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Cancer basics

Breast lumps

Breast lumps can be non-cancerous or cancerous.

Benign (non-cancerous) lumps including fluid-filled cysts are more common. Non-cancerous lumps may result from infections, blocked milk ducts, or fibrous glandular tissue, a fibroadenoma.

Breast cancer, while less frequent than benign (non-cancerous) breast lumps, occurs in about one-in-thirteen Australian women. Breast cancer lumps may be found by you (be aware of your breasts), your GP/family physician, or by X-ray film (see #Mammography).

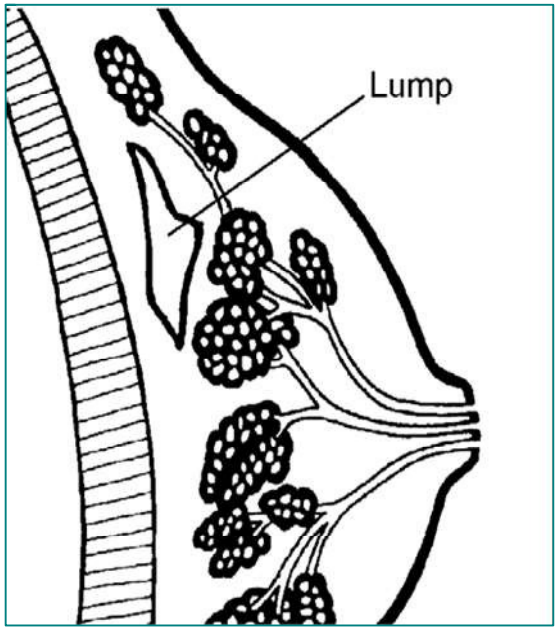
Breast cancer risk

The risk of breast cancer increases with age especially after 35 years of age. Risk doubles about every 10 years. If your mother or sister either had or has breast cancer then your risk is greater. Breast cancer is slightly more common in women who have not had children by age 40.

Non-cancerous breast lumps

Non-cancerous breast lumps commonly occur between the ages of 30 and 50. Although the cause of these lumps is unclear, changes in breast tissue are often due to hormonal influences — part of the normal menstrual cycle, taking the contraceptive pill, or being on hormone replacement therapy. The lumps may be tender or sore especially in relation to the hormonal cycle.

The two most common lumps in younger women are cysts and benign hard growths of fibrous glandular tissue (fibroadenomas).



Many non-cancerous breast lumps, especially blocked ducts, disappear when left alone. A cyst may be drained by removing the fluid through a needle (aspiration). A fibroadenoma can be left alone; if there is doubt about it being cancerous, it may be surgically removed under anaesthetic.

Investigations

When your doctor confirms a lump that is not a cyst, you may have a needle biopsy performed under anaesthetic—ie, little or no pain—to determine whether or not it is cancerous. To get more details about your lump the doctor may require a mammogram (breast X-ray film or radiograph) and/or a breast ultrasound (you will be familiar with the use of sound-wave images of a baby during pregnancy).

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Mammography

Mammography screening aims to detect breast cancer before the onset of obvious signs or symptoms.

Mammography applies X-ray technology to detect changes in breast tissue. X-ray film can identify pre-cancerous or cancerous changes before you or your doctor can feel them by touch with your fingers. Mammography screening, using only very low amounts of radiation, is a safe procedure.

The breast being screened is flattened between the two plates of a special X-ray machine (a flattened breast gives the best picture for diagnostic purposes). Although plate pressure, for some, can be uncomfortable, discomfort lasts only a few minutes.

Mammography allows for the early detection of about 80–90 percent of cancerous lumps. A small proportion, however, will not be identified. For this reason, even if your last mammogram result was normal, report any detection of suspected lumps to your GP/family physician.

Regular free mammography

Free X-ray screening for all women aged 50–69 years of age is provided through the Breast Screening Services operated by the federal Health Department. Your breast mammogram should be repeated every two years.

Preparing for your mammogram

First, do not use talcum powder on the day of your mammogram. It can affect the quality of the X-ray picture.

Secondly, bring your GP/family physician's name and address details with you. Then a copy of the specialist's report can be forwarded directly to your doctor.

Thirdly, as you will undress down to the waist, wear clothes that make this easy.

Finally, if you have breast implants, please inform the Breast Screening Service of this attribute when phoning for an appointment.

Results

The results of your mammogram will be sent to you within about two weeks. Remember, get the specialist's report sent directly to your doctor.

You will be told whether the results are normal or that the mammogram has features in need of further evaluation (such as having a repeat X-ray or a needle test).

Breast cancer treatment

Although there is more than one type of breast cancer, overall, the approach to treatment is the same. Specific treatment depends both on the type and stage of the cancer:

- *Lumpectomy* — Surgical removal of a relatively small lump & a small amount of surrounding breast tissue;
- *Mastectomy* — If the tumour is larger and/or the cancer is more advanced, then the whole breast (usually including the nipple) is surgically removed;
- *Radiotherapy* — Killing, by radiation, cancerous cells in the breast tissue;
- *Hormone treatment* — The type of hormone(s) will depend on the hormone-sensitive attributes of the tumour as well as the age of the patient;
- *Chemotherapy* — Combinations of anti-cancer drugs usually prescribed three at a time.

Your doctors will involve you in decisions on treatment options.

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Bowel cancer

Bowel cancer, in medical terminology '*colorectal cancer*', is the fourth most common cancer.

The bowel is the intestine running from the stomach to the anus. The main part of the large intestine is called the *colon;* the end 12 cms where the bowel runs into the anal canal is called the *rectum*. Waste material from the body (faeces) is stored in the rectum before being evacuated from the anus in the form of stool.

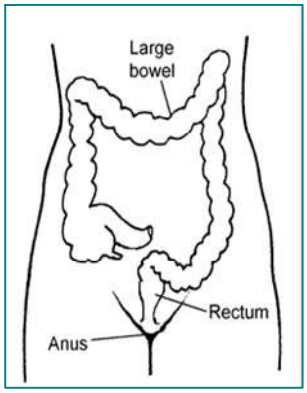
Colorectal cancer is one of the few cancers that can be detected early by way of screening those at risk. Rectal cancer is more common in males, colon cancer more common in females. Colorectal cancer, detected early, can be treated successfully by surgery.

Causes

Colorectal cancer is rare under 40 years of age but becomes increasingly prevalent over this age. Lifetime risk before 75 years of age is about 1-in-19 for males and 1-in-27 for females. Most colorectal cancers are thought to develop from non-cancerous nodules or growths (polyps) in the wall of the large intestine. Those with a family member who either has or has had bowel cancer are more at risk. Those with a low fibre intake in their diet (dietary fibre is roughage found in fruit, vegetables and cereals) are more at risk for colorectal cancer.

Prevention

Lifestyle physical activity appears to protect against cancer of the bowel. A diet low in fat and total calories but high in fibre appears to be protective. Risk is lower if excess alcohol consumption is limited and the individual does not smoke.



Symptoms & signs

Early on, there may be no signs. Bleeding from the rectum, often mixed in with stool, may be the first sign of 'something not quite right'. Specific symptoms and signs vary according to the site of the problem; they can include diarrhoea, stomach pain, constipation, rectal discomfort and appetite loss.

Faecal occult blood test

Those with a family history of bowel cancer and those with certain diseases of the bowel (such as ulcerative colitis) should have a yearly test for blood in the stool (faecal occult blood test). Those over the age of 50 without a family history of bowel problems may have a faecal occult blood test every two years. Three samples of stool are collected on three consecutive days for testing.

Colonoscopy

Colonoscopy—the threading of a flexible tube through the anus for examination of the rectum and the entire colon—is performed when blood is found is detected (or freely seen) and every 3–5 years in patients with a close family history of certain bowel diseases. Small tissue samples will be taken of observed lining abnormalities for examination under a microscope. According to the results, imaging tests (contrast X-ray film, CT scan) may be ordered.

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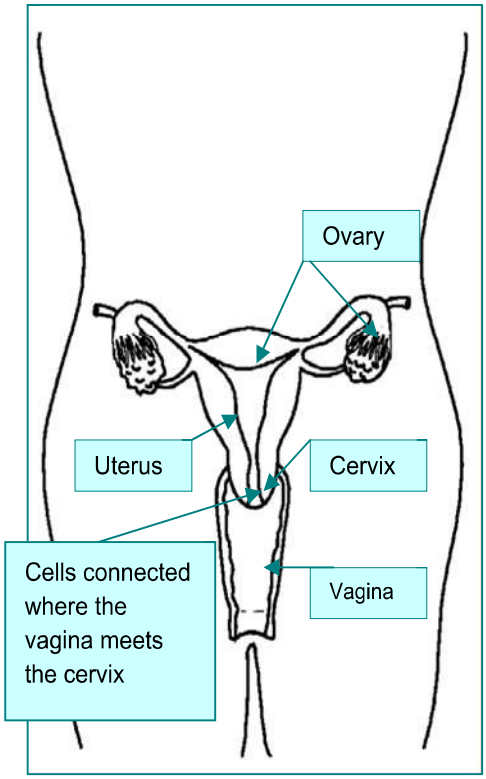
Pap smear

Pap smear procedure — cells collected from the neck of the womb for microscopic examination.



What is a *Pap smear*?

The *Pap smear* is a small number of cells from the cervix (neck region of the uterus or womb) to check for signs of abnormal changes which could lead to cervical cancer. Should abnormal cells be found, early treatment helps prevent cancer of the cervix. The word 'Pap' is a shortened version of Papanicolau, surname of the doctor who invented this screening technique.

Taking the cell sample is a routine painless procedure carried out by your doctor of first contact.

Every woman over 18 years of age, from the time of becoming sexually active, should have a Pap smear every two years. If you are aged over 70 years, with normal results from your last two smears, then you may stop having this screening test.

Procedure

A speculum (an instrument used to hold open the walls of body cavities) is inserted into your vagina enabling the doctor or nurse to see the neck (or cervix) of the uterus. Some cervical cells are collected using a small brush or spatula. These cells are then placed on a glass slide and sent to a laboratory for microscopic examination and evaluation. The process of collecting the sample cells only takes a few minutes.

Results

Your Pap smear results will usually be available within two weeks.

Expect to contact your GP/family physician doctor for the results or to make a further appointment.

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Pap smear results come in the following categories:

- Normal (positive outcome);
- Abnormal; or
- A recommendation for a repeat smear. Either the smear sample did not contain the right sort of cells (the, sometimes, can be difficult) or there was a problem processing the slide.

Normal

A normal test Pap smear result is a positive outcome. Schedule yourself for a further routine smear in two years time. Of course if you have any adverse signs in the meantime—eg, bleeding—then see your doctor.

Abnormal

An abnormal Pap smear test result may be reported as:

- *Non-specific changes:* You should have a further screening test in *12 months*.
- *Inflammation or wart virus* (see #GenitalWarts): You should have a repeat test in *six months*.

  If the result is still abnormal after these or more tests, then you will be referred for a *colposcopy* — a microscopic examination of the cervix; the examining doctor can see the cells directly. Colposcopy, like the Pap smear procedure, is performed with you, awake, lying on an examination couch with a speculum separating the walls of the vagina. Colposcopy can be done in the doctor's rooms, a clinic or hospital.
- *Very early changes:* Early abnormal cell changes requiring further evaluation.

  You will be referred to a specialist for colposcopy and a *biopsy*. For the biopsy, a small sample of tissue, usually not much bigger than a pin head, is taken from the area of the cervix with abnormal cells. The tissue sample is then sent to a laboratory for detailed examination. Results are usually available in about a week.
- *More marked abnormal changes:* Cell changes that, if left untreated, could become harmful or more threatening.

  You will be referred to a specialist for a colposcopy and biopsy.

Treatment

Treatments to destroy abnormal cells in the neck of the womb vary according to colposcopy and biopsy test results.

Alternative types of treatment include:

- Surgical removal;
- Burning by way of a laser or diathermy; or
- Freezing (cryogenic surgery).

Register for Pap tests

A confidential record of all Pap tests is maintained as the Pap Test register.

You will be sent a reminder letter if you are overdue for your scheduled Pap smear test. Unless you tell your doctor that you do not wish to receive a reminder, then this will happen automatically (in most states).

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Prostate cancer

Prostate cancer, a growth in the prostrate, is a common form of cancer in aging and aged men.

An accessory sex gland secreting a fluid that becomes part of semen, the prostate is located at the base of the bladder. The tube connecting the bladder to the end of the penis, the urethra, passes urine from the bladder and fluid from the prostate. A muscle below the prostrate prevents urine leaking from the bladder.

The prostrate enlarges with age; most of this occurs after 50 years of age. Prostate enlargements are most likely to be benign (non-cancerous). The causes of cancerous enlargements are unknown.

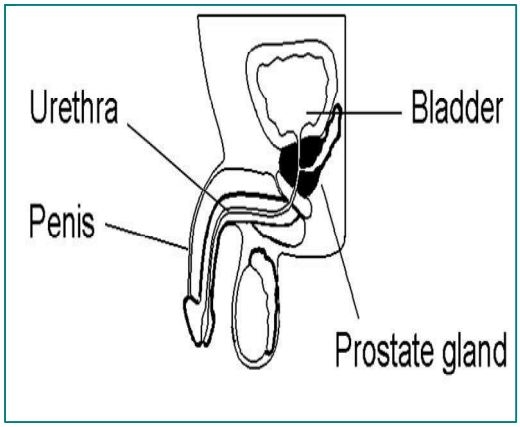
Signs

Benign prostate enlargement may have either few symptoms or the same set of signs as prostate cancer.

Prostrate enlargement—through pressure on the bladder outlet narrowing and the urethra—can cause obstruction and restrict urine flow. It is more difficult to pass urine — it is more difficult to start; flow is hesitant and less forceful (less volume); passing urine may be followed by further spurts or dribbling. The bladder, even when empty, may not feel empty (a sensation called 'incomplete emptying'). Irritative symptoms of the bladder can develop. The affected person may feel the need to urinate more frequently and more urgently. Waking at night with these irritative symptoms (nocturia) can result in problem sleepiness.

Screening

Your doctor may recommend a periodic examination to screen for prostate enlargement.



The *Prostate-Specific Antigen* (PSA) test is not a reliable screening test for prostate cancer. In general, the older you are and the larger your prostate, the higher your blood PSA reading. Your doctor will help you interpret your PSA. A higher than 'normal' PSA does not mean cancer; further examination often shows this not to be the case. But if cancer is diagnosed, PSA measures become a useful guide on the scope of the growth and its management.

Investigations

Your doctor can feel the prostate gland through your anus. Investigations for prostate cancer usually start with a digital (finger) examination for enlargement. You will also have blood tests. You may have X-ray images of the kidney and bladder or an ultrasound scan of the kidney, bladder and prostate. If cancerous enlargement is suspected, usually you will have an endoscopic examination, under general anaesthetic, of your urethra (an endoscope is an instrument for looking into the body).

Treatment

Treatment for prostate cancer typically consists of surgery to remove the growth, followed by radiotherapy (radiation treatment of the tissue surrounding the cancer) and/or hormone therapy.

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Skin cancers

Skin cancers are caused mostly by from exposure to the sun's ultraviolet light over time resulting in skin damage.

Skin cancers are common in Australia (the sun-burnt country). But sunshine can be enjoyed with minimal risk. About 90 per cent of skin cancers are preventable. Protection against the risks of skin damage commences in childhood.

Some skin types—for example, fair-skinned with red hair and freckles—are much more vulnerable to ultraviolet light damage. Conversely, there are those with dark skins who experience little or no damage.

Ultraviolet damage occurs over time by way of suntan, sunburn and photoageing. Areas of skin continually exposed—for example, face and back of hands—become dry, blotchy, red/brown and wrinkled compared to skin on parts of the body that are permanently covered.

The three main types of skin cancer are: basal cell carcinoma, squamous cell carcinoma and malignant melanoma.

Carcinomas are non-melanoma cancers (melanin is the pigment, dark-brown to black in colour, found in the skin, hair and iris). *Solar keratoses*—horny reddish skin spots, less than 1 cm in size, with scaly or rough surfaces—are forerunners to squamous cell carcinoma. Although keratoses are common in fair skinned people aged over 60 years, less than 2 per cent develop into a carcinoma.

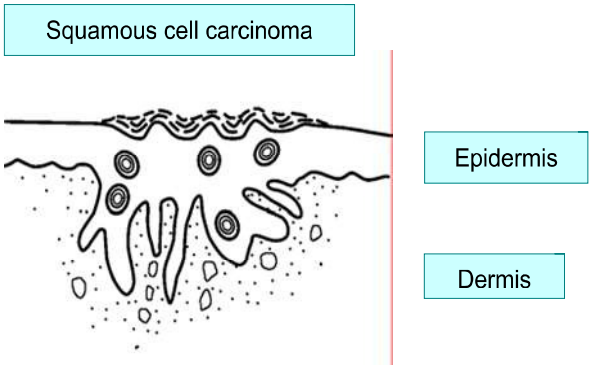
Basal cell carcinoma

Basal cell carcinoma (BCC) is the most common but least threatening of skin cancers

BCC is so named because it develops from the basal level of the dermis (the thick layer of the skin just under the epidermis or skin surface).

BCC starts as a small pearly lump on the skin. Often the skin in the middle will break down and form a scab which can bleed when scratched; it may become an ulcer with a raised pearly edge. BCCs often occur on the face or back of hands but can occur on other sun exposed parts of the skin. The BCC lesion can slowly erode skin tissues. It is very rare for a BCC lesion to spread to other parts of the body.

Squamous cell carcinoma



Squamous cell carcinoma (SCC) is the second most common form of skin cancer. It is more threatening than BCC.

SCC develops in keratinocytes on the surface of the skin (keratinocytes make up about 95 per cent of the cells in the epidermis).

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SCC lesions, typically, are small white or reddish/brown lumps that can be slightly tender to touch; ulcers may develop with sharp 'pinched out' edges that do not heal. SCCs, like BCCs, generally occur on skin consistently exposed to ultraviolet light.

SCCs rarely spread to local lymph glands (nodes on the network of vessels conveying lymph fluid to the blood stream).

Malignant Melanoma

Malignant melanomas are the least common but most dangerous form of skin cancer.

A melanoma can develop on any part of the body. A melanoma can start either in a pre-existing mole or in skin that, in appearance, previously was normal. Melanocytes, pigment-producing cells in the basal level of the skin, develop into a mole about 6 mm across. As expected, melanomas are less common in darker-skinned people.

Danger signs for moles are irregular changes of size, shape, lumpiness or colour (eg. red, blue or black), or bleeding. Changes can occur to an existing mole. Alternately, a new mole may appear. Changes may or may not occur at the same time; typically changes are spread over one month to several months.

Report any such change immediately to your GP/family physician for examination and evaluation. Melanoma, if diagnosed early enough, can most likely be cured.

Protection

Protect your skin from the sun's ultraviolet radiation as a matter of course. Minimise the risk and scope of skin damage as follows:

1. *Be more inclined not to venture outside during the more harmful times of day.*

   Ultraviolet exposure is highest when the sun is highest in the sky, particularly between 11 am and 3 pm (daylight saving time) on cloudless days over the summer months.
2. *When outside wear the right clothing.*

   Wear head gear and appropriate limb cover. If engaging in recreational physical activity, then wear sportswear or beachwear with a high sun protection factor (SPF).
3. *Use sunblock or sunscreen on exposed areas.*
4. *Take special care with children.* Their exposure risk is much higher.

Treatment

Although treatment for skin cancer and the skin changes which come before skin cancer depends on the type and location of skin damage, part of the treatment is to make proper protection an everyday procedure.

Photoageing: If concerned, ask your doctor or chemist about treatments for photoageing.

Solar keratoses: Your doctor will advise whether you should have your solar keratoses treated. Treatment is necessary with some drug regimens.

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BCC & SCC: Most carcinomas can be simply treated by removing the tumour surgically. Small BCCs are sometimes treated by freezing (cryogenic surgery) or burning. Radiotherapy (X-ray treatment) may be used for larger tumours or for SCC which have spread to the lymph nodes.

Malignant melanoma: The melanoma is surgically removed usually with a margin of surrounding skin; depending on the amount of tissue taken, a skin graft may be required to cover the site of the surgery.

Following removal of the malignant growth, radiotherapy or chemotherapy may be required to treat any cancer cells that may have spread further.

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