.
- Exercise regularly under medical supervision.
- Avoid stress, learn techniques to relax and do things that you enjoy.
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How can I help myself if I have breast cancer?
You can get more information on related health topics from:

**Change for Health Website**
[Website](www.change4health.gov.hk)

**Health Education Hotline of the Department of Health:** 2833 0111


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