

A large teal floral pattern, consisting of stylized leaves and flowers, is positioned in the bottom right corner of the page, extending diagonally from the bottom edge towards the top right.

Breast Cancer and Screening Mammography

BreastScreen

SOUTH AUSTRALIA

A joint Australian, State and Territory Government Program

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1. Introduction

BreastScreen SA is the accredited South Australian component of BreastScreen Australia. This is the organised national breast cancer screening program for women without breast cancer symptoms and signs. BreastScreen SA provides free screening mammograms (breast x-rays) at two-yearly intervals, primarily for women aged 50 to 69, with the aim of reducing deaths from breast cancer in this target group, through early detection of the disease.

Breast cancer is one of the most common causes of cancer deaths in women and increases in frequency with age. In South Australia:

- one in 11 women will develop breast cancer in her lifetime.
- in 2003, there were 974 new cases of breast cancer recorded, and 261 women died from this disease.

Screening is the process of looking for disease in healthy people who have no symptoms of disease. A screening mammogram is simply a breast x-ray. It can detect most breast cancers, including some too small to be felt. If breast cancer is found at an early stage, there is a greater chance of successful treatment.

Research has clearly demonstrated the benefit of screening mammograms for women aged 50 to 69 without breast symptoms. It is estimated that for individual women in this age group, having a screening mammogram **every two years** reduces the chance of dying from breast cancer by about 40%.

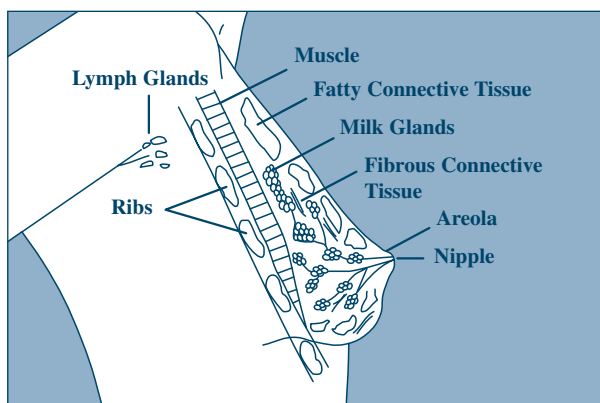
However, most women who attend for screening are reassured that their mammogram shows no evidence of breast cancer.

2. Structure and function of the breast

The breast is a glandular organ which produces milk after pregnancy.

The breast, which is made up of glandular, fibrous and fatty tissues, extends almost to the collar bone at the top and out to the armpit at the side. Lying beneath the breast are the chest muscles and ribs.

The glandular tissue, consisting of milk sacs and ducts, is divided into about twenty segments or lobes arranged like the spokes of a wheel. From each lobe the milk ducts lead to the nipple area. The lobes of glandular tissue are surrounded by fatty and fibrous tissues.



In the breast area and the armpit, there are lymph glands or nodes which are connected by a system of channels. These glands and channels are part of the lymph system which helps the body fight infection.

3. What is breast cancer?

Breast cancer, like other cancers, is a disease of the body's cells. Normally, the body's cells grow and divide in an orderly manner so that growth occurs and worn out or injured tissue is replaced or repaired. Occasionally, some cells begin to behave in an abnormal way and grow into a mass of tissue called a **tumour**, or cancer.

Tumours can be **benign (non-cancerous)** or **malignant (cancerous)**. Benign tumours do not spread, but malignant tumours can invade neighbouring tissues and spread to other parts of the body. This can result in new cancer deposits called **secondaries** or **metastases**.

Breast cancer generally arises in the cells that line the specialised glandular breast tissue. There are several different types of breast cancer; some grow very slowly whilst others develop more rapidly.

Breast cancer can spread to the lymph glands, the bones and to other parts of the body.

4. What causes breast cancer?

As yet the causes of breast cancer, or how to prevent it, are not known. It is most unlikely that there is one single cause of breast cancer; rather, a number of different factors, some known and many unknown, may work together to trigger the development of this disease.

Doctors have identified a number of factors that can indicate that a woman may have an increased chance of developing breast cancer.

However, having one or even several of these characteristics does not mean that a woman is certain or even likely to develop this disease.

5. Knowing the risks

Breast cancer is mainly a disease of women over 50 years of age, although it does occur in younger women. As increasing age is the major risk factor, all women are at risk of developing breast cancer.

Women with a strong family history of breast cancer have an increased chance of developing breast cancer, but the degree of this increased risk can be low, moderate, or high depending on several factors. These include the number of relatives affected, the age of relative(s) at diagnosis, the type of breast cancer and whether one or both breasts were affected.

Currently, researchers are isolating and investigating genes associated with an increased risk of breast cancer. Tests to identify women who have familial genes that increase their risk of developing breast cancer are available, but are relevant to only a very small percentage of women.

Women who have been treated for breast cancer have a greater chance of developing a new breast cancer in the remaining breast tissue.

Some other factors which may also influence the development of breast cancer include:

- never having children or having the first full-term pregnancy at a late age
- early onset of periods and late menopause
- some types of benign breast disease
- a diet high in animal fat and low in fibre.

However, all of these characteristics explain only a small fraction of breast cancer cases.

If a woman is concerned about her personal risk of developing breast cancer, she should discuss this with her doctor.

6. Dispelling breast cancer myths

Women sometimes worry unnecessarily about the causes of breast cancer. For example, a bump or blow to the breast will **not** cause breast cancer. It may however, make the woman more aware of an underlying lump.

A woman who notices a symptom, such as a lump or nipple discharge, or any other change in her breasts, should contact her doctor promptly to arrange further investigation.

7. Signs and symptoms of breast cancer

Breast tissue does not stay the same throughout a woman's adult life. Monthly periods, pregnancy, age and weight changes can alter the shape, size and feel of the breast.

However, changes such as thickening or a breast lump, discharge from the nipple, skin dimpling or an inverted nipple (unless the nipple has always been turned in) can be signs of breast cancer.

It must be remembered though, that these changes can also be due to other disorders.

Although nine out of ten breast lumps are not due to breast cancer, **a woman who becomes aware of any change in her breasts should contact her doctor promptly to arrange further investigation.**

8. Screening mammograms and early detection of breast cancer

Screening is the process of looking for disease in healthy people who have no symptoms of disease. A screening mammogram is simply a breast x-ray. It can detect most breast cancers, including some too small to be felt. If breast cancer is found at an early stage, there is a greater chance of successful treatment.

While regular screening mammograms are currently the most effective tool for early detection, they do not cure cancer or prevent breast cancer from developing in the future. Nor are they 100% accurate. This means that in a very small number of women, the screening mammogram will not find all breast cancers.

Therefore a woman who becomes aware of a symptom, such as a lump or nipple discharge, or any other change in her breasts, should contact her doctor promptly to arrange further investigation.

A screening mammogram is not suitable for investigations of breast lumps or other symptoms, because more detailed tests are needed.

Some women may be uncertain about the recommendations for breast cancer screening at different ages. The following information will help to explain the BreastScreen SA policy on age.

9. At what age should a woman be screened for breast cancer?

Please note: The following information is concerned only with BreastScreen SA's policy on screening mammograms for women in different age groups. **However, breast cancer can occur at any age.**

Screening for women aged under 40

Women younger than 40 years are not eligible to attend for screening at BreastScreen SA. There is no evidence that having routine screening mammograms in this age group reduces the number of deaths from breast cancer.

Breast cancer occurs less frequently in women under 40 years of age. Also, the breast tissue of younger women may be dense, making mammograms difficult to assess. This means that very small changes cannot readily be detected.

Screening for women aged 40 to 49

The benefit of screening mammograms has not been clearly established for women in this age group. However, all women aged 40 to 49 without breast symptoms are eligible for screening and are very welcome to phone for an appointment if they wish to attend.

Most women in this age group who choose to begin screening in their forties are re-invited for a screening mammogram every two years.

Screening for women aged 50 to 69

Screening is primarily recommended for all women aged 50 to 69 without breast symptoms. It is estimated that for individual women in this age group, having a screening mammogram **every two years** reduces the chance of dying from breast cancer by about 40%. BreastScreen SA re-invites most women in this age group for a screening mammogram every two years.

Screening for women aged 70 and over

Research is less clear about the benefits of screening mammograms for women aged 70 years and over. For this reason, BreastScreen SA does not continue to send two-yearly reminders to women in this age group.

However, the risk of getting breast cancer continues to increase with age and does not stop at 70. Therefore, all women 70 years and over without breast symptoms are very welcome to continue with screening if they wish, and can contact BreastScreen SA for an appointment.

Some women in this age group may decide not to have screening mammograms as other medical conditions or lifestyle issues take higher priority. They may wish to discuss their decision with their doctor.

10. Screening for women with a strong family history of breast cancer

Women from the age of 40 with a strong family history of breast cancer are eligible for a screening mammogram **every year**. A woman is said to have a strong family history if she has one of the following:

- a first-degree relative (mother/sister/daughter, father/brother/son) with breast cancer diagnosed before the age of 50.
- a first-degree relative with cancer in both breasts (diagnosed at any age).
- two or more first-degree relatives with breast cancer (diagnosed at any age).

11. What is a diagnostic mammogram?

BreastScreen SA is a specialised screening program for women with no breast symptoms. It only performs screening mammograms at the screening visit, not diagnostic mammograms.

A diagnostic mammogram is a special x-ray for women who have breast symptoms. These may include:

- a breast lump or thickening
- discharge of blood from the nipple
- any change in breast size, shape or appearance
- unusual pain or discomfort
- change in nipple shape
- puckering or dimpling on the surface of the skin.

Finding any change in the breasts is a worrying experience, but most changes will not be due to cancer.

If a woman is at all concerned about any breast symptoms or changes, she should contact her doctor promptly to arrange further investigation. A doctor may recommend a diagnostic mammogram to examine the breast symptom in more detail.

When a woman has a diagnostic mammogram, the specialist is present and can arrange individualised x-rays, focused on the area of concern. She also receives a detailed report describing any benign and/or cancerous changes that may be present.

A diagnostic mammogram requires a doctor's referral, and incurs a cost. However, a Medicare rebate is available.

12. The screening mammography process

A screening mammogram is a simple and quick procedure that begins with the woman making an appointment for one of our clinics.

On arrival at the screening clinic, the woman gives her signed consent to have a mammogram to the receptionist. This consent may be withdrawn at any time. She is then shown to a change room where she undresses from the waist up.



A specially trained female radiographer explains the procedure to the woman, and then proceeds with the screening mammogram.

During a mammogram, each breast is firmly compressed for about 10-15 seconds in an x-ray machine specially designed for this purpose. This compression is necessary to obtain the best possible picture of the breast tissue. Depending on the breast size, an average of two x-rays are taken of each breast - one from the side and one from above. Women with larger breasts may need to have additional x-rays taken to ensure that all of the breast tissue can be seen on the x-rays.

Most women find this compression causes only brief discomfort. If women are still menstruating and suffer from pre-menstrual breast tenderness, it is recommended that they have their mammogram just after their period, to reduce the likelihood of discomfort during the mammogram.

The radiation dose from a mammogram is very low, less than that from many other x-rays people commonly have, and compressing the breasts does not cause cancer.

Screening mammograms are not 100% accurate. This means that in a very small number of women, the screening mammogram will not find all breast cancers. It also means that sometimes women may be brought back for further tests which would otherwise not have been necessary.

Screening mammograms do not cure cancer or prevent breast cancer from developing in the future.

13. When will the results be available?

All screening mammograms are read independently by two specialist radiologists. If no signs of breast cancer are found on the mammogram, the woman and her nominated doctor will be notified of the results in writing, within 14 days. As this test looks **only** for breast cancer, a report describing any benign (non-cancerous) breast changes is not completed. The woman's x-rays will be filed at BreastScreen SA so that they are readily available for comparison with her future screening mammograms. Any private x-rays will be returned to her. Due to privacy issues, staff cannot leave telephone messages or discuss the woman's results with her relatives or others, without her permission.

Women MUST contact BreastScreen SA if they have not received their results within 21 days.

Most women who attend for screening are reassured that their mammogram shows no evidence of breast cancer.

These women will receive another letter inviting them to return to BreastScreen SA when their next mammogram is due. Women over 70 are not sent reminder letters, but are very welcome to contact BreastScreen SA for an appointment.

14. What happens if the results are not normal?

When a screening mammogram shows an area of possible concern, more detailed investigations are necessary. These are done by BreastScreen SA at the Assessment Clinic at Wayville in Adelaide. A travel allowance called the Patient Assistance Transport Scheme (PATs) is payable to eligible country women who need to come to Adelaide for tests.

Approximately three in 100 women have a mammogram that indicates the need for further assessment. These women will be contacted by a nurse counsellor to arrange an appointment.

Women who are planning to be away for an extended period soon after their mammograms are asked to provide BreastScreen SA with contact details, in case they need to be recalled.

The Assessment Clinic provides a free specialist service, and consists of experienced teams of radiographers, radiologists, medical officers, nurse counsellors, pathologists and surgeons. The medical teams will support women through the assessment process, and answer their questions.

Further imaging of the breast is done in the morning clinic. This will involve more detailed breast x-rays and/or ultrasound examination. Women will then have a breast examination by one of the doctors, who will explain the results.

If the results are normal or benign (non-cancerous), no further investigations will be needed. A letter will be sent to the women and their nominated doctors detailing the results. The morning clinic may take between two and four hours to complete.

If the tests show that further investigations are needed, women will be asked to attend an afternoon clinic, which may take a further two to four hours. Fine needle aspiration biopsy and core biopsy tests are done in the afternoon.

Fine needle aspiration biopsy is a method used to obtain cells from the area of concern in the breast. A fine needle is inserted by a specialist doctor who may use an ultrasound or x-ray machine to guide it. If necessary, local anaesthetic will be used. These cells are then examined by a pathologist who will determine if cancer is present.

Core biopsy may be recommended to obtain additional information. A larger needle is used to obtain samples of tissue for analysis. The specialist is assisted in guiding the needle into the area of concern by the ultrasound or x-ray machine. A device called a mammotome may also be used. This applies suction through the needle to ensure adequate removal of tissue samples, and in certain situations, implants a small metal clip to allow easy identification of the biopsy site. Core biopsies are performed using local anaesthetic.

In some instances, the results of the fine needle aspiration biopsy and/or core biopsy may be inconclusive and the woman may be referred for a diagnostic open biopsy (performed under general anaesthetic, this is the complete removal of the area of concern, by a surgeon). This is not done at BreastScreen SA. It is possible that this procedure may have a benign (non-cancerous) result.

All available results are given to women on the day by one of the doctors. The women's nominated doctors are also informed. The final results of core biopsies will usually be available within two working days after the visit. The staff will arrange for women to receive these results as soon as possible, either at BreastScreen SA or from their nominated doctors.

Any woman who has not received her results within seven days MUST contact BreastScreen SA.

When the biopsy result is benign, further tests or treatment are usually not required.

The majority of women called back for assessment are reassured that they do not have breast cancer.

15. What happens if a breast cancer is suspected following assessment?

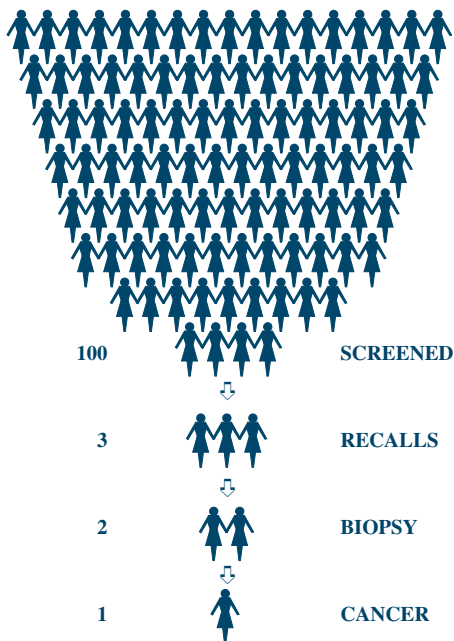
If women require treatment, BreastScreen SA staff will inform the women and their doctors, and arrange an appointment for them with their general practitioner so that they can discuss further management. Referral to a specialist is often necessary at this stage. Treatment for breast cancer is not performed at BreastScreen SA.

Most cancers found by the screening program are very small, giving an excellent chance of successful treatment.

The Cancer Council SA can also supply further information about cancer treatment and support services.

Fortunately, as this simplified diagram indicates, of 100 women screened:

- only three will be recalled for further assessment
- of these three, only two will require biopsies
- of these two, only one will have breast cancer.



16. Summary of recommended practices

- Screening mammography is for women without breast symptoms.
- Women aged 50 to 69 should have a free screening mammogram **every two years**.
- Mammograms are recommended **every year** for women aged 40 and over who have a strong family history of breast cancer.
- The risk of getting breast cancer continues to increase with age and does not stop at 70. Women 70 years and over are very welcome to continue with screening if they wish.
- Women should ask their doctors for a physical examination of their breasts every year.
- All women of any age should be aware of the look and feel of their breasts.
- If they notice a symptom, such as a lump or nipple discharge, or any other change in their breasts, they should contact their doctor promptly to arrange further investigation.

17. How is an appointment for screening arranged?

A doctor's referral is not needed for this free service. Eligible women simply call BreastScreen SA on 13 20 50.

Here are some practical hints for the day of the appointment:

- it is best to wear a two-piece outfit, as the woman will need to undress from the waist up.
- talcum powder, deodorant or skin ointment should not be worn, as these may produce confusing shadows on the x-rays.
- if a woman has had a mammogram elsewhere in the past five years, she should bring any available x-rays with her.
- clients are requested to be on time and to allow about 20 minutes for the visit. On-site parking is not available at all of the screening clinics, so a little extra time to find a car park may be needed.
- the woman should read, complete and sign the "Information and consent for screening form" and bring it with her to the clinic.

BreastScreen SA staff are specially trained in breast cancer screening, and will do their best to ensure every woman receives a caring and efficient service.

BreastScreen SA

For appointments at all clinics and the mobile units

PHONE 13 20 50

(cost of a local call)

Free interpreter services and wheelchair access are available

Website: www.breastscreen.sa.gov.au

Email: BSSAenquiries@health.sa.gov.au

Our clinics are located at:

Wayville

1 Goodwood Road, Wayville

Marion

199 Sturt Road, Seacombe Gardens

City

Twin Plaza Arcade, Adelaide

Frome Road

Frome Road, Adelaide

Salisbury

88 John Street, Salisbury

Centro Arndale

Facing Hanson Road, Kilkenny

Three mobile x-ray units visit country regions and some metropolitan areas every two years, the recommended screening interval.

18. Further information

The following organisations can provide further information about breast cancer and breast health:

BreastScreen SA

1 Goodwood Road, Wayville SA 5034
Tel: (08) 8274 7100
Fax: (08) 8373 4395
Email: BSSAenquiries@health.sa.gov.au
Internet: <http://www.breastscreen.sa.gov.au>

The Cancer Council South Australia

202 Greenhill Road, Eastwood SA 5063
PO Box 929, Unley SA 5061
Tel: (08) 8291 4111
Fax: (08) 8291 4122
Email: tcc@cancersa.org.au
Internet: <http://www.cancersa.org.au>

or call:

Cancer Help Line

Tel: 13 11 20

The National Breast Cancer Centre

Locked Bag 16, Camperdown NSW 1450
Tel: (02) 9036 3030
Fax: (02) 9036 3077
Email: director@nbcc.org.au
Internet: <http://www.nbcc.org.au>

19. Acknowledgements

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If you have any comments about this information booklet, BreastScreen SA would be pleased to receive them.

Please send your comments to:

**Promotions and Education Manager
BreastScreen SA
1 Goodwood Road
WAYVILLE SA 5034**



Government of South Australia

Central Northern Adelaide
Health Service

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