

Section Five: Brain tumour treatments

Tekiona Rima
Ngā maimoatanga puku roro



Key points:

- Your treatment team will advise you on the best treatment for the tumour in your brain.
- Depending on the type and grade of brain tumour, treatment may include:
 - steroids
 - surgery
 - radiation treatment
 - chemotherapy
 - palliative careor a combination of these.
- Complementary treatments are healing practices or products that are not usually part of standard medical care.

- Traditional Māori healing methods can include rongoā Māori, romiromi or mirimiri, massage therapy, and spiritual healing.
- Traditional Pacific healing treats the whole person, including your mental, emotional, physical, and spiritual wellbeing.
- If you are thinking about using complementary, traditional Māori, or Pacific treatments, please talk about them with your cancer treatment team.

Ngā kōrero matua:

- Mā tō rōpū maimoa koe e tohutohu e pā ana ki te maimoatanga pai rawa mō tō puku roro.
- Tērā pea ka uru ko ēnei maimoatanga, e ai ki te momo puku roro me te māhiti puku roro:
 - ngā pūtaiaki
 - mahi hāparapara
 - maimoatanga iraruke
 - mahi hahau
 - Atawhai whakangāwarihe whiriwhiringa rānei o ēnei.
- He whakawaiwai whakaora, he hua whakaora rānei ngā maimoatanga whakahāngai kāore e whai wāhanga ana i te taha o ngā mahi atawhai ā-hauora.
- Ka taea te whakauru te rongoā Māori, te mahi romiromi, te mirimiri rānei, me te mahi whakaora ā-wairua, ki raro i ngā huarahi whakaora Māori taketake.
- Maimoa ai te whakaora taketake o Te Moana-nui-ā-Kiwa i te katoa o te tangata, tae noa ki te oranga hinengaro, oranga tinana.
- Mehemea e whakaaro ana koe ki te whakamahi i te maimoatanga whakahāngai, te maimoatanga Māori taketake, tēnā koa kōrero ki tō rōpū maimoatanga matepukupuku mō aua maimoatanga.

Treatment options

Your treatment team will advise you on the best treatment for the tumour in your brain. Depending on the type and grade of the tumour, treatment may include steroids, surgery, radiation treatment, chemotherapy, or palliative care, or a combination of these.

Sometimes treatment is offered with the goal of curing the brain tumour. Your treatment team will talk with you about how likely the treatment is to be successful.

Even when treatment to cure the tumour in your brain is not possible, your treatment team may recommend treatment options that could reduce the symptoms of the cancer and improve your quality of life.

Steroids

Medications called steroids are commonly used as part of treatment for a brain tumour. Steroids are made naturally in the body, but they can also be produced artificially and used as medication.

The main purpose of taking steroids when you have a brain tumour is to reduce the swelling in the brain caused by the tumour or treatment. Steroids can be given before, during, and after both surgery and radiation treatment.

The most commonly used steroid for people with brain tumours is dexamethasone.

It is important to always take the prescribed dose of steroids. Do not stop taking them without talking to your doctor first. If you continue to experience symptoms, ask your treatment team for advice.

Side effects of steroids

The side effects of steroids depend on the dose and the length of treatment.

Taking steroids for a short time may cause the following side effects.

- Increased appetite
- Weight gain
- Trouble sleeping
- Restlessness
- Mood swings, feeling angry or agitated for no reason
- Anxiety
- High or unstable blood sugar levels in people with diabetes

Taking steroids for several months can have additional side effects, including:

- puffiness or swelling in the feet, hands, or face due to your body retaining fluid
- high blood pressure
- unstable blood sugar levels
- diabetes
- muscle weakness
- loss of bone density (osteoporosis)
- increased risk of getting infections.

Talk to your treatment team about the best ways to manage side effects. Your doctor may adjust your steroid dose to help ease them. Most side effects from steroids go away after you have finished taking them.

Surgery

Surgery in the brain is called neurosurgery.

You may have surgery to:

- help diagnose a brain tumour (take a biopsy)
- remove part of the tumour (partial resection or debulking)
- remove the whole tumour (total resection).

Types of surgery

Craniotomy

A craniotomy is an operation where a piece of the skull (bone) is removed to make an opening so that your surgeon can operate on your brain. The surgery is usually done under general anaesthetic.

Once the surgeon has made an opening in the skull, they will remove the entire tumour (total resection) or as much of it as they can safely (partial resection or debulking).

Awake craniotomy

Some people have a craniotomy while they are awake. This operation may be recommended if the tumour is near parts of the brain that control speech or movement. The operation is done while you are awake, but you will be given medication to help you relax.

Although you are awake, the surgery will not be painful as the brain does not feel pain.

The surgeon will use an electrode to stimulate the brain during the operation. They will also ask you to speak or move parts of your body. Using the electrode and asking you to perform simple tasks helps the surgeon to identify important parts of the brain that they do not want to damage.

Recovery after surgery

Recovery from surgery to treat a brain tumour may take a long time. Your treatment team will talk to you about the benefits and side effects of surgery.

Some people recover fully and can gradually return to their usual activities. For others, there are longer-term changes in how they speak, move, and think. Your doctor may refer you to a rehabilitation service to receive treatments such as physiotherapy and occupational therapy. These can help your recovery and teach you ways to manage any changes you experience.

Genetic profiling

Samples of your tumour taken when you have a biopsy may be sent to a special laboratory to get information on the DNA (deoxyribonucleic acid) of your tumour. This is called genetic or DNA profiling.

Genetic profiling can give your doctor detailed information about your tumour to help guide the best course of treatment for you. It may also help to identify clinical trials that you might be able to join.

Radiation treatment

Radiation treatment is the use of X-ray beams to destroy cancer cells or slow their growth. Radiation treatment only affects the part of the body that the beams are aimed at.



For more information on how radiation treatment works, see the Cancer Society's *Radiation Treatment/Haumanu Iraruke* booklet, available on our website: cancer.org.nz/radiation-treatment

When is radiation treatment offered?

Radiation can be used:

- after surgery to destroy any remaining brain tumour cells
- to treat tumours that cannot be removed by surgery
- to reduce symptoms caused by a brain tumour.



How radiation treatment is given

External beam radiation treatment

External beam radiation treatment is given from outside the body by a machine called a linear accelerator (LINAC). This is the most commonly used radiation treatment for a brain tumour.

Treatment is given daily (Monday to Friday) and your treatment team will give you more information on how long you will have treatment for. The LINAC is on for only a few minutes and the total amount of time spent in the treatment room is usually 10 to 20 minutes.

Treatment is carefully planned to do as little harm as possible to your normal body tissue.

Stereotactic radiation treatment

A specialised radiation treatment machine is used to give very precise, targeted radiation treatment to some brain tumours. Only a few treatment centres in New Zealand offer this treatment.

Sometimes it is called stereotactic radiosurgery – but it does not need an operation.

Wearing a mask (a shell, or head mould)

If you are having radiation treatment to your brain, you will have a mask made. It is hard to keep your head completely still, so the mask is used to keep you in the right position for treatment. It is made of plastic mesh, so you will be able to see and breathe through it.

Some people find that the thought of wearing a mask throughout treatment makes them feel anxious or claustrophobic. Talk to your treatment team about your concerns, as they are experienced in helping you to manage this.

Where radiation treatment is provided

Radiation treatment is available at specialist treatment centres in Auckland, Hamilton, Tauranga, Palmerston North, Wellington, Christchurch, and Dunedin (2022).

If you need to be away from home for your treatment, help may be available for transport and accommodation costs through the National Travel Assistance Scheme (NTA).

Your treatment centre, hospital social workers, the travel office at your local hospital or your local Cancer Society can advise you on what help may be available.



You can find more information about the National Travel Assistance Scheme on our website: cancer.org.nz/nta

Side effects of radiation treatment for a brain tumour

People react to treatment in different ways. Side effects are usually temporary, but some may last for several weeks to a few months or they may be permanent.

These are the common side effects that you may experience.

- Fatigue (tiredness) – can occur during and after treatment
- Red and dry skin in the area being treated
- Headaches
- Nausea (feeling sick) or vomiting
- Loss of appetite
- Hair loss in the area treated

Chemotherapy treatment

Chemotherapy uses medication to kill tumour cells or slow their growth. It affects cells throughout your body. It is used to reduce the risk of a brain tumour returning or to control the growth of a brain tumour that cannot be removed by surgery.



For more information on chemotherapy, see the Cancer Society's *Chemotherapy, Immunotherapy and Targeted Treatment* booklet, available on our website: cancer.org.nz/chemotherapy

When chemotherapy treatment is given

Chemotherapy may be given:

- after surgery to reduce the chances of the brain tumour coming back
- to improve symptoms if you are unable to have surgery
- before, after, or with radiation treatment
- as palliative treatment for a high-grade brain tumour to reduce symptoms and

improve your quality of life or extend your life.

How chemotherapy is given

Chemotherapy is given as tablets (oral chemotherapy) or into a vein (intravenously).

Oral chemotherapy is often used to treat high-grade brain tumours. Your treatment team will give you information on how to take and store this medication safely while you are at home.

If chemotherapy is given into a vein, it may be given through a cannula. A cannula is a small tube that is put into a vein in your arm or the back of your hand and is removed after each treatment. Intravenous treatment is usually given to you at your local treatment centre.

Not all people with a brain tumour will receive the same treatment.

Side effects of chemotherapy

Chemotherapy side effects vary depending on the combination of medications you receive.

You can ask your treatment team to provide you with some written information on the side effects that you are most likely to have.

The common side effects that you may experience include:

- increased risk of infection
- hair loss
- fatigue – feeling tired
- forgetfulness and concentration problems (chemo brain)
- nausea and vomiting
- constipation or diarrhoea
- sore mouth and ulcers.



Some side effects of chemotherapy can be life threatening. If you develop any of the following symptoms you must contact your treatment team, or go immediately to your nearest hospital emergency department and tell them you are receiving chemotherapy treatment.

- Fever - a temperature over 38°C
- Chills - shivers or shakes, feeling hot or cold
- Chest pain
- Difficulty breathing
- Vomiting that continues after taking anti-sickness medication
- Diarrhoea
- Gum or nose bleeds, or bleeding that does not stop
- Pain or burning when passing urine, or blood in urine

It is important that you do not wait to seek assistance until the next morning or after the weekend.

The availability of targeted treatment for brain tumours

Targeted treatment uses medication to target the damaged genes or proteins of cancer cells to stop the cancer growing and spreading. It is sometimes called biological therapy.



For more information about targeted treatments, see the Cancer Society's *Chemotherapy, Immunotherapy and Targeted Treatment* booklet, available on our website: cancer.org.nz/targeted-treatments

Targeted treatments are expensive, and Pharmac has decided not to provide funding for some treatments that might be helpful for the management of a brain tumour. You may like to ask your oncologist if there are any unfunded treatments available that may be beneficial for you. Your medical oncologist will be able to give you an estimate of the cost involved if you are thinking of funding your own treatment.

In New Zealand, bevacizumab (Avastin) has been approved for use in people with high-grade, relapsed glioma. This treatment is not currently funded by Pharmac (2022).

Supportive care and palliative treatment

Supportive care

Anyone with a brain tumour may need supportive care. It includes the management of physical symptoms, emotional and spiritual support, and guidance to help you plan ahead.

Supportive care will mostly be provided by your primary health care team, Cancer Society support workers, and palliative care services.

Advance care planning

An important part of planning ahead is preparing an advance care plan.

Advance care planning helps you, and the people important to you, to talk about the treatment and care you may want towards the end of your life. This will guide your whānau and doctors when you can no longer tell them yourself.

Advance care planning is voluntary – no one can force you to do it.



More information is available on this website:

www.hqsc.govt.nz/our-programmes/advance-care-planning

Specialist palliative care

You may need extra support if the symptoms you are experiencing are complex or difficult to manage. Your primary care team may refer you to a specialist palliative care service.

Palliative care is often provided by primary health care teams as part of supportive care. It is a good idea to ask for palliative care early rather than wait until things become difficult to manage. This can help to reduce stress for you and your whānau.

Specialist palliative care can be offered at home or in a hospital, rest home, or hospice. Coordinated care is provided by specialist doctors, nurses, social workers, spiritual care workers, and cultural health services. Their services include, for example, helping you with physical and emotional symptoms and helping you to get practical support.

You may also be faced with decisions that are hard to make during your illness. The specialist palliative care team may be able to explain things to you, and help you to find answers. In general, specialist palliative care services are free. There may be a charge for hiring some equipment if you are being cared for at home.

Traditional treatments

Traditional Māori healing

Traditional healing has been a central part of Māori culture for generations. Values, belief systems, and teachings from kaumātua and tohunga have seen Māori focus on total wellbeing, which includes taha tinana, taha hinengaro, taha wairua and taha whānau (the physical domain, the domain of the mind and behaviour, the spiritual domain, and the whānau or social domain).

Traditional healing methods can include rongoā Māori, romiromi or mirimiri. These therapies are based on the use of native plants, massage therapy and spiritual healing.



You can find more information on rongoā Māori and providers on our website: cancer.org.nz/traditional-healing/

Hauora Māori

Mai rā anō te hauora Māori i noho ai hei wāhanga o te ahurea Māori. Nā ngā uaratanga, te pūnaha whakapono me ngā akoranga a ngā kaumātua me ngā tohunga i kitea ai te arotahi a te Māori ki te oranga kotahi e rarawhi ana i te taha tinana, te taha hinengaro, te taha wairua me te taha whānau.

Ka whai wāhi te rongoā Māori, te romiromi, te mirimiri rānei, hei tauira atu. Ka hāngai katoa ki tarutaru otaota whenua me ngā rākau, te haumanu romiromi me te whakaoranga ā-wairua.

Ka taea etahi atu mōhiohio e pa ana ki te rongoā Māori me ngā kaiwhakarato i runga i tō mātou paetukutuku: cancer.org.nz/traditional-healing/

Traditional Pacific healing

Traditional healing is also important to Pasifika, to help in their recovery. It takes a holistic approach to treating the person, where mental, emotional, physical, and spiritual needs are looked after together, rather than as separate parts. The treatment offered to each person depends on their specific needs. Medicinal plants and herbs may be used during the treatment process, as well as stones and massage.

If you are thinking about using either Māori or Pacific traditional healing, please discuss them with your cancer treatment team. Both traditional healers and your treatment team aim to provide you with the best possible care that has minimal side effects. If you have difficulty expressing your needs to your treatment providers, find someone to advocate on your behalf. Then the traditional healers and hospital

treatment specialists can work together to support you on your cancer journey.

Other treatments

It is important to discuss any additional treatments you are using or thinking of using with your treatment team. Some treatments may be harmful if they are taken at the same time as medical treatments, so it is advisable to discuss the benefits, medicine interactions, and any safety concerns.

Complementary treatment

Complementary treatments (sometimes called integrative therapy) are healing practices and products that are not usually part of standard medical care. A number of practices are now being used to complement medical treatments. Examples include massage, meditation, and acupuncture, which are sometimes used to lessen the side effects of treatment.

Alternative treatments

When these treatments are used instead of medical treatment, they are considered alternative treatments. Some alternative therapists may claim their treatments are cancer cures – this is very unlikely to be true.



You can check for warnings on natural and herbal products on the Medsafe website: www.medsafe.govt.nz

For more information on complementary and alternative medicine, see the Cancer Society's *Complementary and Alternative Medicine* booklet, available on our website: cancer.org.nz/complementary-therapy

