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Information about cancer

This chapter may help you answer simple questions about what cancer is and how it is treated. There are more than 200 different types of cancer and a range of treatments. Being aware of how cancer can affect people, what the treatments involve and their possible side effects can prepare you to support students, families and colleagues affected by cancer.



Individualised treatment

Cancer is increasingly seen as a genetic disease because it is caused by abnormal changes in a person's genes. An individual's cancer cells are unique. This means that different people may receive different treatments, even if their cancer type is the same. Doctors will recommend the best treatment for an individual based on the type and stage of cancer, the person's age and their general health.

What is cancer?

Cancer is a disease of the cells. Cells are the body's basic building blocks – they make up tissues and organs. The body constantly makes new cells to help us grow, replace worn-out tissue and heal injuries.

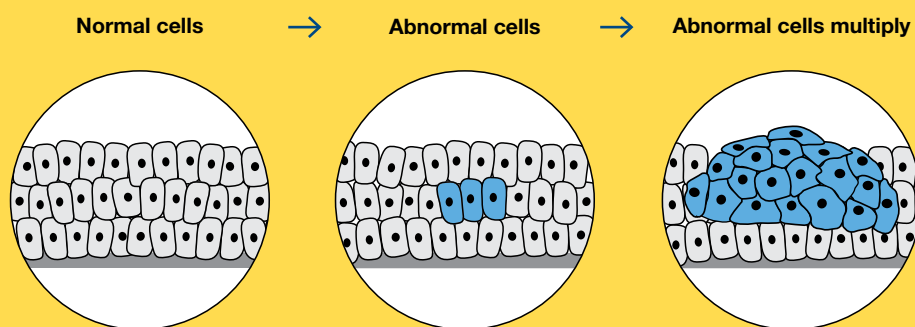
Normally, cells multiply and die in an orderly way, so that each new cell replaces one lost. Sometimes, however, cells become abnormal and keep growing. In solid cancers, such as kidney cancer, the abnormal cells form a mass or lump called a tumour. In some cancers, such as leukaemia, the abnormal cells build up in the blood and bone marrow.

Not all tumours are cancer. Benign tumours tend to grow slowly and usually don't move into other parts of the body or turn into cancer. Cancerous tumours, also known as malignant tumours, have the potential to spread. They may invade nearby tissue, destroying normal cells. The cancer cells can break away and travel through the bloodstream or lymph vessels to other parts of the body.

The cancer that first develops is called the primary cancer. It is considered localised cancer if it has not spread to other parts of the body. If the primary cancer cells grow and form another tumour at a new site, it is called a secondary cancer or metastasis. A metastasis keeps the name of the original cancer, e.g. kidney cancer that has spread to the liver is called metastatic kidney cancer, even though the main symptoms may be coming from the liver.

There are more than 200 different types of cancer, each with its own name and treatment. Most areas of the body can be affected by cancer. Some cancers are more common than others (see page 10).

How cancer starts



Treatments and side effects

Cancer and its treatment can have physical, cognitive and emotional impacts. There are a number of ways for staff to help a student or colleague manage these impacts in the school setting (see pages 30–33 and 52–53).

People with cancer may have one type of treatment or a combination of treatments. The table on the next page provides an overview of the most common cancer treatments and their side effects.

For some people treatment will cause significant side effects. However, not everyone will experience side effects. Some treatment side effects occur immediately; others appear weeks or months later. For more information, call Cancer Council 13 11 20 or visit your local Cancer Council website.

How long will treatment take?

Some cancer treatments take a few months, others take a number of years. An initial phase of intensive active treatment may be followed by a longer period of maintenance treatment.

If cancer cells and symptoms reduce or disappear after treatment, the person is said to be in remission. Remission may last for a long period of time. If the cancer comes back after a period of improvement, it is called a recurrence or relapse.

Some people experience a recurrence of cancer after a period of remission. If this happens to someone in your school community, they may need extended support from school staff.

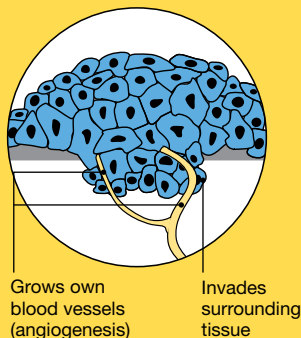


Alternative therapies

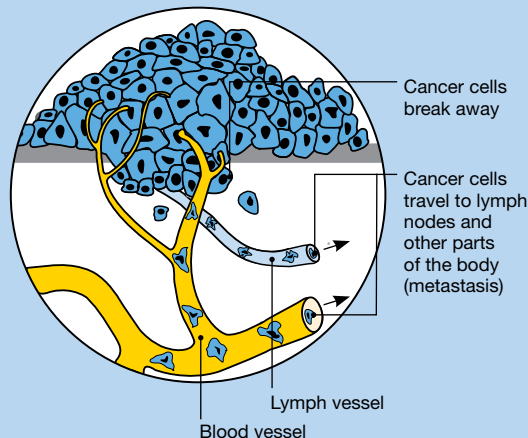
Alternative therapies are unproven therapies used instead of conventional treatment. They are often promoted as “cancer cures” without scientific testing. Examples include shark cartilage, magnet therapy and drastic diets.

Some alternative therapies may cause serious side effects or interfere with conventional cancer treatment. Cancer Council does not endorse the use of alternative therapies.

→ Malignant cancer



How cancer spreads



Common cancer treatments

	Description	Side effects
Chemotherapy	<ul style="list-style-type: none"> • Chemotherapy is the use of drugs to kill or slow the growth of cancer cells. • The drugs are most commonly given through a vein (intravenously), but can also be given as tablets (orally), as a cream, or as injections into different parts of the body. • Chemotherapy drugs circulate throughout the body. They particularly affect cells that divide rapidly, such as cancer cells or the healthy cells in a person's mouth, stomach, skin or hair. • Treatment may take several months. It is usually given in courses (cycles) over several weeks, with rest periods in-between. 	<ul style="list-style-type: none"> • Side effects of chemotherapy depend on the drugs used and vary from person to person. • They may appear rapidly (within a few hours) or later (2–4 weeks). • Short-term side effects may include nausea, vomiting, tiredness, hair loss, mouth ulcers, sun sensitivity and lowered immunity. • Long-term side effects may include problems with concentration, memory and thinking (cancer-related cognitive impairment). These can affect work or school performance for many years (see pages 32–33). Some chemotherapy drugs can cause infertility or heart problems.
Radiation therapy (also known as radiotherapy)	<ul style="list-style-type: none"> • Radiation therapy uses a controlled dose of radiation to kill or damage cancer cells so they cannot multiply. • It can be used to treat the original (primary) cancer or the symptoms of a cancer that has spread (metastasised). • The radiation is specifically targeted at the treatment site to reduce the risk of damage to healthy cells. • The radiation affects all cells in the area being treated, but cancer cells are the most affected. • Treatment may be given daily for several weeks. 	<ul style="list-style-type: none"> • Side effects may appear throughout a course of radiation therapy, but particularly near the end or even several weeks after. • Side effects will depend on the part of the body treated. • Short-term side effects may include nausea, tiredness, hair loss and reddening of the skin near the area treated. • Tiredness can persist for many weeks, especially after radiation to the head area. • Long-term side effects may include sun sensitivity, learning difficulties, growth failure, thyroid problems, hair loss, infertility and (rarely) a second cancer later in life.
Surgery	<ul style="list-style-type: none"> • Surgery involves the partial or total removal of a tumour. • Surgery for cancer sometimes requires removal of a part of the body (e.g. amputation). 	<ul style="list-style-type: none"> • The most common side effect is pain at the site of the operation. • Other possible side effects include infections and reactions to the anaesthetic. • Some kinds of surgery require prolonged rehabilitation such as physiotherapy. • An amputation can change physical appearance and ability, and may require the use of mobility aids such as a wheelchair or prosthesis. • Some surgeries cause bowel changes. Support and a private toilet may make this easier for the person to manage.

	Description	Side effects
Immunotherapy	<ul style="list-style-type: none"> Immunotherapy uses drugs to help trigger the immune system to fight cancer. 	<ul style="list-style-type: none"> Side effects vary depending on the drug. Some may become serious and treatment may need to be stopped. They may include fatigue, allergic reactions, painful joints, skin rash and diarrhoea. These can vary in severity and duration. Immunotherapy can also cause inflammation in any of the organs in the body.
Targeted therapy	<ul style="list-style-type: none"> Targeted therapy drugs attack specific particles within cells that let cancer grow. They may be used instead of or together with chemotherapy. 	<ul style="list-style-type: none"> Side effects vary depending on the drug. They may include fevers, diarrhoea, allergic reactions, rashes and blood pressure changes.
Steroid therapy	<ul style="list-style-type: none"> Steroid therapy uses corticosteroid drugs to reduce nausea or swelling. Steroids are also used to help treat some cancers and to increase the effectiveness of some chemotherapy drugs. They may be given orally or by injection. 	<ul style="list-style-type: none"> Side effects may include increased thirst and appetite, sleep problems, weight gain, behavioural changes, mood swings, stretch marks, acne, fluid retention, high blood glucose levels and muscle weakness.
Stem cell and bone marrow transplants	<ul style="list-style-type: none"> A stem cell transplant is a long, demanding process that replaces stem cells destroyed by disease, chemotherapy or radiation. (Stem cells normally live in the bone marrow and give the body a constant source of blood cells.) It may also be called a bone marrow transplant, a peripheral blood stem cell transplant or a cord blood transplant (depending on the source of the stem cells). 	<ul style="list-style-type: none"> Lowered immunity makes the person more likely to catch infections. The treatment may involve many months off school or work and prolonged isolation. The donor cells sometimes attack a patient's normal cells, a complication called graft-versus-host disease. This can occur soon after the transplant or many months later, requiring more time off school or work.
Hormone therapy	<ul style="list-style-type: none"> Certain hormones stimulate the growth of some cancers. Hormone therapy either blocks or removes hormones from the body to slow or stop the growth of cancer cells. It is mostly used for adults with breast, prostate, ovarian or thyroid cancer. 	<ul style="list-style-type: none"> Side effects for men may include tiredness, weight gain, hot flushes, breast tenderness, depression and osteoporosis. Side effects for women may include blood clots, weight gain, generalised swelling, hot flushes and irregular menstrual periods.
Complementary therapies	<ul style="list-style-type: none"> Complementary therapies are used alongside conventional treatments, and may help manage any side effects. They focus on physical and emotional wellbeing. Examples include acupuncture, yoga, massage, meditation and art therapy. 	<ul style="list-style-type: none"> Side effects depend on what type of complementary therapy is used.



Chapter summary

- ✓ Cancer is a disease of the body's cells – there are over 200 different types of cancer.
- ✓ Cancer is quite rare in children and adolescents.
- ✓ Children and adolescents are usually diagnosed with different types of cancer than adults.
- ✓ Type and length of treatment depends on the type of cancer and whether it has spread.
- ✓ Different treatments cause different side effects – short-term and long-term.
- ✓ Common side effects include fatigue, nausea, pain, loss of appetite, weight gain or loss, sun sensitivity, hair loss, swollen arm or leg (lymphoedema), diarrhoea, constipation, depression, difficulty thinking clearly, and concentration and memory issues.
- ✓ Students who have had cancer may need support throughout their schooling.

Who gets cancer?

An estimated one in two Australians will be diagnosed with cancer by the age of 85. In Australia, more than 127,000 people are diagnosed with cancer every year.¹ People over the age of 50 are the most likely to be diagnosed with cancer, and children are the least likely. Unfortunately, however, some children and young people are diagnosed with cancer.

In adult men, the most common forms of cancer are prostate cancer, bowel cancer, melanoma, and lung cancer. Adult women are most often diagnosed with breast cancer, bowel cancer, melanoma, and lung cancer.

Cancer in children and adolescents

In Australia, about 1000 children aged 0–19 develop cancer every year, which means that at any time there are thousands of school students who have had cancer.¹ Advances in diagnosis, treatment and follow-up care mean the overall five-year survival rate for children and adolescents is now more than 80%.² This can vary depending on the age of the patient and their cancer type.

Cancers affecting children generally differ from those affecting adults. Childhood cancers commonly occur in different parts of the body and are not usually linked to lifestyle or environmental factors. They tend to be more responsive to chemotherapy, and children often tolerate the treatments better.

Some side effects from treatment may not show up until many months or years later. These are called late effects. This is particularly the case for a child who was treated at a young age. Any student who has survived cancer will need appropriate support for the rest of their school years (see pages 32–33).

Childhood cancers

The most common types of childhood cancer in Australia are:³

- **leukaemia** – a cancer that affects the blood cells; the two main types are acute lymphoblastic leukaemia and acute myeloid leukaemia
- **brain tumours** – the most common types in children are gliomas (starting in the brain's glial cells) and medulloblastoma (starting in the cerebellum, the lower back part of the brain)
- **lymphoma** – a cancer that develops in the lymphatic system; the two main types are Hodgkin lymphoma and non-Hodgkin lymphoma
- **neuroblastoma** – a cancer of the nerve cells involved in the development of the nervous system
- **sarcoma** – a malignant tumour that develops in the bone, muscle or connective tissue.