Understanding Brain Tumours

A guide for people with brain or spinal cord tumours and their families and friends.
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Understanding Brain Tumours is reviewed approximately every two years.
Check the publication date above to ensure this copy of the booklet is up to date.
To obtain a more recent copy, phone the Cancer Council Helpline on 13 11 20.

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Cancer Council New South Wales
Cancer Council is the leading cancer charity in NSW. It plays a unique and important role in the fight against cancer through undertaking high-quality research, advocating on cancer issues, providing information and services to the public and people with cancer, and raising funds for cancer programs.

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Note to reader
Before commencing any health treatment, always consult your doctor. This booklet is intended as a general introduction to the topic and should not be seen as a substitute for your own doctor’s or health professional’s advice. All care is taken to ensure that the information contained here is accurate at the time of publication.

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Introduction

This booklet has been prepared to help you understand more about brain and spinal cord tumours. It provides information about malignant (cancerous) and benign (non-cancerous) tumours, which are diagnosed and treated similarly.

Many people feel understandably shocked and upset when told they have a tumour. We hope this booklet will help you understand how brain and spinal cord tumours are diagnosed and treated. We also include information about support services.

We cannot advise you about the best treatment for you. You need to discuss this with your doctors. However, we hope this information will answer some of your questions and help you think about questions you want to ask your doctors or other health carers.

You may like to pass this booklet to your family and friends for their information.

This booklet does not need to be read from cover to cover – just read the parts that are useful to you.

Some medical terms that may be unfamiliar are explained in the glossary.
## Contents

**What is cancer?** .......................................................... 4

**The brain and spinal cord** ........................................... 6
*Nerve cells* ................................................................. 7

**What is a brain or spinal cord tumour?** ....................... 8
*Causes* ........................................................................ 9
*Symptoms* ................................................................... 10
*How common are brain and spinal cord tumours?* ......... 12

**Diagnosis** ..................................................................... 13
*Physical examination* ................................................. 13
*CT scan* ......................................................................... 13
*MRI scan* ...................................................................... 14
*Further tests* .............................................................. 15
*Grading tumours* ........................................................ 16
*Prognosis* ...................................................................... 16
*Which health professionals will I see?* ......................... 17

**Treatment** ..................................................................... 18
*Surgery* .......................................................................... 18
*Radiotherapy* .............................................................. 21
*Chemotherapy* ............................................................. 23
*Other therapies* .......................................................... 25
*Palliative treatment* ..................................................... 25

**Rehabilitation** ............................................................ 26
*Types of rehabilitation* .............................................. 27
*Driving* ......................................................................... 28
Making treatment decisions ................................................................. 29
Decision-making steps ........................................................................ 30
Talking with doctors ........................................................................... 31
Taking part in a clinical trial .............................................................. 32

Looking after yourself ........................................................................ 33
Healthy eating ...................................................................................... 33
Being active ......................................................................................... 34
Complementary therapies .................................................................. 35
Strengthening your relationships ....................................................... 36
Changing body image .......................................................................... 36
Sexuality, intimacy and cancer ............................................................ 37
Life after treatment ............................................................................. 38

Seeking support ................................................................................ 40
Practical and financial help ................................................................. 41
Understanding Cancer program ......................................................... 41
Talk to someone who’s been there ..................................................... 42
Cancer Council Helpline ..................................................................... 43
Caring for someone with cancer ......................................................... 44
Caring for a child with a brain tumour ................................................. 44
Information on the Internet ............................................................... 48
Cancer information library ................................................................. 49

Question checklist ............................................................................. 50

Glossary ............................................................................................ 51

How you can help ............................................................................. 56

Regional offices ................................................................................ 57
What is cancer?

Cancer is a disease of the body’s cells, which are the body’s basic building blocks. Our bodies constantly make new cells: to help us to grow, to replace worn-out cells, or to heal damaged cells after an injury.

Normally, cells grow and multiply in an orderly way, but sometimes something goes wrong with this process and cells grow in an uncontrolled way. This uncontrolled growth may result in abnormal blood cells, or may develop into a lump called a tumour.

A tumour can be benign (not cancer) or malignant (cancer). Most benign tumours are slow-growing and unlikely to spread throughout the brain. However, some benign brain tumours can become genetically damaged and develop into a rapidly growing malignant tumour. This process is called malignant transformation.

The beginnings of cancer

Normal cells  Abnormal cells  Abnormal cells multiply  Malignant or invasive cancer

Boundary  Lymph vessel  Blood vessel

Some benign tumours are precancerous and may progress to cancer if left untreated. Other benign tumours do not develop into cancer.
Unlike other types of cancer, malignant tumours of the brain or spinal cord are very unlikely to spread to other parts of the body. Instead, they often are identified as cancer by their rapid growth and tendency to come back (recur) after surgery.

If cancerous cells move away from the original (primary) cancer and invade other organs and bones, this is called a secondary cancer or metastasis. A metastasis keeps the name of the original cancer. For example, lung cancer that has spread to the brain is still called lung cancer, even though you may be treated for symptoms caused by a brain tumour.
The brain and spinal cord make up the central nervous system.

The central nervous system receives messages from cells called nerves, which are spread throughout the body (the peripheral nervous system). The brain interprets information and relays messages back through the nerves to muscles and organs.

The brain is the most important organ in the body because it controls all voluntary and involuntary processes, such as learning, sensing, imagining, remembering, breathing, blood circulation and heart rate, body temperature, digestion and continence (urinary and bowel control).

There are two main sections of the brain; the cerebrum (the largest part) and cerebellum. These parts of the brain play unique roles in maintaining body processes, many of which are critical to staying alive.
The spinal cord extends from the brain to the base of the spinal column. It consists of nerve cells and bundles of nerves that connect the brain with all parts of the body through the peripheral nervous system.

The brain and spinal cord are surrounded and protected by membranes called the meninges, the skull and the vertebrae bones. Inside the skull, the brain floats in fluid called cerebrospinal fluid.

**Nerve cells**

The brain, spinal cord and nerves consist of billions of cells called neurons, which process and transmit information. There are three main types of neural cells:

- sensory neurons – respond to light, sound and touch
- motor neurons – cause muscle contractions
- interneurons – connect neurons in the brain and spinal cord.

Glial cells are the other main type of cell in the nervous system. There are several different types of glial cells, including astrocytes and oligodendrocytes.

Glial cells are the glue of the nervous system because they surround and insulate the neurons and hold the neurons in place. The glial cells also supply nutrients and oxygen to neurons and eliminate dead neurons and germs.
What is a brain or spinal cord tumour?

A tumour forms when cells in the central nervous system grow and divide in an uncontrollable way. A tumour can be benign or malignant.

The difference between benign and malignant tumours in the central nervous system is not always clear-cut.

- **Benign tumours** – not cancerous. The most common types are meningiomas, neuromas, pituitary tumours and cranio-pharyngiomas.

  Benign tumours can cause problems by pressing on the brain and spinal cord. Some people have surgery to remove the tumour, but if surgery is not possible, cancer treatments such as radiotherapy may be used.

- **Malignant tumours** – cancerous. Tumours are usually named after the cell type from which they arise. They include high-grade astrocytomas, oligodendrogliomas, ependymomas, glioblastomas and mixed gliomas.

  In some malignant tumours, the cells are confined to a specific area. In other tumours, malignant cells are also found in surrounding tissue. Treatments for malignant tumours are described on pages 18 to 25.
Causes

The causes of most brain and spinal cord tumours are unknown. However, there are a few known risk factors for malignant brain tumours.

People who have had radiation to the head, usually as treatment for another type of cancer, may be at an increased risk of developing a tumour. This may occur in people who had radiotherapy to treat childhood leukaemia.

It is also possible to have a genetic predisposition to developing a tumour. For example, some people have a condition called neurofibromatosis, which causes nerve tissue to grow tumours.

Some researchers speculate whether the long-term use of mobile phones increases a person’s risk of brain cancer. At the time of publication, there was insufficient scientific evidence to link mobile phone usage and brain tumours.

Brain tumours are not contagious.

“It was not a priority of mine to know exactly what had caused my tumour. I accept that some things happen with no current explanation.”
Symptoms

The symptoms of brain or spinal cord tumours depend on where the tumour is located. Sometimes, when a tumour grows slowly, symptoms develop gradually and are hardly noticeable. The symptoms can be similar to other illnesses, such as a migraine or stomach bug.

Brain tumours and spinal cord tumours may cause weakness or paralysis in parts of the body. Some people also have trouble balancing or have seizures (see following page).

Other symptoms of brain tumours include:
- headaches
- drowsiness
- nausea and/or vomiting
- difficulty speaking or remembering words
- disturbed vision, hearing, smell or taste
- general irritability or a change in personality – this is sometimes noticed only by family or friends.

Symptoms of spinal cord tumours include:
- back and neck pain
- numbness or tingling in the arms or legs
- clumsiness or difficulty walking
- incontinence (loss of bowel or bladder control).

Hydrocephalus

A brain tumour can sometimes block the flow of cerebrospinal fluid around the brain and its cavities. When this happens, fluid can build up, putting pressure on the brain. This is called hydrocephalus. The condition is most common in infants and some adults and is usually treated with a shunt (see page 20).
Seizures

A tumour may cause seizures, which are disruptions to the normal pattern of electrical impulses in the brain. Seizures are sometimes called fits or convulsions.

- Partial seizures – affect one part of the body, such as an arm or leg. Symptoms may include twitching, jerking, tingling or numbness, a strange smell or taste, or a feeling of deja vu. They can cause a brief loss of consciousness.
- Generalised or grand mal seizures – typically affect the whole body. They can cause a loss of consciousness and violent muscle twitching or spasms.

For more detailed information about seizures, contact Epilepsy Action Australia on 1300 374 537 or visit www.epilepsy.org.au.

If you are with someone who has a seizure

- Remain calm. Stay with the person and try to prevent injury. Place something soft under their head or hold their hands. Most seizures only last a few minutes.
- Don’t restrain the person. Restraining the person or putting anything in their mouth may be harmful. Instead, clear the area around them.
- Lie the person on their side. This is important if the person is unconscious, if they vomit, or if they have food or fluid in their mouth.
- Call an ambulance if the seizure lasts more than five minutes, if multiple seizures occur, or if anyone is injured.
- Explain what has occurred. In some cases, people are confused after a seizure.

Further seizures can often be prevented by medication called anti-epileptics or anti-convulsants (see page 25).
How common are brain and spinal cord tumours?

About 450 new cases of brain cancer are diagnosed in NSW each year. Brain cancer represents about 1.4% of all cancers in males and 1.2% of all cancers in females.

Malignant spinal tumours affect about 30 people each year.

Children with tumours

Brain tumours are the second most common cancer in children, with about 120 children diagnosed with a malignant brain tumour each year.

Children who are diagnosed with a brain or spinal cord tumour will have the same types of diagnostic tests as adults. Their treatment is also similar to adults, with the exception of radiotherapy treatment (see page 21).

Many of the side effects and emotional issues surrounding body image will also be similar to adults. The information in this booklet, therefore, applies to children too.

For more information on the prognosis of children with tumours, and communicating with children, see the section Caring for a child with a brain tumour on page 44.
Diagnosis

Most people first consult with their general practitioner (GP) if they are feeling unwell. Some people who have sudden symptoms, such as vomiting or a loss of consciousness, go directly to the hospital emergency room.

You may have one or more of the following diagnostic tests.

Physical examination

Your doctor may check how different parts of your brain or body are working. This may include checking your reflexes (for example, knee jerks), the strength in your limb muscles, and your ability to feel pinpricks. You may be asked to do some mental exercises, such as some simple arithmetic.

The doctor may also look into your eyes, using an instrument called an ophthalmoscope. This will allow the doctor to see your optic nerve, which transmits visual information from the eyes to the brain.

CT scan

A computerised tomography (CT) scan is a procedure that uses x-ray beams to take pictures of the inside of your body. Unlike a standard x-ray, which takes a single picture, a CT scan uses a computer to compile many pictures of areas of your body.
A special dye may be injected into your veins. This injection will help make the scan pictures clearer. It may make you feel flushed or hot for a few minutes. Rarely, more serious reactions occur, such as breathing difficulties or low blood pressure.

You will be asked to lie still on a table while the CT scanner, which is large and round like a doughnut, slowly rotates around you.

This painless test takes about 30 to 60 minutes, and you will be able to go home when the scan is complete.

MRI scan

A magnetic resonance imaging (MRI) scan uses a combination of magnetism and radio waves to build up detailed cross-section pictures of the body. This test involves lying on a table in a metal cylinder, which is a large and powerful magnet.

As with a CT scan, special dye may be injected into your veins before the scan.

Some people feel anxious lying in the narrow metal cylinder when they are having an MRI. Talk to your health care team before the scan if you are claustrophobic. It may be helpful to take a mild sedative or talk to the person operating the MRI machine through an intercom.

Though the MRI scanner can feel tightly enclosed and noisy, the test is painless and is usually complete in about one hour. You will be able to go home when your scan is complete.

People who have a pacemaker or certain other metallic objects in their body will not be able to have an MRI due to the effect of the magnet.

The dye that is injected into your veins before a CT or MRI scan is called contrast solution and may contain iodine. If you are allergic to iodine, fish or dyes, let the person performing the scan know in advance.
Further tests

You may also have some of the following tests. Some of these tests are used to determine how aggressive a tumour is, or if the cancer has spread (metastasised).

- Magnetic resonance spectroscopy (MRS) scan: This scan can be conducted at the same time as a standard MRI scan (see previous section). An MRS scan uses technology to examine the chemical composition and function of neurons.
- Single photon emission computerised tomography (SPECT or SPET) scan: After an injection of a small amount of radioactive fluid, your body is scanned with a machine called a gamma camera. The camera takes three-dimensional pictures of your body. This scan is often used to assess blood flow in the brain.
- Positron emission tomography (PET) scan: You are injected with radioactive glucose solution, which may be absorbed by active cells, such as cancer cells.
- Lumbar puncture (spinal tap): A needle is inserted into the spinal column to collect cerebrospinal fluid for analysis.
- Surgical biopsy: If scans show an abnormality that looks like a tumour in your brain, your doctor may decide to remove some or all of the tissue for examination. In some cases, the neurosurgeon is able to make a small opening in your skull and scalp and insert a needle to obtain an adequate sample. In other cases, the neurosurgeon will remove part of your skull to access the tumour.

If your doctor recommends any of these tests, you can ask for a more detailed explanation of the procedure. Understanding what will happen may help you feel less worried about the scan and its results.
Grading tumours

Brain and spinal cord tumours are usually graded on a scale based on how quickly they are growing, as well as their ability to invade nearby tissue.

- Grades 1 and 2 are the slowest-growing tumours. They are called low-grade tumours.
- Grade 3 tumours grow at a moderate rate.
- Grade 4 are the fastest-growing tumours. They are called high-grade tumours.

Prognosis

Prognosis means the expected outcome of a disease. You will need to discuss your prognosis with your doctor, but it is not possible for any doctor to predict the exact course of your illness.

Both benign and malignant tumours can be life-threatening, but you may have a better prognosis if the tumour is benign, or if a surgeon is able to remove all of the tumour.

Test results, the rate and depth of tumour growth, how well you respond to treatment, and other factors such as age, fitness and your medical history are all important factors in assessing your prognosis.

Some brain or spinal cord tumours can recur, but treatment such as surgery or radiotherapy can often relieve symptoms for several years.

For information about the prognosis of children with brain or spinal cord tumours, see page 44.
Which health professionals will I see?

Your GP will probably arrange the first tests to assess your symptoms. This can be a worrying and tiring time, especially if you need several tests. You will usually be referred to a neurologist, who will arrange further tests and advise you about treatment options.

You will be cared for by a range of health professionals who specialise in different aspects of your treatment. This multidisciplinary team may include:

- neurosurgeon and neurologist – diagnose and treat illnesses of the brain and nervous system
- nurses – assist and support you through all stages of your diagnosis and treatment
- medical oncologist – prescribes and coordinates chemotherapy treatment
- radiation oncologist – prescribes and coordinates radiotherapy treatment
- dietitian – supports and educates you about nutrition and diet
- social worker, psychologist and pastoral worker – advise you on support services and provide emotional support
- cognitive therapist, physical therapist, speech therapist and occupational therapist – provide rehabilitative services.
Treatment

Tumours of the brain or spinal cord are usually treated with surgery, radiotherapy, chemotherapy or steroid therapy. These treatments may be used alone or in combination.

The aim of treatment is to remove the tumour, slow its growth, or relieve symptoms by shrinking the tumour and any swelling around it.

There are also many types of new and experimental treatments (or refinements of existing treatments) that are sometimes used to treat people with tumours. For more information, talk to your doctor about joining a clinical trial (see page 32).

The choice of treatment will depend on
- the type, size and location of the tumour
- your age, medical history and general state of health.

Surgery

Surgery treating the central and peripheral nervous system is called neurosurgery.

Some tumours can be removed completely by neurosurgery. This is called a gross total resection.

If a tumour is more spread out, is near major blood vessels, or cannot be removed without damaging other important parts of the brain or spinal cord, the surgeon may be able to remove part of the tumour. This procedure, which is called a partial resection, may improve your symptoms by reducing the pressure on your brain.

Removing all or part of the tumour may allow you to lead an active life for some time.
In some cases, a tumour cannot be removed because it would be too dangerous. If this is the case, you will probably have another type of treatment to ease your symptoms.

For one week before surgery, avoid taking any medication, including aspirin, herbal remedies or anti-inflammatory drugs, unless it is a medical emergency. Medication may interfere with the anaesthetic you are given during the operation.

**Surgery for a brain tumour**

The surgeon will remove as much of the tumour as possible without damaging healthy parts of your brain.

- **Craniotomy:** The main type of operation to treat a brain tumour. Some head hair will be shaved off and you will be given a general anaesthetic. A neurosurgeon will cut through the scalp and move it aside, then remove a piece of skull above the tumour.

- **Awake craniotomy:** This operation is done if the tumour is near parts of the brain that control speech or movement. When the brain is exposed, the patient is brought back to consciousness so they can speak, move and respond. The patient does not feel any pain because local anaesthetic is used and there are no pain receptors in the brain. The surgeon asks the patient to speak or move a limb, which allows them to identify and avoid certain parts of the brain.

- **Endoscopic transnasal brain surgery:** A rarer type of surgery used if the tumour is near the base of the brain. The surgeon puts a long tube (endoscope) up into the nose. Through the nostrils, the surgeon uses small tools to remove part or all of the tumour. This type of surgery has a faster recovery time and fewer long-term side effects. It also means you can have further treatment, if necessary.
Surgery for a spinal cord tumour

The main surgery for a spinal cord tumour is a laminectomy. In this procedure, the surgeon makes an opening in the spinal column and removes the tumour affecting the spinal cord.

After your operation

- For the first 12 to 24 hours after the operation, you will be closely monitored. Nurses will regularly check your pulse, blood pressure and temperature.
- You may need to wear pressure stockings on your legs to prevent blood clots from forming. Tell your doctor if you have pain or swelling in your legs.
- Some people have fluid build-up in their brain (hydrocephalus). The surgeon may insert a small permanent tube, called a shunt, just below the skin of the head. The shunt drains extra fluid from your brain into your abdomen, where it is safely absorbed into the bloodstream.
- If you are recovering from a craniotomy, your head will be bandaged for the first day, and a small tube will drain excess blood from the operation site. Your face and eyes may be swollen or bruised, but this is not painful and should ease within about a week.
- If you had an operation on your spinal cord, the nurses will regularly check the movement and sensation in your legs. You may need to rest flat in bed for three to five days, to allow the wound to heal. Your doctor will tell you when you can resume normal activities.

The length of your hospital stay, and any effects on your speech or mobility, will depend on the extent of the operation. See the Rehabilitation section (page 26).
Radiotherapy

Radiotherapy is a type of treatment that uses high-energy x-ray beams to kill or damage cancer cells. The radiation is specifically targeted at the treatment site to minimise damage to healthy cells.

Before your treatments begin, your doctor will measure you and take x-rays to determine the precise area to be treated. Several marks (small tattoos) may be made on your skin and a face mask may be worn during treatment to ensure that the same area is treated each time.

If you have a face mask, you will only wear it for about 10 minutes at a time, during treatment. Let your doctor know if you are claustrophobic.

Radiotherapy treatment is usually given once daily, Monday to Friday, for several weeks. However, the course of your treatment will depend on the size and type of the tumour.

Radiotherapy for children

Radiotherapy is rarely used for children under the age of three because high-dose therapy can slow a child’s intellectual development. If a child receives radiotherapy, it is given in a lower dose than is used for adults.

 Radiotherapy to the spine and head can stunt a child’s growth. It can either slow the growth of bones, or affect the work of the pituitary gland, which produces hormones that control growth. Children may need hormone therapy to help them to grow and develop.
Side effects

Radiotherapy has many possible side effects. Significant side effects usually tend to peak about one to three weeks after treatment. Most side effects are temporary and disappear, but some side effects may last for a few years after treatment or permanently. Talk to your doctor before treatment for more information about side effects.

Common short-term side effects include:
- nausea
- headaches
- tiredness or fatigue
- hair loss in the treatment area
- redness and soreness of skin in the treatment area.

Some people experience late-stage side effects, which can occur several years after treatment. These can include difficulty thinking clearly or remembering things (cognitive impairment), confusion and personality changes. It is not always clear if these changes are caused by radiotherapy or damage in the brain due to the tumour. If you experience these symptoms, you may benefit from rehabilitative therapy or medication.

Many side effects – short-term side effects in particular – can be treated effectively with medication. Talk to your doctor about how to manage side effects.

For more information, call 13 11 20 for a free copy of *Understanding Radiotherapy*. 
Chemotherapy

Chemotherapy is the use of cytotoxic drugs to treat cancer. Cytotoxic drugs damage or destroy rapidly dividing cells such as cancer cells while causing the least possible damage to healthy cells. However, some healthy fast-growing cells in your body, such as your hair or bone marrow cells, may be affected.

It can be difficult to treat brain tumours with chemotherapy drugs because the body has a natural defence mechanism called the blood-brain barrier. Only certain drugs can penetrate this barrier.

Chemotherapy is often combined with radiotherapy for treatment of some types of brain tumours, such as gliomas. The combination of treatments enhances the effects of radiotherapy treatment.

You may have chemotherapy through an oral capsule or intravenous drip. Each treatment session is usually followed by a rest period of a few weeks. This allows your body to recover from any side effects.

The way your body reacts to chemotherapy will be monitored carefully through regular blood tests. Your treatment schedule may be changed when your doctor sees how well you are responding to the chemotherapy drugs.

Some craniotomy patients have small, dissolvable chemotherapy wafers inserted into their brain during surgery. The wafer slowly releases drugs into the brain. Talk to your doctor for more information.
Side effects

There are many possible side effects of chemotherapy, depending on the drugs that you are given. Some of these side effects include:

- tiredness and fatigue
- nausea and vomiting
- diarrhoea
- hair loss
- mouth sores and ulcers
- a tingly feeling (nerve or muscle damage)
- anaemia.

You may receive medication, such as anti-nausea drugs, at the same time that you have chemotherapy. This may prevent unpleasant side effects.

Ask your doctor what side effects to expect and how to manage them. You can also read *Understanding Chemotherapy*, a booklet available free from the Cancer Council Helpline on 13 11 20.
Other therapies

Some types of treatment are used to make you more comfortable or reduce your symptoms or side effects.

- Steroids – drugs that can reduce brain swelling. They may cause an increased appetite, weight gain, diabetes or muscle weakness.

- Anti-convulsants – drugs that are used to prevent seizures. You may have a blood and liver-function test before taking anti-convulsants. The side effects vary and may include tiredness, weight changes, tremors, nausea and vomiting. Your doctor will monitor you and adjust your dose to reduce side effects.

Grapefruit, Seville oranges and some herbal medicines may interfere with some anti-convulsants. You may also have to limit your alcohol intake. Talk to your doctor.

Palliative treatment

Palliative treatment helps to improve quality of life by alleviating symptoms of cancer without trying to cure the disease. Often treatment is concerned with pain relief and stopping the spread of cancer, but it can also involve the management of other physical and emotional symptoms. Treatment may include radiotherapy, chemotherapy and other medication.

For more information on palliative treatment or advanced cancer, call the Helpline for free copies of Understanding Palliative Care or Living with Advanced Cancer, or view them online at www.cancercouncil.com.au.
Rehabilitation

A brain or spinal cord tumour may affect some of the normal functions of the body and brain, including speech, personality, movement, balance and memory.

The brain can sometimes begin to heal itself after treatment, but this may be a slow process. Most patients require some kind of rehabilitation to aid their recovery. The type of therapy you have depends on your choices and what is available at your hospital, treatment centre or rehabilitation clinic.

School-aged children with brain tumours may benefit from tutoring as part of their rehabilitation. Talk to the student welfare coordinator or the principal of your child’s school. You can also ask your child’s medical team for information about cognitive effects of the tumour and treatment.
Types of rehabilitation

- **Cognitive rehabilitation:** If your cognition (memory, language skills, concentration and other thinking processes) is affected, a cognitive therapist can help you to improve your thinking and reasoning skills.

  For example, if you are forgetful, a cognitive therapist can help you use memory tools, such as a detailed diary, timer or alarm system.

- **Physical therapy (physiotherapy):** Sometimes a brain or spinal cord tumour or treatment can affect balance, muscle movement, coordination or strength. Physical therapy can help develop, maintain or restore mobility. It can also increase endurance and reduce tiredness.

  If you are unable to move normally, your therapist can teach you how to use compensation techniques (such as a cane). You also may learn how to exercise safely and stimulate parts of your body to improve circulation and reduce swelling.

- **Speech therapy:** If your ability to talk has been impaired, a speech pathologist may be able to help.

  Speech pathologists also work with people who have difficulty swallowing (dysphagia), which can impair the ability to speak or eat.

- **Occupational therapy:** This type of therapy will help you get back to everyday activities, such as going to work, travelling or doing things around the house.

  A therapist who helps you get back to work may be called a vocational therapist.
Driving

Benign and malignant tumours, seizures and certain treatments and medications (such as anti-convulsants) can impair a person’s driving skills.

You must inform the NSW Roads and Traffic Authority (RTA) that you have a tumour, especially if you have had brain surgery or have had seizures in the past three to six months. The RTA will request information from your doctor to determine if you are medically fit to drive.

You may have an occupational therapy driving assessment. This will help determine the type of difficulties you are experiencing while driving (for example, slow reaction time). Each licence class (car, motorcycle or truck) you hold will be assessed.

The focus of a driving assessment is not to cancel or suspend your licence. In some cases, an occupational therapist is able to teach you driving techniques to compensate for your weaknesses or instruct you on how to use car modifications (like special mirrors).

Some people feel upset if they are unable to drive. If you lose your licence, even temporarily, it may help to talk to a counsellor or someone who has been through a similar experience (see page 42).

To contact the RTA, visit www.rta.nsw.gov.au or call 13 22 13.

“The thing I miss most is my licence. I know I shouldn’t drive, but it would be nice to know I could.”
Making treatment decisions

Sometimes it is difficult to decide on the right treatment. You may feel that everything is happening so fast that you don’t have time to think things through, but there is usually time for you to consider what sort of treatment you want.

Waiting for test results and for treatment to begin can be difficult. While some people feel overwhelmed with information, others feel they don’t have enough. You need to make sure you understand enough about your illness, the treatment and side effects to make your own decisions.

If you are offered a choice of treatments, you will need to weigh the advantages and disadvantages of each treatment. If only one type of treatment is recommended, ask your doctor to explain why other choices have not been offered.

Some people with an advanced tumour will choose treatment, even if it only offers a small chance of cure. Others want to make sure the benefits of treatment outweigh any side effects so they have the best possible quality of life. Some people choose treatment options that don’t try to cure the tumour, but instead make them feel as well as possible.
Decision-making steps

1. Take the time to consider all treatment options.

2. Weigh up the advantages and disadvantages of each treatment.

3. Consider how important each side effect is to you, particularly those that affect your lifestyle. If you have a partner, it may help to discuss the side effects with them.

4. If only one type of treatment is recommended, ask your doctor if other treatment choices are available.

5. Find out more about the treatment choices offered to you – speak to your doctor, consider getting a second opinion, look at the recommended Internet sites on page 48, and talk to your family and friends and to people who have received these treatments.

6. If you are not happy with the information you are given – or how it is given – tell the doctor about your concerns or seek a second opinion.
Talking with doctors

When your doctor first tells you that you have a tumour, it is very stressful and you may not remember much. It is often difficult to take everything in, so you may want to see the doctor a few times before deciding on treatment. If your doctor uses medical terms you don’t understand, it’s okay to ask for another explanation. You can also check a word’s meaning in the glossary at the end of this booklet.

Before you see the doctor, it may help to write down your questions – see the list of suggested questions on page 50. Taking notes during the session or recording the discussion can also help. Many people like to have a family member or friend go with them, to take part in the discussion, take notes or simply listen.

A second opinion

You may want to get a second opinion from another specialist. Some people feel uncomfortable asking their doctor for a second opinion, but specialists are used to patients doing this.

A second opinion can be a valuable part of your decision-making process. It can confirm or clarify your doctor’s recommended treatment plan and reassure you that you have explored all of your options.

Your original specialist or family doctor can refer you to another specialist and you can ask for your initial results to be sent to the second-opinion doctor.

You may later decide you would prefer to be treated by the doctor who provided the second opinion, and you are within your rights to make this choice.

You can ask for a second opinion even if you have already started treatment or still want to be treated by your first doctor.
Taking part in a clinical trial

Your doctor may suggest you consider taking part in a clinical trial. Doctors conduct clinical trials to test new or modified treatments and see if they are better than current treatments.

Before deciding whether or not to join the trial, you may wish to ask your doctor:

- What treatments are being tested and why?
- What tests are involved?
- What are the possible risks or side effects?
- How long will the trial last?
- Will I need to go into hospital for treatment?
- What will I do if problems occur while I am in the trial?
- Has an independent ethics committee approved the trial?

If you are unsure about joining a clinical trial, ask for a second opinion from an independent specialist.

If you decide to join a randomised clinical trial, you will be given either the best existing treatment or a promising new treatment. You will be chosen at random to receive one treatment or the other.

Being in a trial gives you important rights. You have the right to withdraw at any time; doing so will not jeopardise your treatment for cancer.

For more information about clinical trials – and how to find a trial that may be suitable for you – call the Helpline on 13 11 20 for a free copy of Understanding Clinical Trials.
Looking after yourself

When you find out you have a tumour and during treatment, your body is put through a great deal of physical and emotional strain. It is crucial that you take steps to enhance your well-being to help you adapt to the stress that you are facing. Nurturing your body and mind by eating nourishing food, doing some enjoyable physical activity, and taking some time out to relax can help you to feel more balanced and improve your vitality. Addressing changes in your emotions and challenges in your relationships is also very important. The following sections may be relevant to you during your treatment and convalescence, and after your recovery.

Healthy eating

Eating nutritious food will help you keep as well as possible and cope with the tumour and treatment side effects. Depending on your treatment, you may have special dietary needs. A dietitian can help to plan the best foods for your situation – ones that you find tempting, easy to eat and nutritious.

The Cancer Council Helpline can send you information on nutrition during and after cancer treatment. Call the Helpline for a free copy of Food and Cancer.
Being active

You will probably find it helpful to stay active and to exercise regularly if you can. Physical activity – even if gentle or for a short duration – helps to improve circulation, reduce tiredness, decrease joint and muscle pain, and elevate mood. The amount and type of exercise you do will depend on what you are used to, how well you feel and what your doctor, physical therapist or occupational therapist advises.

Start by making small changes to your daily activities, such as walking to the shops. Even gardening can be beneficial. If you want to do more vigorous exercise or weight-bearing exercise, ask your doctor what is best for you.

Relaxation techniques

Some people find relaxation or meditation helps them feel better by releasing tension and anxiety. Relaxation exercises may also help reduce pain and increase energy levels. The hospital social worker or nurse will know whether the hospital or a community health centre runs any programs.

You may also enjoy exploring relaxation techniques in the comfort of your own home using CDs or DVDs. Contact your local library or the Cancer Council Helpline to access these resources.
Complementary therapies

Complementary therapies may help you enhance your general well-being and cope better with side effects such as pain. They may also increase your sense of control over what is happening to you, decrease your stress and anxiety, and improve your mood.

There are many types of complementary therapies, including acupuncture, massage, hypnotherapy, relaxation, yoga, herbal medicine and nutrition. While some cancer treatment centres offer complementary therapies as part of their services, you may have to go to a private practitioner. Ask what’s available at your hospital.

Be sure to let your doctor know about any complementary therapies you are using or thinking about trying. This is important, as some therapies may not be appropriate, depending on your conventional treatment. For example, some herbs and nutritional supplements may interact with your medication, resulting in harmful side effects. Massage and exercise therapies may also need to be modified to accommodate the changes in your body.

For further information, call the Cancer Council Helpline for a free copy of *Understanding Complementary Therapies*.
Strengthening your relationships

The strong emotions you experience as a result of your tumour may affect your relationships with people close to you. Your experiences may cause you to develop a new outlook on your values, priorities and life in general. It may help to share those thoughts with your family, friends and work colleagues.

It may be uncomfortable to talk about your feelings; take your time and approach others when you are ready. You may feel relieved when you have talked to them. People usually appreciate insight into how you are feeling and guidance on how they can best support you during and after treatment. This open and honest approach can strengthen your relationships.

While you are giving yourself time to adjust to life after your tumour diagnosis, remember to do the same for your friends and family. Everyone will react in a different way – by putting on a happy face, playing down your anxiety, or even ignoring you. They are also adjusting in their own way to changes. If someone’s behaviour upsets you, it will probably help to discuss how you both feel about the situation.

Changing body image

Cancer treatment can change the way you feel about yourself (your self-esteem). You may feel less confident about who you are and what you can do. This is more common if your body has changed physically.
Give yourself time to adapt to these changes and try not to focus solely on the parts of you that have changed. Seeing yourself as a whole person (your body, mind and personality) can help to increase your self-esteem. You may eventually adjust to and come to accept any physical changes.

For practical suggestions about hair loss, weight changes and other physical changes, call the Cancer Council Helpline.

**Sexuality, intimacy and cancer**

The role of sexuality and intimacy depends on a person’s age, environment, health, relationships, culture, beliefs and interest.

Having a tumour can affect your sexuality in both physical and emotional ways. The impact of these changes depends on many factors, such as treatment and side effects, the way you and your partner communicate, and your self-confidence. Knowing the potential challenges, such as a change in libido, and addressing them if they affect you personally will help you overcome or adjust to these changes.

Sexual intercourse may not always be possible during or after treatment for a tumour, but closeness and sharing are vital to a healthy relationship.

More information about sexuality for men and women is available. Call 13 11 20 for a copy of the Cancer Council’s sexuality booklet.
Life after treatment

Many people are surprised to discover that life after treatment presents its own challenges. Although you might feel pressure to get back to your ‘normal life’, it’s important to remember that your life may not return to how it was before your tumour diagnosis.

Give yourself time to recover from the physical and emotional changes. You may not be fit enough to do your usual activities around the house. If you’re returning to work, you should ease back into it slowly, rather than rushing back the week after leaving hospital.

After treatment, it is common to feel anxious rather than more secure. Beforehand, you were busy with appointments and focused on treatment, but now you may feel you are facing an uncertain future.

You might worry about every ache and pain and wonder if it is caused by your tumour. Making sure you have regular checkups, and talking to your doctor about what to expect if the cancer comes back may reassure you.

Many people say that after their tumour diagnosis, they have a new perspective and see life with a new clarity. Your priorities may change. For example, you may decide to spend more time with family, start a new hobby, travel or get involved in advocacy or volunteer work.
Everyone will eventually re-establish a daily routine, but it will be at their own pace and may be different to how things were in the past. It may take some time to balance the need to have regular checkups with resuming day-to-day activities and making plans for the future. Talking to someone who has had a brain or spinal cord tumour may help you deal with the uncertainties or challenges you encounter. For more information see page 42.

If you have continued feelings of sadness, have trouble getting up in the morning or have lost motivation to do things that previously gave you pleasure, it is important to talk to your doctor, as you may be clinically depressed. Counselling and prescribed medication can help this condition.

**What if the tumour returns?**

For some people, a brain or spinal cord tumour does come back after treatment. This is known as a recurrence. It is important to have regular checkups with your doctor to monitor your health. These checkups often involve tests such as an MRI scan.

If the tumour returns, talk to your doctor about your treatment options. Some people choose to have treatment (such as surgery or radiotherapy) for the tumour. Other people choose not to have treatment. Your decision will depend on your prognosis, the grade of your tumour and what you want.
Seeking support

When you are first diagnosed with a tumour, it is normal to experience a range of emotions, such as fear, sadness, depression, anger or frustration. If anxiety or depression is ongoing or severe, tell your doctor about it as counselling or medication can help.

It may help to talk about your feelings with others. Your partner, family members and friends are a good source of support or you might prefer to talk to:
- members of your treatment team
- a hospital counsellor, social worker or psychologist
- your religious or spiritual adviser
- a support group – see page 42
- the Cancer Council Helpline.

If you have children, the prospect of telling them you have cancer can be frightening and unsettling. The Cancer Council booklet When a Parent Has Cancer: how to talk to your kids can help you prepare for this difficult conversation.

You may find that your friends and family don’t know what to say to you. In time, you may feel able to approach your friends directly and tell them what you need. Some people prefer to ask a family member or a friend to talk with others and coordinate offers of help.

Some people may feel so uncomfortable that they avoid you. They may expect you to ‘lead the way’ and tell them what you need. This can be difficult to handle and can make you feel lonely.

The Cancer Council’s booklet Emotions and Cancer may help at this stressful time. Call 13 11 20 for a copy or download it from the Cancer Council’s website, www.cancercouncil.com.au.
Practical and financial help

A serious illness often causes practical and financial difficulties. You don’t need to face these alone.

Many services are available to help:
- Financial assistance, through benefits and pensions, can help pay for the cost of prescription medicines and for travel to medical appointments.
- Home nursing care is available through community nursing services or through the local palliative care services.
- Meals on Wheels, home care services, aids and appliances can make life easier.

To find out more, contact the hospital social worker, occupational therapist or physiotherapist, or the Cancer Council Helpline.

Understanding Cancer program

If you want to find out more about cancer and how to cope with it, you may find the Cancer Council’s Understanding Cancer program helpful. The program offers practical information and discussions about many issues people experience after a diagnosis of cancer. Topics covered include: what cancer is, cancer symptoms and side effects, treatment, palliative care, diet, exercise and complementary therapies. Courses are held frequently at hospitals and community organisations throughout NSW. Call the Helpline to find out more.
Talk to someone who’s been there

Getting in touch with other people who have been through a similar experience to you can be very beneficial. There are many ways to contact others for mutual support.

In these support settings, most people feel they can speak openly, share tips with others, and just be themselves. You will probably find that you feel comfortable talking about your diagnosis and treatment, your relationships with friends and family, and your hopes and fears about the future.

Support services are available for patients, carers and family members. They include:

• face-to-face support groups, which are often held in community centres or hospitals
• telephone support groups for certain situations or types of cancer, which trained counsellors facilitate
• online discussion forums where people can connect with each other any time
• Cancer Council Connect, a program that matches you with a volunteer who has been through a similar cancer experience, and who understands how you’re feeling.

Ask your nurse or social worker to tell you about support groups in your area. You can also call the Helpline on 13 11 20 or go to www.cancercouncil.com.au to access the Cancer Services Directory or join an online discussion.
The Cancer Council Helpline is a telephone information service provided by Cancer Council NSW for people affected by cancer.

For the cost of a local call, you can talk about your concerns and needs confidentially with oncology health professionals. Helpline consultants can send you written information and put you in touch with appropriate services in your area. You can also request services in languages other than English.

You can call the Cancer Council Helpline, Monday to Friday, 9am to 5pm. If calling outside business hours, you can leave a message and your call will be returned the next business day.

If you have difficulty communicating over the phone, contact the National Relay Service, a Government initiative to assist people who are hearing and/or speech impaired (www.relayservice.com.au). This service will help you to communicate with a Cancer Council Helpline consultant.

Cancer Council Helpline 13 11 20
Monday to Friday 9am to 5pm
Caring for someone with cancer

You may be reading this booklet because you are caring for someone with cancer. Being a carer can be very stressful, especially when the person you are looking after is someone you love very much. Look after yourself during this time. Give yourself some time out, and share your worries and concerns with somebody neutral such as a counsellor or your doctor.

Many cancer support groups are open to carers as well as people with cancer. A support group can offer a valuable opportunity to share experiences and ways of coping.

There are several support services that can help you in your caring role, such as Home Help, Meals on Wheels or visiting nurses. There are also many organisations and groups that can provide you with information and support, such as Carers NSW. Phone 1800 242 636 to talk about your needs, or visit www.carersnsw.asn.au.

Call the Cancer Council Helpline to find out more about different services or to obtain a free copy of the Caring for Someone with Cancer booklet.

Caring for a child with a brain tumour

Prognosis

A significant number of children with brain or spinal cord tumours will recover completely. Other children may have treatment that controls their tumour for many years.

Your child’s prognosis depends on their treatment and other factors, such as their overall health.
A proportion of children will develop a disability as a result of their tumour or treatment. This disability, which may be a mild learning or behaviour problem or a more severe physical or intellectual disability, may form because the child’s nervous system is still developing. However, not every child develops a disability.

Talk to your child’s medical team about their treatment options and what to expect. You may also benefit from talking to a hospital social worker, who can provide practical and emotional support to your family.

**Should I tell my child?**

It is natural to want to protect your child from the news of the diagnosis, but children quickly pick up that something is wrong. Your child may not be feeling well or may be seeing the doctor often.

Talking openly and honestly about the tumour will help your child to be less anxious and to feel more in control of the situation. What you tell your child will depend on their age and how much they understand.

**Newborns, infants and toddlers**

Children this young do not understand illness but will react to periods of separation from their carers and changes in their routine. They may not be able to explain how they feel, but they are often aware of physical and emotional changes. Toddlers like to have control over their environment.
Preschool children, 3-5 years

Children in this age group are beginning to understand the difference between being well and being sick. They often believe their actions can make things happen.

• Assure your child their thoughts and behaviour have not caused the illness.
• Be honest when you explain tests and treatments.

School-age children, 6-12 years

By this age, some children know about cancer, but may not know what causes it and fill in the gaps with their own theories. They can understand what cancer cells are.

• Be open and truthful so they don’t assume their own interpretations are correct.
• Tell the school about your child’s cancer and any changes in their behaviour or attendance patterns.
• If necessary and appropriate, seek the support of the school’s student welfare coordinator, who may be able to provide extra tutoring or support.

Teenagers, 13-18 years

Many teenagers have an adult understanding of cancer. They often want detailed information so they can make decisions.

Teenagers are at a stage when they are starting to separate from the family. This is also a vulnerable time for them, as they don’t want to appear different to their peers. Their friends are very important, and they may confide in an adult who is not a parent.

• Provide resources for learning more about the disease and getting support.
• Talk to the school’s student welfare coordinator, who may be able to provide extra tutoring or support.
Try to keep things normal

One of your child’s most important needs will be for as many things as possible to stay normal and consistent. It is important to continue to show your love and support. It may help to keep rules and discipline as normal as possible. Although you may be tempted to spoil your child or relax your usual discipline, this can lead to confusion in the long run.

A tumour diagnosis can also be difficult for other children in the family. They may feel left out if their sibling gets extra attention. Their routines are disturbed and they may be cared for by other relatives or friends whilst their parents are at the hospital. Try to make time to talk to all your children – ask them how they’re coping and thank them for their patience.

Who is available to help?

The hospital staff members who work with your child will often specialise in working with children and young adults (paediatrics). Some hospitals and cancer treatment centres employ play therapists, music therapists or art therapists who can help children cope with the challenges of treatment, and work through their thoughts and feelings, such as fear, sadness or anxiety.

A number of organisations and support groups, such as CanTeen and Redkite, offer practical and emotional support for families and children, camps for children and other services. See the following page for contact details, and ask your hospital social worker or the Cancer Council Helpline for further information.
Information on the Internet

The Internet can be a useful source of information, although not all websites are reliable. The websites listed below are good sources of reliable information.

Australian

Cancer Council NSW .............................. www.cancercouncil.com.au
Cancer Council Australia .......................... www.cancer.org.au
Cancer Institute NSW .............................. www.cancerinstitute.org.au
Health Insite – an Australian Government initiative ......................... www.healthinsite.gov.au
Commonwealth Department of Health and Ageing .......................... www.health.gov.au
NSW Health ............................................. www.health.nsw.gov.au
Brain Australia ........................................ www.brainaustralia.org.au
CanTeen ................................................. www.canteen.org.au
Redkite .................................................... www.redkite.org.au

International

American Cancer Society ................................ www.cancer.org
Macmillan Cancer Support .......................... www.cancerbackup.org.uk
US National Cancer Institute ........................ www.cancer.gov
National Brain Tumor Society ......................... www.tbts.org
                                                                              www.braintumor.org
Cancer information library

Following a cancer diagnosis, many people look for information about new types of treatment, the latest research findings, and stories about how other people have coped.

The Cancer Council Library has a wealth of information on these topics. There are more than 3,000 resources in the collection, including books, videos, DVDs and a large range of current cancer medical journals.

You can visit the library at 153 Dowling Street, Woolloomooloo (9am-5pm Monday-Friday), borrow by post or ask your local librarian to organise an inter-library loan. Contact the librarian on 13 11 20 or email library@nswcc.org.au.

Related publications

You might also find the following publications relevant:

- Emotions and Cancer
- Understanding Chemotherapy
- Understanding Radiotherapy
- Living with Advanced Cancer
- Understanding Palliative Care
- Understanding Clinical Trials
- When a Parent Has Cancer: how to talk to your kids
- Caring for Someone with Cancer
- Food and Cancer

Call the Helpline for free copies of any of these Cancer Council booklets, or download them from our website, www.cancercouncil.com.au/cancerinformation.
Question checklist

You may find this checklist helpful when thinking about the questions you want to ask your doctor about your illness and treatment. If your doctor gives you answers that you don’t understand, it is okay to ask for clarification.

1. What type of brain or spinal cord tumour do I have?

2. How extensive is my cancer?

3. What treatment do you recommend and why?

4. Are the latest tests and treatments for my type of cancer available in this hospital?

5. Are there other treatment choices for me? If not, why not?

6. What are the risks and possible side effects of each treatment?

7. Will I have to stay in hospital?

8. How long will treatment take? How much will it affect what I can do? How much will it cost?

9. Will I have a lot of pain with the treatment? What will be done about this?

10. Will the treatment affect my sex life?

11. Are there any clinical trials of new treatments?

12. How frequently will I have checkups?

13. Are there any complementary therapies that might help me?
Glossary

**anaesthetic**
A drug that stops a person feeling pain during a medical procedure. A local anaesthetic numbs part of the body; a general anaesthetic puts a person to sleep for a period of time.

**astrocyte**
A type of glial cell.

**astrocytoma**
A type of malignant brain tumour.

**benign**
Not cancerous or malignant.

**biopsy**
The removal of a small sample of tissue from the body, for examination under a microscope, to help diagnose a disease.

**central nervous system**
The brain and spinal cord.

**cerebellum**
A part of the brain concerned with the coordination of voluntary movements. It lies below the cerebrum.

**cerebrospinal fluid**
The clear, watery fluid that surrounds and protects the brain and the spinal cord.

**cerebrum**
The anterior part of the upper brain.

**chemotherapy**
The use of cytotoxic drugs to treat cancer by killing cancer cells or slowing their growth.
continence
Ability to control voluntary functions such as urination or bowel movements.

cranio-pharyngioma
A type of benign brain tumour.

craniotomy
An operation to open the skull in order to access the brain.

CT scan
A computerised tomography scan. This scan uses x-rays to build a picture of the body.

ependymoma
A type of malignant brain tumour.

glial cell
A type of cell in the nervous system that surrounds and insulates neurons, holds neurons in place, supplies nutrients and oxygen to neurons, and eliminates dead neurons and germs.

glioblastoma
A type of malignant brain tumour.

grade
The degree of abnormality of cancer cells.

hydrocephalus
The build-up of cerebrospinal fluid in the brain.

interneuron
A type of neuron that connects other neuron cells within the brain and spinal cord.

irresectable
Not able to be surgically removed.
laminectomy  
Surgery that involves cutting into the spinal column and removing a spinal cord tumour.

lumbar puncture  
Also known as a spinal tap. A test where a needle is inserted into the spinal column and fluid is collected.

malignant  
Cancerous. Malignant cells spread (metastasise) and can eventually cause death if they are not treated.

malignant transformation  
When a benign tumour becomes genetically damaged and develops into a rapidly growing, cancerous tumour.

meninges  
The membranes surrounding the brain and spinal cord.

meningioma  
A type of benign brain tumour.

metastasis  
Also known as a secondary cancer. A cancer that has spread from another part of the body.

mixed glioma  
A type of malignant brain tumour.

motor neuron  
A type of neuron that causes muscle contractions in the body.

MRI scan  
A magnetic resonance imaging scan. This scan uses both magnetism and radio waves to take detailed cross-sectional pictures of the body.
**neurologist**
A doctor who specialises in the structure, functioning and diseases of the nervous system (including the brain, spinal cord and peripheral nerves).

**neuron**
A cell specialised to transmit electrical nerve impulses, which carry information from one part of the body to the other. The three types of neurons are sensory neurons, motor neurons and interneurons.

**neuroma**
A type of benign brain tumour.

**neurosurgeon**
A surgeon who specialises in operations on the nervous system.

**oligodendrocyte**
A type of glial cell.

**oligodendroglioma**
A type of malignant brain tumour.

**peripheral nervous system**
The system of nerves extending outside the central nervous system, serving the limbs and organs.

**pituitary tumour**
A type of benign brain tumour.

**primary cancer**
The original cancer. Cells from the primary cancer may break away and be carried to other parts of the body, where secondary cancers may form.

**prognosis**
The likely outcome of a person’s disease.
**radiotherapy**
The use of radiation, usually x-rays or gamma rays, to kill cancer cells or injure them so they cannot grow and multiply.

**rehabilitation**
A program that helps a person recover from illness or injury and regain function.

**resectable**
Able to be surgically removed.

**secondary cancer**
Also called metastasis. A cancer that has spread from the original site to another part of the body.

**seizure**
A disruption of the normal electrical impulses of the brain, causing a person to convulse or have other symptoms.

**sensory neuron**
A type of neuron that responds to light, sound and touch.

**shunt**
A small permanent tube used to drain fluid build-up in the brain.

**spinal cord**
The portion of the central nervous system enclosed in the spinal column, consisting of nerve cells and bundles of nerves connecting all parts of the body with the brain.

**spinal tap**
See lumbar puncture.

**steroids**
Hormones used in the treatment of disease.

**vertebrae**
The bones or segments composing the spinal column.
How you can help

At Cancer Council NSW we’re dedicated to defeating cancer. As well as funding more cancer research than any other charity in the state, we advocate for the highest quality of care for cancer patients and their families, and create cancer-smart communities by empowering people with knowledge about cancer, its prevention and early detection. We also offer direct financial assistance for those people in hardship as a result of having cancer. These achievements would not be possible without community support, great and small.

Join a Cancer Council event: join one of our community fundraising events like Daffodil Day, Australia’s Biggest Morning Tea, Relay For Life, Girls Night In and Pink Ribbon Day, or hold your own fundraiser or become a volunteer.

Make a donation: any donation whether large or small will make a meaningful contribution to our fight to defeat cancer.

Buy your sun protection products from our website or our retail stores: every purchase helps you prevent cancer and contributes financially to our work.

Help us speak out and create a cancer-smart community: Cancer Council is a leading advocate for cancer prevention and improved patient services. You can help us speak out on important cancer issues and help us defeat cancer by living and promoting a cancer-smart lifestyle.

To find out more about how you or your family and friends can help, please call 1300 780 113.
# Regional offices

<table>
<thead>
<tr>
<th>Region</th>
<th>Address</th>
<th>Phone</th>
<th>Fax</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Central and Southern Sydney Region</strong></td>
<td>153 Dowling Street, Woolloomooloo NSW 2011 (PO Box 572, Kings Cross NSW 1340)</td>
<td>(02) 9334 1900</td>
<td>(02) 9334 1739</td>
</tr>
<tr>
<td><strong>Far North Coast Region</strong></td>
<td>101-103 Main Street, Alstonville NSW 2477</td>
<td>(02) 6627 0300</td>
<td>(02) 6628 8659</td>
</tr>
<tr>
<td><strong>Hunter Region</strong></td>
<td>22 Lambton Road, Broadmeadow NSW 2292</td>
<td>(02) 4923 0700</td>
<td>(02) 4961 0955</td>
</tr>
<tr>
<td><strong>Mid North Coast Region</strong></td>
<td>121 High Street, Coffs Harbour NSW 2450</td>
<td>(02) 6659 8400</td>
<td>(02) 6652 1530</td>
</tr>
<tr>
<td><strong>North West Region</strong></td>
<td>Shop 2, 218 Peel Street, Tarnworth NSW 2340</td>
<td>(02) 6763 0900</td>
<td>(02) 6766 7053</td>
</tr>
<tr>
<td><strong>Northern Sydney and Central Coast Region</strong></td>
<td>The Hive, Erina Fair, 622-650 Terrigal Drive, Erina NSW 2250</td>
<td>(02) 4336 4500</td>
<td>(02) 4367 5895</td>
</tr>
<tr>
<td><strong>South West Region</strong></td>
<td>1/37 Tompson Street, Wagga Wagga NSW 2650</td>
<td>(02) 6937 2600</td>
<td>(02) 6921 3680</td>
</tr>
<tr>
<td><strong>Southern Region</strong></td>
<td>1 Lowden Square, Wollongong NSW 2500</td>
<td>(02) 4223 0200</td>
<td>(02) 4225 1700</td>
</tr>
<tr>
<td><strong>Western Region</strong></td>
<td>75 Kite Street, Orange NSW 2800</td>
<td>(02) 6392 0800</td>
<td>(02) 6361 7425</td>
</tr>
<tr>
<td><strong>Western Sydney Region</strong></td>
<td>43 Hunter Street, Parramatta NSW 2150</td>
<td>(02) 9354 2000</td>
<td>(02) 9687 1118</td>
</tr>
</tbody>
</table>
Cancer Council Helpline 13 11 20

For support and information on cancer and cancer-related issues, call the Cancer Council Helpline. This is a free and confidential service.

For further information and details please visit our website:
www.cancercouncil.com.au