Understanding Melanoma
A guide for people with cancer, their families and friends.

For information & support, call 131120
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Understanding Melanoma is reviewed approximately every two years. Check the publication date above to ensure this copy of the booklet is up to date.

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Note to reader
Always consult your doctor about matters that affect your health. This booklet is intended as a general introduction to the topic and should not be seen as a substitute for medical, legal or financial advice. You should obtain appropriate independent professional advice relevant to your specific situation and you may wish to discuss issues raised in this book with them.

All care is taken to ensure that the information in this booklet is accurate at the time of publication. Please note that information on cancer, including the diagnosis, treatment and prevention of cancer, is constantly being updated and revised by medical professionals and the research community. Cancer Council Australia and its members exclude all liability for any injury, loss or damage incurred by use of or reliance on the information provided in this booklet.

Cancer Council Australia
Cancer Council Australia is the nation’s peak non-government cancer control organisation. Together with the eight state and territory Cancer Councils, it coordinates a network of cancer support groups, services and programs to help improve the quality of life of people living with cancer, their families and carers. This booklet is funded through the generosity of the people of Australia. To make a donation and help us beat cancer, visit Cancer Council’s website at www.cancer.org.au or call your local Cancer Council.

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Introduction

This booklet has been prepared to help you understand more about melanoma.

Many people feel shocked and upset when told they have melanoma. We hope this booklet will help you, your family and friends understand how melanoma is diagnosed and treated. We also include information about support services.

We cannot give advice 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 other questions to ask your treatment team.

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

How this booklet was developed
This information was developed with help from a range of health professionals and people affected by melanoma.

If you or your family have any questions, call Cancer Council 13 11 20. We can send you more information and connect you with support services in your area. Turn to the last page of this book for more details.
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What is cancer?

Cancer is a disease of the cells, which are the body’s basic building blocks. 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.

Sometimes cells don’t grow, divide and die in the usual way. This may cause blood or lymph fluid in the body to become abnormal, or form a lump called a tumour. A tumour can be benign or malignant.

**Benign tumour** – Cells are confined to one area and are not able to spread to other parts of the body. This is not cancer.

**Malignant tumour** – This is made up of cancerous cells, which have the ability to spread by travelling through the bloodstream or lymphatic system (lymph fluid).

### How cancer starts

Normal cells → Abnormal cells → Abnormal cells multiply → Malignant or invasive cancer

- **Normal cells**
- **Abnormal cells**
- **Abnormal cells multiply**
- **Malignant or invasive cancer**

Cancer Council
The cancer that first develops in a tissue or organ is called the primary cancer. A malignant tumour is usually named after the organ or type of cell affected.

A malignant tumour that has not spread to other parts of the body is called localised cancer. A tumour may invade deeper into surrounding tissue and can grow its own blood vessels (angiogenesis).

If cancerous 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. For example, melanoma that has spread to the bones is called metastatic melanoma, even though the person may be experiencing symptoms caused by problems in the bones.

**How cancer spreads**

- Primary cancer
- Local invasion
- Angiogenesis – tumours grow their own blood vessels
- Lymph vessel
- Metastasis – cells invade other parts of the body via blood vessels and lymph vessels
The skin

The skin is the largest organ in the body. It covers the body, protecting it from injury, regulating its temperature and preventing it from becoming dehydrated. Skin, like all other body tissues, is made up of cells. It has two main layers called the epidermis and the dermis.

The epidermis is the top, outer layer of the skin. It contains three different kinds of cells:
- **squamous cells** – flat cells that are packed tightly to make up the top layer
- **basal cells** – tall cells that make up the lower layer
- **melanocytes** – cells that produce a dark pigment called melanin, the substance that gives skin its colour.

Basal cells multiply constantly. As they age, they move upwards in the epidermis and flatten out to form a new layer, becoming squamous cells. These cells eventually die and form the top layer of your skin. Over time our body sheds these dead skin cells.

The dermis is the layer underneath the epidermis. It contains the roots of hairs, sweat glands, blood vessels, lymph vessels and nerves.

**Melanocytes**

When skin is exposed to the sun, melanocytes make extra melanin to protect the skin from getting burnt. This is what causes skin to tan. Melanocytes are also in non-cancerous (benign) spots on the skin called moles or naevi. Most moles are brown, tan or pink in colour and round in shape.
The skin

Squamous cells
Basal cells
Nerve
Sweat gland
Hair follicle
Blood vessels

Melanocytes

Epidermis
Basement membrane (germinal layer)
Dermis
Fat layer

Hair

2–4 mm
Q: What is melanoma?
A: Melanoma is a type of skin cancer. There are three main types of skin cancer that are named after the cells that are affected: squamous cell carcinoma (SCC), basal cell carcinoma (BCC) and melanoma. Melanoma develops from the melanocytes (pigment cells).

It usually occurs on parts of the body that have been overexposed to the sun. However, rare melanomas can also start in a part of the skin or another part of the body that has never been exposed to the sun, such as the nervous system, eye and mucous membrane (lining of the mouth and digestive tract), as well as under the feet and nails.

Melanoma is one of the least common skin cancers. However, it is one of the most serious types because it is more likely to spread to other parts of the body, especially if not detected early. If melanoma is found early, treatment is often successful.

Q: What are the types of melanoma?
A: Skin melanomas (cutaneous melanomas) are categorised by their appearance, thickness and how far they have spread.

**Superficial spreading melanoma** – This is the most common type of melanoma, making up almost 50% of all cases. It starts as a brown or black spot that spreads across the outer layer of the skin (epidermis). This type of
melanoma becomes dangerous when it invades the lower layer of the skin (dermis).

**Nodular melanoma** – This type makes up about 10% of melanomas. It is usually a raised lump on the surface of the skin that is often red, pink, brown or black and feels firm to touch. It is a fast growing and aggressive form of melanoma, so if suspected it is important to see your GP (general practitioner) without delay.

**Lentigo maligna melanoma (LMM)** – This type of melanoma is most common in older people. It makes up about 10% of melanomas and begins as a large freckle (lentigo maligna) in an area of skin that has had a lot of sun exposure, such as the face, ears, neck and head. It may grow slowly and superficially over many years until it penetrates more deeply into the skin.

**Acral lentiginous melanoma** – This is an uncommon type of melanoma that is most commonly found on the palms of the hands, soles of the feet or under the fingernails or toenails. These commonly present as a lightly pigmented, sometimes warty area and do not respond to treatments for warts or tinea. In the nails, they most often present as a long streak of pigment in the nail or discoulouration in the skin around the nail.

**Desmoplastic melanoma** – This is another uncommon type of melanoma that presents as a firm, progressively growing lump, often on the head or neck. Many are skin-coloured and not pigmented.
Other types of melanoma – There are some other rarer types of melanoma, which start in the eyes, nervous system, anus, genital tract (urethra and vagina) and tissues that line the inside of the nose.

Melanoma in-situ – This is when the abnormal cancer cells are only in the epidermis and have not penetrated into the dermis.

Q: How common is melanoma?
A: Australia and New Zealand have the highest rates of melanoma in the world. Over 12,500 people are estimated to be diagnosed with melanoma in Australia every year.

Melanoma is the third most common cancer in both men and women. It accounts for 10% of all cancer diagnoses. One in 18 Australians will be diagnosed with melanoma before age 85.

It is the most common type of cancer in young Australians aged 15–29, making up more than 25% of all cancer cases in this age group.
Q: What are the signs and symptoms?

A: Melanoma can vary greatly in the way it looks. The first sign is usually a new spot or a change in an existing mole.

**Size** – The spot may begin to get, or keep getting, larger.

**Colour** – The mole may become increasingly blotchy with varying depth and shades of colour.

**Shape or border** – The spot may have an irregular edge (scalloped or notched) or lack of symmetry. That is, if a line was drawn through the middle of the mole, both halves would not match up. The spot may increase in height or become scaly.

**Itching or bleeding** – The mole may itch or bleed at times.

**Elevation** – Melanomas may develop a raised area or may develop from the start as a raised nodule. Such raised areas are often reddish or reddish brown.

It is normal for new moles to appear and change during childhood and teenage years. However, all adults who develop a new mole should see their doctor to get it examined. Even if you have had a mole checked before and it was benign, keep an eye on it because it could change in the future. Talk to your doctor immediately about any changes.
Q: What are the risk factors?

A: The main cause of all types of skin cancers is exposure to ultraviolet (UV) radiation from the sun or another source, such as a solarium tanning machine. Each time your unprotected skin is exposed to UV radiation, it changes the structure of cells and affects how they behave.

Overexposure to UV radiation permanently damages the skin. This damage adds up over time. The most important years for sun protection are during childhood. However, increased protection against sun exposure is important and will help prevent skin cancer at any age.

International research shows that people who first use tanning machines (solariums) before the age of 35 have a 59% higher risk of developing melanoma.1

Family history of melanoma

Sometimes melanoma runs in families. For most people this is due to factors such as similar skin type or too much sun exposure in childhood. However, approximately 7% of melanomas may be caused by an inherited faulty gene. Some of these genes have been identified.
The signs that melanoma could be due to an inherited faulty gene include:

- Having two or more close relatives who have been diagnosed with melanoma. Close relatives include parents, siblings or children
- Being diagnosed with more than one melanoma on different areas of the skin
- Being diagnosed with melanoma before the age of 40.

People who have a strong family history of melanoma should monitor their own skin and have their skin checked by their GP or skin cancer specialist at least annually from their early twenties. New moles after this age should be investigated.

If you are concerned about your family risk factors, talk to your doctor about having regular skin checks or ask for a referral to a family cancer clinic. To find out more call Cancer Council 13 11 20.
Who is at risk?

Anyone can develop melanoma. However, the following factors may increase a person’s risk:

**Skin type** – Some people have skin that is more sensitive to UV radiation. This includes people who have pale, fair or freckled skin; skin that burns easily and doesn’t tan; and people with light-coloured eyes or fair or red hair.

**Having lots of moles** – Adults with more than 10 moles on their arms and more than 100 on their body have an increased risk.

**Childhood tanning/sunburn** – Too much sun exposure during childhood and adolescence greatly increases the chance of getting melanoma in later life because damaged cells have more time to develop into cancer.

Studies show that people who move after childhood from low to high UV radiation countries, such as from England to Australia, develop melanoma at a lower rate than people born in Australia.

**UV exposure** – Melanoma risk is related to the pattern of UV exposure and not just the amount. People with occasional high UV exposure and sunburn, such as on weekends and holidays, are at increased risk.

**Age** – Melanoma is more common in people over 50 years of age. However, it is the most commonly diagnosed cancer in 15–29 year olds.

**Cancer history** – People with a previous melanoma or other type of skin cancer (BCC or SCC) have an increased risk.

**Family history** – People with a strong family history of melanoma have an increased risk.
Physical examination

Usually you begin by seeing a doctor to have the suspicious spot or mole, and any other moles on your body examined. The doctor may use a magnifying instrument, called a dermascope, to see the spot clearly and will ask if you or your family have a history of melanoma.

Removing the mole (excision biopsy)

If the doctor suspects that a spot on your skin may be melanoma, the usual procedure is to have a biopsy. This is generally a quick and simple procedure. Your GP may do it, or you may be referred to a dermatologist or plastic surgeon.

You will have a local anaesthetic injected into the area near the mole. The doctor will use a scalpel to remove the spot and a small area of tissue around it. A stitch or stitches will be used to close up the wound. The tissue sample will be sent to a laboratory for examination under a microscope by a tissue specialist (histopathologist).

It is recommended that the entire mole is removed rather than a small biopsy due to the potential of an inaccurate and misleading diagnosis.

Results are usually ready in about a week, and a follow-up appointment may be arranged. This waiting period may be an anxious time. Call Cancer Council 13 11 20 for support or it may help to talk things over with a close friend, relative or health professional. If the mole contains cancerous cells you will need further surgery, such as a wide local excision (see page 27).
Pathology report

If you have melanoma, the pathologist will prepare a report that provides your treatment team with information to help plan treatment and determine your prognosis. The following factors may be included:

**Breslow thickness** – This is a measure of the thickness of the tumour in millimetres. Melanomas are classified into four categories:
- less than 1 mm (most melanomas are this category)
- 1–2 mm
- 2.1–4 mm
- greater than 4 mm

**Clark level** – This describes how deeply the cancer has gone through into layers of the skin. It is rated 1–5, with 1 being the most shallow and 5 the deepest. A low Clark level means the cancer is close to the skin’s surface (more superficial); a high level means the cancer has penetrated more deeply into the skin. It is important not to confuse the level of a melanoma with the stage (see page 18).

**Margins** – This is the edge of an excision specimen. If there is no tumour touching the margins, the pathologist will describe how close the lesion came to the edge.

**Mitotic rate** – Mitosis is the process by which one mature cell divides into two identical cells. The pathologist counts the number of actively dividing cells (mitoses) that they see. Averaging this number gives the mitotic count, which is stated as the number of mitoses per square millimetre.

**Ulceration** – The breakdown or loss of the epidermis. Ulceration is determined by the pathologist when the specimen is examined under a microscope.
Checking the lymph nodes

Once the melanoma has been diagnosed, the doctor will check the nearby lymph nodes to see if the cancer has spread. This provides more accurate information about the stage of the melanoma (see page 18).

Lymph nodes are part of your body’s lymphatic system, which removes excess fluid from tissues; absorbs fatty acids and transports fat; and produces immune cells. Sometimes melanoma can travel through the lymph vessels to other parts of the body.

To check if the melanoma has spread to a lymph node or several lymph nodes, your doctor may recommend that you have a fine needle aspiration biopsy or a sentinel node biopsy.

**Fine needle aspiration biopsy** – The doctor takes a sample of cells by inserting a needle into a suspicious node. This tissue is examined under a microscope to see if it contains cancer cells.

**Sentinel node biopsy** – The sentinel lymph node drains fluid from the area where the melanoma developed. It is located by injecting a small amount of radioactive fluid into the area where the melanoma was removed. The radioactive fluid is not harmful. This procedure, called lymphoscintigraphy, is done to see which node has absorbed the injected fluid first. This is the sentinel node, and it is then removed in a small operation and checked for cancer cells.

If cancer cells are found, the remaining nodes in the area are also removed. This is to try to stop cancer coming back in the same
area and to assess the risk of the cancer spreading to other parts of the body.

A sentinel lymph node biopsy can provide information that helps predict the risk of melanoma spread in the future, and can help your doctor plan your treatment. It may also allow you to access new trials to test future cancer treatments. The risk of having melanoma in the lymphatics increases with the Breslow thickness of the primary melanoma and is very low for thin melanomas. For this reason, sentinel node biopsy will only be offered to patients if the Breslow thickness of their melanoma is over 1 mm or they have a Clark level of 4.

**Staging the melanoma**

Staging determines whether the melanoma has spread from the original site to other parts of the body. This is based on diagnostic tests, which could include blood tests, X-rays, CT scans, MRI or PET scans. Staging the melanoma helps your health care team decide what treatment is best for you.

<table>
<thead>
<tr>
<th>Staging melanoma</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Stage 1</strong></td>
</tr>
<tr>
<td>The melanoma has not moved beyond the primary site. This is called localised cancer.</td>
</tr>
<tr>
<td><strong>Stage 2</strong></td>
</tr>
<tr>
<td>The melanoma has spread to nearby skin and subcutaneous tissues.</td>
</tr>
<tr>
<td><strong>Stage 3</strong></td>
</tr>
<tr>
<td>The melanoma has spread to lymph nodes near the primary site.</td>
</tr>
<tr>
<td><strong>Stage 4</strong></td>
</tr>
<tr>
<td>The melanoma has spread to other parts of the body.</td>
</tr>
</tbody>
</table>
**Prognosis**

Prognosis means the expected outcome of a disease. You may wish to discuss your prognosis and treatment options with your doctor, but it is not possible for any doctor to predict the exact course of the disease. The type of melanoma you have, how well you respond to treatment, and other factors such as age and medical history are all important in assessing your prognosis.

Melanoma can be treated most effectively in its early stages when it is still confined to the top layer of the skin (epidermis). The deeper a melanoma penetrates into the skin, the greater the risk that it may spread to draining lymph nodes or other organs.

In Australia, more than 90% of people with melanoma are treated successfully with surgery. With early detection and treatment, the outlook has steadily improved over the past 50 years.

**Which health professionals will I see?**

You may be cared for by a range of health professionals, called a multidisciplinary team, who specialise in different aspects of your treatment, especially if you have a melanoma with a Breslow thickness greater than 1 mm, or if the melanoma has spread. Ideally, all your tests and treatment will be available at your hospital, although this may not always be possible.

This team may include some or all of the health professionals listed on the next page.
## Health professionals for people with early stage melanoma

<table>
<thead>
<tr>
<th>Professional</th>
<th>Specialisation</th>
</tr>
</thead>
<tbody>
<tr>
<td>dermatologist</td>
<td>specialises in the diagnosis and treatment of skin cancers and other skin disorders</td>
</tr>
<tr>
<td>histopathologist</td>
<td>examines tissue to diagnose cancer</td>
</tr>
<tr>
<td>surgeon</td>
<td>performs operations to remove the melanoma</td>
</tr>
</tbody>
</table>

## Additional health professionals for people with advanced melanoma

<table>
<thead>
<tr>
<th>Professional</th>
<th>Specialisation</th>
</tr>
</thead>
<tbody>
<tr>
<td>radiologist</td>
<td>specialises in reading medical imaging tests such as x-rays, CT and MRI scans</td>
</tr>
<tr>
<td>radiation therapist</td>
<td>plans and delivers radiotherapy treatment</td>
</tr>
<tr>
<td>lymphoedema therapist</td>
<td>educates people about lymphoedema management and provides treatment if lymphoedema occurs</td>
</tr>
<tr>
<td>medical oncologist</td>
<td>prescribes and coordinates the course of treatment that may include targeted therapies, immunotherapy and chemotherapy</td>
</tr>
<tr>
<td>radiation oncologist</td>
<td>prescribes and coordinates the course of radiotherapy</td>
</tr>
</tbody>
</table>
**Health professionals for people with early stage melanoma**

<table>
<thead>
<tr>
<th>Role</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>dermatologist</td>
<td>specialises in the diagnosis and treatment of skin cancers and other skin disorders</td>
</tr>
<tr>
<td>reconstructive (plastic) surgeon</td>
<td>specialises in surgery to reconstruct the appearance of the body</td>
</tr>
<tr>
<td>specialist nurses</td>
<td>support you throughout your diagnosis and treatment</td>
</tr>
<tr>
<td>GP (general practitioner)</td>
<td>assists you in obtaining practical and emotional support and works in partnership with your specialists in providing ongoing care</td>
</tr>
<tr>
<td>histopathologist</td>
<td>examines tissue to diagnose cancer</td>
</tr>
</tbody>
</table>

**Additional health professionals for people with advanced melanoma**

<table>
<thead>
<tr>
<th>Role</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>radiologist</td>
<td>specialises in reading medical imaging tests such as x-rays, CT and MRI scans</td>
</tr>
<tr>
<td>cancer care coordinators</td>
<td>support and assist you through all stages of your treatment</td>
</tr>
<tr>
<td>dietitian</td>
<td>recommends an eating plan for you to follow while you are in treatment and recovery</td>
</tr>
<tr>
<td>social worker, counsellor, psychologist, psychiatrist</td>
<td>link you to support services, provide emotional support, assist with emotional concerns, and help manage depression and anxiety</td>
</tr>
<tr>
<td>radiation therapist</td>
<td>plans and delivers radiotherapy treatment</td>
</tr>
<tr>
<td>dietitian</td>
<td>recommends an eating plan for you to follow while you are in treatment and recovery</td>
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<tr>
<td>lymphoedema therapist</td>
<td>educates people about lymphoedema management and provides treatment if lymphoedema occurs</td>
</tr>
<tr>
<td>medical oncologist</td>
<td>prescribes and coordinates the course of treatment that may include targeted therapies, immunotherapy and chemotherapy</td>
</tr>
<tr>
<td>physiotherapist and occupational therapist</td>
<td>assist with physical and practical problems, including restoring range of movement after surgery and managing lymphoedema</td>
</tr>
<tr>
<td>palliative care team</td>
<td>offer a range of services for people with advanced cancer to improve their quality of life and ensure their physical, practical, emotional and spiritual needs are met</td>
</tr>
</tbody>
</table>
**Melanoma units**

Some people are diagnosed and treated in specialist melanoma units available in major cities around Australia. At these centres, specialists in melanoma work together to assess your case and recommend the best treatment.

If you are referred to a melanoma unit or a multidisciplinary team, a histopathologist may review your biopsy results and a radiologist may review your imaging. Based on these results, a consensus opinion will be reached regarding your treatment. You will be able to talk to one or more medical specialists who will answer your questions and advise you and your GP about your treatment.

As well as providing treatment advice, melanoma units are also involved in research studies and may invite you to participate. They may also seek your permission to collect information and tissue and blood samples from you, for use in melanoma research. People who are at high risk of melanoma are also often asked to take part in research studies, even if they have not been diagnosed with melanoma. See page 25 for more information on clinical trials.

To find out where a specialist melanoma unit is located, ask your doctor or call Cancer Council 13 11 20.

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Most people with melanoma will only require surgery. They will not need to see a medical or radiation oncologist.
Key points

- A melanoma diagnosis starts with an examination of the suspicious spot or mole, and any other moles on your body.

- A GP, dermatologist or surgeon can give you a local anaesthetic and remove a spot on your skin for examination by a histopathologist. This is called an excision biopsy.

- The biopsy will provide information about the thickness of the melanoma (Breslow thickness) and how deeply into the skin the cancer cells have grown (Clark level).

- Your doctor will feel the nearby lymph nodes to work out if the melanoma has spread to other parts of the body. If necessary, you will have a fine needle biopsy or sentinel node biopsy to check the lymph nodes for cancer cells.

- Your doctor may talk to you about possible treatments and the expected outcome of the disease (prognosis).

- There are many health professionals who care for people with melanoma. Some health professionals, such as medical oncologists and radiation oncologists, care for people with a melanoma that is at risk of spreading or has spread (metastatic melanoma).

- Some people visit specialist melanoma units, which are based in major cities around Australia.
Making treatment decisions

Sometimes it is difficult to decide on the type of treatment to have. You may feel that everything is happening too quickly. Check with your doctor how soon your treatment should start, and take as much time as you can before making a decision.

Understanding the disease, the available treatments and possible side effects can help you weigh up the pros and cons of different treatments and make a well-informed decision that’s based on your personal values. You may also want to discuss the options with your doctor, friends and family.

You have the right to accept or refuse any treatment offered. Some people with more advanced cancer choose treatment even if it only offers a small benefit for a short period of time. Others want to make sure the benefits outweigh the side effects so that they have the best possible quality of life.

Talking with doctors

When your doctor first tells you that you have cancer, you may not remember the details about what you are told. Taking notes or recording the discussion may 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.

I was confused when my doctor gave me a choice of treatments, so I asked him, ‘If it was you, what would you do?’ His answer helped to make things clearer. Jacob
If you are confused or want clarification, you can ask questions – see page 52 for a list of suggested questions. If you have several questions, you may want to talk to a nurse or ask the office manager if it is possible to book a longer appointment.

Some cancer treatments can affect your fertility permanently or temporarily. If having children is important to you, talk to your doctor before starting treatment.

A second opinion
You may want to get a second opinion from another specialist to confirm or clarify your doctor’s recommendations or reassure you that you have explored all of your options. Specialists are used to people doing this.

Your doctor can refer you to another specialist and send your initial results to that person. You can get a second opinion even if you have started treatment or still want to be treated by your first doctor. You might decide you would prefer to be treated by the doctor who provided the second opinion.

Taking part in a clinical trial
Your doctor or nurse may suggest you take part in a clinical trial. Doctors run clinical trials to test new or modified treatments and ways of diagnosing disease to see if they are better than current methods. For example, if you join a
randomised trial for a new treatment, you will be chosen at random to receive either the best existing treatment or the modified new treatment.

Over the years, trials have improved treatments and led to better outcomes for people diagnosed with cancer.

It may be helpful to talk to your specialist or clinical trials nurse, or get a second opinion. If you decide to take part, you can withdraw at any time.

“Although being involved in a clinical trial can be both physically and emotionally demanding it empowers you and makes you feel like you are being pro-active about your health. As a clinical trial participant you are provided with hope, and the possibility that you will beat the disease.”

Natalia

For more information, call Cancer Council 13 11 20 for a free copy of Understanding Clinical Trials and Research or visit www.australiancancertrials.gov.au or www.anzctr.org.au.
Melanoma that is found early can generally be treated successfully with surgery. Your medical team will discuss the best treatment for you based on how far the melanoma has spread.

**Surgery**

Surgery is the main treatment for early stage (localised) melanoma. Most of the time this is the only treatment needed.

**Wide local excision**

A doctor or surgeon will do a procedure called wide local excision. This means that the area where the melanoma is, as well as a small amount of surrounding normal-looking skin will be cut out. This is called a safety margin, and is done to make sure all the cancer cells have been removed. The safety margin is usually between 5 mm and 1 cm, depending on the thickness and site of the melanoma. In some circumstances, a safety margin of up to 2 cm may be advised. The surgeon will stitch the wound closed.

A wide local excision is often performed as a day procedure using local anaesthetic. However, people with a melanoma thicker than 1 mm or with a Clark level of 4 or above will generally have a sentinel node biopsy (see page 17) at the same time and will be given a general anaesthetic. The sentinel node biopsy is not accurate if it is performed after the wide local excision has been done.
A pathologist will check the tissue around the melanoma for cancer cells. If the sample doesn’t have any cancer cells, it is called a clear margin. If the margins aren’t clear, you may need further treatment. See page 34.

**Repairing the wound**

Most people will be able to have the surgical wound drawn together with stitches. If the wound is too big to close with stitches, the surgeon may cover it using some skin from another part of your body. This can be done in two ways:

- **Skin flap** – Nearby skin and fatty tissue is pulled over the wound and stitched.

- **Skin graft** – A layer of skin is taken from another part of your body and placed over the area where the melanoma was removed. The skin graft is usually taken from the thigh.

The decision about whether to do a skin graft or flap will depend on many factors, such as where the melanoma is, how much tissue has been removed and your general health.

In either case, the wound will be covered with a dressing and left for several days. It will then be checked to see if it is healing properly. You will also have dressings on any area from which skin was taken for a graft.
Recovering from surgery
You may be uncomfortable for a few days after a wide local excision. Your doctor will prescribe pain-killers if necessary. If you have a skin graft, the area on which the skin is grafted may look red and raw immediately after the operation. Eventually this area will heal and the redness will fade. Your medical team will tell you how to keep the wound clean to prevent it from becoming infected. Occasionally the original skin graft doesn’t take and a new skin graft is required.

Your total recovery time will vary depending on the thickness of the melanoma and the extent of the surgery required. Most people recover in a week or two. Your doctor can also give you information about any bruising or scarring you may have after surgery.

For more information about surgery, call Cancer Council 13 11 20 for a free copy of Understanding Surgery.

I went to a doctor who specialises in facial and cosmetic surgery. He said it was important to get the melanoma out straightaway. He cut out a larger piece – about the size of a 20-cent coin – and it had clear margins. The cuts from surgery were able to heal into the folds and wrinkles of my face, so the scar is not noticeable. John
Removing the lymph nodes (dissection)

If the melanoma has spread to your lymph nodes, they will be removed in an operation called a lymph node dissection or lymphadenectomy. The lymph nodes you have removed are likely to be near the location of the primary melanoma. There are large groups of lymph nodes in the neck, armpits and groin.

Side effects

Like most treatments, having your lymph nodes removed can cause side effects such as:

- **Wound pain** – Most people will have some pain after the operation. This usually improves as the wound heals. Although for some people, pain may continue after the wound has healed, especially if lymph nodes were removed from the neck. Talk to your medical team about how to manage your pain.

- **Shoulder stiffness and pain** – These are the most common problems if lymph nodes in your armpit were removed. You may find that you cannot move your arm as freely as you could before the surgery. It may help to see a physiotherapist. You may also be at risk of developing lymphoedema (see page 31).

- **Seroma/lymphocele** – This is a collection of fluid in the area where the lymph glands have been removed. It is a common side effect of lymphadenectomy and sometimes this fluid needs to be drained by having a needle inserted into the cavity which has filled up with fluid.
Lymphoedema

If the lymph nodes have been surgically removed from the groin or armpit area, swelling of the leg, arm or neck on the same side is the most common problem. This is called lymphoedema and happens due to a build-up of lymph fluid in the affected part of the body.

The likelihood of lymphoedema following treatment depends on the extent of the surgery and whether you’ve had radiotherapy. It can develop a few weeks, or even several years, after treatment. Though lymphoedema may be permanent, it can usually be managed.

How to manage lymphoedema

- Keep the skin healthy and unbroken. This will reduce the risk of infection.
- Wear a professionally fitted compression sleeve, stocking or bandaging if recommended by a physiotherapist or occupational therapist.
- Always wear gloves for gardening and housework.
- Avoid scratches from pets, insect bites, thorns or pricking your finger when sewing.
- Use sunscreen to protect your skin from sunburn.
- Moisturise your skin to prevent dryness and irritation.

- Don’t pick or bite your nails, or push back your cuticles.
- Do light exercise to help the lymph flow, such as swimming, bike riding or light weights.
- Massage the affected area to help move fluid.
- See a lymphoedema specialist – visit the Australasian Lymphology Association, www.lymphoedema.org.au, or talk to your doctor.
- Seek medical help urgently if you think you may have an infection.
Adjuvant therapies

Occasionally, other treatments are used after surgery if there's a risk that the melanoma could come back. These are known as adjuvant treatments. They may include radiotherapy, targeted therapies and immunotherapies, or you may be offered an opportunity to participate in a clinical trial.

For more information see Treatment for advanced melanoma on page 34.
Key points

- Melanoma can be treated successfully if it is diagnosed early. This is called early stage or localised melanoma.

- Most people will only need to have the melanoma surgically removed. This usually does not require a hospital stay or further treatment.

- Treatment is based on how far the melanoma has spread.

- Melanomas are always surgically removed. The surgeon will cut out the melanoma and some skin around it (safety margin). This is called a wide local excision.

- In a wide local excision, small wounds are stitched up. For larger wounds, skin is pulled over the wound and stitched (skin flap) or a thin layer of skin is taken from another part of the body, such as the thigh, and placed over the wound (skin graft).

- Recovery time will vary depending on the extent of the surgery. Most people recover in about two weeks.

- Melanoma that is found early can generally be treated successfully with surgery. However, if the melanoma has spread to other parts of your body, you will need further treatment.

- If cancer has spread to nearby lymph nodes, they will be removed in a surgical procedure called lymph node dissection or lymphadenectomy. This procedure may cause side effects, such as lymphoedema.

- Lymphoedema occurs when lymph fluid build ups and causes swelling. This can be managed.

- Treatments that are used after surgery, in case the melanoma comes back, are called adjuvant therapies.
Treatment for advanced melanoma

Advanced melanoma (also called metastatic melanoma) means the cancer has spread to distant skin sites, lymph nodes or internal organs. Treatment may include surgery, radiotherapy, immunotherapy, targeted therapies and chemotherapy.

Surgery

In some cases the surgeon will be able to do a wide local excision (see page 27) to treat metastatic melanoma that involves other parts of the skin. The surgeon will also remove nearby lymph nodes if they are cancerous. This procedure is called a lymphadenectomy or lymph node dissection (see page 30).

If the melanoma has spread to internal organs, surgery may still be possible, but this will depend on a number of other factors. The type of operation you have will depend on the part of your body that is affected. Talk to your medical team for more information or call Cancer Council 13 11 20.

Radiotherapy

Radiotherapy treatment uses high energy rays to damage or kill cancer cells so they cannot multiply. It is usually used if the cancer has spread to the lymph nodes. Radiotherapy is also sometimes given after surgery to prevent the melanoma coming back and when the melanoma has spread to other parts of the body such as the bones or brain, in order to control cancer growth or relieve symptoms.
Before starting treatment you will have a planning appointment where a CT (computerised tomography) scan is performed. The radiotherapy team will use the images from the scan to plan your treatment. The technician may make some small permanent tattoos or temporary marks on your skin so that the same area is targeted during each treatment session.

During treatment, you will lie on a table under a machine that aims radiation at the affected part of your body. Treatment sessions are usually given daily over one to four weeks. The number of treatment sessions will depend on the size and location of the tumour, and your general health. Each session takes about 20–30 minutes and is not painful – similar to an x-ray.

**Side effects**
Many people will develop temporary side effects, such as fatigue and skin reactions during their treatment. The side effects you experience will depend on the part of the body that receives radiotherapy and how long you receive treatment.

Skin in the treatment area may become red and sore during or immediately after treatment. Ask your treatment team for advice about dealing with any side effects.

For a free booklet about radiotherapy and its side effects, call **Cancer Council 13 11 20** or visit your local Cancer Council website.
Chemotherapy
Chemotherapy is the use of drugs to kill or slow the growth of cancer cells, while causing the least possible damage to healthy cells. In advanced melanoma, chemotherapy is mainly used to slow the growth of the cancer cells, or as a palliative treatment (see page 38).

The number of treatment sessions and their frequency will vary according to the type of melanoma you have and the drugs used.

Side effects
Chemotherapy drugs used to treat melanoma can cause side effects, including nausea, vomiting, fatigue, and thinning or loss of hair. These side effects are temporary and steps can be taken to prevent or reduce them.

Targeted therapies
There have been a number of new developments in the use of targeted therapies for the treatment of advanced melanoma. They have been shown to help specific groups of people with melanoma.

These treatments work by selectively targeting particular types of cancer cells while minimising harm to healthy cells. Targeted therapies have different actions to help destroy or stop the growth of cancer cells and are generally administered into the vein (intravenously) or in tablet form (orally).
To find out if you are eligible for targeted therapy treatment, a section of melanoma tissue needs to be tested for a genetic mutation. One of the more common genetic mutations is in the BRAF gene. When abnormal, this gene signals cancer cells to multiply. Approximately 50% of people with melanoma have a mutation in the BRAF gene. The change in the BRAF gene is only found in the melanoma cells and cannot be passed from parents to children.

**Immunotherapies**

Immunotherapies (also called biological therapies) can stimulate the body’s immune system to fight the melanoma. Different types of immunotherapies may be used to treat advanced melanoma. These treatments are generally administered into the vein (intravenously).

Side effects will vary depending on your treatment. It is important to discuss any side effects with your doctor immediately, including changes to your mood. If left untreated some symptoms can become life threatening. For more information about chemotherapy, targeted therapies and immunotherapies and their side effects call Cancer Council 13 11 20.
Palliative treatment
Palliative treatment seeks to improve quality of life by reducing cancer symptoms without aiming to cure the disease.

Treatment can assist with managing symptoms such as pain and nausea, as well as slowing the spread of the cancer and may include radiotherapy, chemotherapy or other medication.

It is commonly assumed that palliative treatment is for people at the end of their life; however it may be beneficial for people at any stage of advanced disease.

“I’ve been having palliative care treatment for five years. I’m not trying to get rid of the disease, just keeping it under control - and my quality of life is excellent.” Jim

For more information or free booklets about palliative care and advanced cancer, call Cancer Council 13 11 20 or visit your local Cancer Council website.
Key points

• If melanoma has spread to other parts of your body (distant skin sites, lymph nodes or internal organs), it is called advanced or metastatic melanoma.

• Treatment for metastatic melanoma may include surgery, radiotherapy, targeted therapies, immunotherapies, chemotherapy, or participation in clinical trials. New developments are occurring all the time.

• The surgeon will usually be able to remove the melanoma metastasis and skin around it (wide local excision). Nearby lymph nodes may also be removed in a procedure called lymph node dissection.

• Radiotherapy uses high energy beams to kill or damage cancer cells so they cannot multiply. Side effects may include skin redness and soreness, and fatigue.

• Targeted therapies block proteins that signal the cancer cell to grow.

• Immunotherapies activate cells in the body to fight cancer.

• Chemotherapy is drug treatment that kills cancer cells or slows their growth. Most of the chemotherapy drugs used to treat melanoma do not cause major side effects, but you may experience some temporary side effects such as fatigue, nausea and hair loss.

• Palliative treatment seeks to improve quality of life without aiming to cure the cancer.
Looking after yourself

Cancer can cause physical and emotional strain. It’s important to try to look after your wellbeing as much as possible.

**Nutrition** - Eating healthy food can help you cope with treatment and side effects. A dietitian can help you manage special dietary needs or eating problems, and choose the best foods for your situation. Call Cancer Council 13 11 20 for a free copy of the *Nutrition and Cancer* booklet.

**Staying active** - Physical activity may help to reduce tiredness, improve circulation and elevate mood. The amount and type of exercise you do depends on what you are used to, how you feel, and your doctor’s advice. Cancer Council’s *Exercise for People Living with Cancer* booklet provides more information about the benefits of exercise, and outlines simple exercises that you may want to try.

**Complementary therapies** - These therapies are used with conventional medical treatments and increase your sense of control, decrease stress and anxiety, and improve your mood. Examples include massage, relaxation and acupuncture. Let your doctor know about any therapies you are using or thinking about trying. For more information, call Cancer Council 13 11 20 for a free copy of the *Understanding Complementary Therapies* booklet.

Alternative therapies are used instead of conventional medical treatments. These therapies, such as coffee enemas and magnet therapy, can be harmful.
Relationships with others
Having cancer can affect your relationships with family, friends and colleagues. This may be because cancer is stressful, tiring and upsetting, or as a result of more positive changes to your values, priorities, or outlook on life.

Give yourself time to adjust to what’s happening, and do the same for others. People may deal with the cancer in different ways, for example by being overly positive, playing down fears, or keeping a distance. It may be helpful to discuss your feelings with each other.

Sexuality, intimacy and fertility
Cancer can affect your sexuality in physical and emotional ways. The impact of these changes depends on many factors, such as treatment and side effects, your self confidence, and if you have a partner. Although sexual intercourse may not always be possible, closeness and sharing can still be part of your relationship.

If you are able to have sex, you may be advised to use certain types of contraception to protect your partner or avoid pregnancy for a certain period of time. Your doctor will talk to you about the precautions to take. They will also tell you if treatment will affect your fertility permanently or temporarily. If having children is important to you, talk to your doctor before starting treatment.

Call Cancer Council 13 11 20 for free copies of Sexuality, Intimacy and Cancer, Fertility and Cancer and Emotions and Cancer, or download the booklets from the website.
Changing body image
Skin cancer treatments such as surgery and skin flaps or grafts often leave noticeable scars. In most cases your doctor will do everything possible to make the scar less noticeable. Scars will fade with time.

You may feel concerned with the appearance of the scar, especially if it’s on your face. Various cosmetics are available to help conceal the scar. Your hairstyle or clothing might also cover scarring.

Give yourself time to adapt to any changes. Try to see yourself as a whole person (body, mind and personality) instead of focusing on the parts that have changed. Many people find it helps to talk things through with a counsellor, friend or family member.

Life after treatment
For most people, the cancer experience doesn’t end on the last day of treatment. Life after cancer treatment can present its own challenges. You may have mixed feelings when treatment ends, and worry if every ache and pain means the cancer is coming back.

Some people say that they feel pressure to return to ‘normal life’, but they don’t want life to return to how it was before cancer. Take some time to adjust to the physical and emotional changes, and re-establish a new daily routine at your own pace.

Cancer Council 13 11 20 can help you connect with other people who have had cancer, and provide you with information about the emotional and practical aspects of living well after cancer.
Dealing with feelings of sadness

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, you may be experiencing depression. This is quite common among people who have had cancer.

Talk to your GP, as counselling or medication – even for a short time – may help. Some people are able to get a Medicare rebate for sessions with a psychologist. Ask your doctor if you are eligible. Your local Cancer Council may also run a counselling program.

The organisation beyondblue has information about coping with depression and anxiety. Go to www.beyondblue.org.au or call 1300 224 636 to order a fact sheet.

After treatment: follow-up

After your treatment, you will need regular check-ups to confirm that the cancer hasn’t come back.

Check-ups will become less frequent if you have no further problems. Between follow-up appointments, let your doctor know immediately of any health problems.

Follow-up will vary depending on the type of melanoma you have. Your doctor will recommend regular skin checks, including the level of monitoring needed for your particular melanoma. Check with your doctor if you are unsure of your follow-up plan.
What if melanoma returns?
For some people melanoma does come back after treatment, which is known as a recurrence. People who have had one melanoma have more than five times the risk of developing another melanoma compared with the average person of their age.

During your regular follow-up appointments, your doctor will check your melanoma site and lymph nodes to check for any potential regrowth or spread. Your doctor will also check the rest of your skin surface for detection of another melanoma.

It is important to be familiar with your skin, check it for changes (self-examination) and visit your doctor for regular check-ups.

How much sun is enough?
Some exposure to the sun is healthy. Vitamin D, which is essential to develop and maintain healthy bones and muscle function, is produced in the body when skin is exposed to UV radiation in sunlight. However, after treatment for melanoma it is important to limit your exposure to the sun’s UV radiation and use a combination of sun protection measures during sun protection times (when the UV index is 3 or above). See page 46. Your family members are also at increased risk of melanoma and other skin cancers and will need to protect their skin from UV radiation.

UV levels vary across Australia, according to the location, the season and the time of day. This means the amount of time you need to be in the sun to make enough vitamin D will vary.
Check the SunSmart UV Alert for daily sun protection times, available as a free SunSmart app, online (sunsmart.com.au or bom.gov.au/weather/uv), in the weather section of newspapers, or as a free website widget.

**How much sun is enough?**

<table>
<thead>
<tr>
<th>Period</th>
<th>Summer</th>
</tr>
</thead>
<tbody>
<tr>
<td>June–July</td>
<td>2–3 hours per week*</td>
</tr>
<tr>
<td>May–August</td>
<td>2–3 hours per week*</td>
</tr>
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*This should not be all at once but rather a total of 2–3 hours over the course of the week.*
Protecting your skin from the sun

During sun protection times, use a combination of protective measures to protect your skin from the sun:

- Wear clothing that covers your shoulders, neck, arms, legs and body. Choose closely woven fabric.
- Use a SPF 30 or higher broad spectrum and water resistant sunscreen. Apply sunscreen 20 minutes before going out and reapply every two hours, or after swimming or any activity that causes you to sweat or rub it off.
- Wear a broad-brimmed hat that shades your face, neck and ears. Adult hats should have at least a 7.5cm brim.
- Use shade from trees, umbrellas, buildings or any type of canopy. UV radiation is reflective and bounces off surfaces, such as concrete, snow, water and sand. If you can see the sky, even if the direct sun is blocked, the shade will not completely protect you from UV.
- Protect your eyes with sunglasses that meet the Australian Standard AS 1067. Wrap-around styles are best. Sunglasses should be worn all year round.
- Babies and children should be protected from direct exposure to sunlight. Use shade, umbrellas, clothing and hats to protect them whenever the UV Index is 3 or above. Apply SPF 30 or higher sunscreen to the areas of a baby’s or child’s skin that cannot be covered with clothing, such as the face and the back of the hands.
- Do not use solariums, tanning beds or sun lamps, which give off UV radiation.
Seeking support

Cancer may cause you to experience a range of emotions, such as fear, sadness, anxiety, anger or frustration. It can also cause practical and financial problems.

Some people diagnosed with localised melanoma may not feel they need practical, financial or emotional support. However, at any stage of your treatment you may want to contact Cancer Council 13 11 20, or your hospital social worker, to discuss which services are available in your area and if you are eligible to receive them.

Practical and financial help

There are many services that can help deal with practical or financial problems caused by the cancer. Benefits, pensions and programs can help pay for prescription medicines, transport costs or utility bills. Home care services, aids and appliances can also be arranged to help make life easier.

Ask the hospital social worker which services are available in your local area and if you are eligible to receive them.

If you need legal or financial advice, you should talk to a qualified professional about your situation. Cancer Council offers free legal and financial services in some states and territories for people who can't afford to pay – call 13 11 20 to ask if you are eligible.
Talk to someone who’s been there

Coming into contact with other people who have had similar experiences to you can be beneficial. You may feel supported and relieved to know that others understand what you are going through and that you are not alone.

People often feel they can speak openly and share tips with others who have gone through a similar experience.

You may find that you are comfortable talking about your diagnosis and treatment, relationships with friends and family, and hopes and fears for the future. Some people say they can be even more open and honest in these support settings because they aren’t trying to protect their loved ones.

Types of support

There are many ways to connect with others for mutual support and to share information. This includes:

- **face-to-face support groups** – often held in community centres or hospitals
- **telephone support groups** – facilitated by trained counsellors
- **peer support programs** – match you with someone who has had a similar cancer experience, e.g. Cancer Connect.
- **online forums** – such as www.cancerconnections.com.au.

Talk to your nurse, social worker or Cancer Council about what is available in your area. You can also contact Melanoma Patients Australia on 1300 88 44 50 for information about support groups.
You may be reading this booklet because you are caring for someone with cancer. Being a carer can be stressful and cause you much anxiety. Try to look after yourself – 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 and cancer education programs are open to carers, as well as people with cancer. Support groups and programs can offer valuable opportunities to share experiences and ways of coping.

Support services such as Home Help, Meals on Wheels or visiting nurses can help you in your caring role. There are also many groups and organisations that can provide you with information and support, such as Carers Australia, the national body representing carers in Australia. Carers Australia works with the Carers Associations in each of the states and territories. Phone 1800 242 636 or visit www.carersaustralia.com.au for more information and resources.

You can also call Cancer Council 13 11 20 to find out more about carers’ services and get a copy of the Caring for Someone with Cancer booklet.

My family members don’t really understand what it’s like to have cancer thrown at you, but in my support group, I don’t feel like I have to explain. Sam
Useful websites

The internet has many useful resources, although not all websites are reliable. The websites listed below are good sources of support and information.

**Australian**

Cancer Council Australia ........................................ www.cancer.org.au
Cancer Australia........................................www.canceraustralia.gov.au
Cancer Connections ...................... www.cancerconnections.com.au
Carers Australia ...................................... www.carersaustralia.com.au
HealthInsite ........................................ www.healthinsite.gov.au
Beyondblue ....................................... www.beyondblue.org.au
Department of Health ...................................... www.health.gov.au
Healthdirect Australia .................................. www.healthdirect.gov.au
Department of Human Services ........ www.humanservices.gov.au

**Australian and New Zealand**

Melanoma Trials Group ........................................ www.anzmtg.org
Melanoma Institute Australia .................... www.melanoma.org.au
Melanoma Patients Australia .......... www.melanomapatients.org.au
Melanoma WA ........................................ www.melanomawa.org.au
Peter MacCallum Cancer Centre ..... www.petermac.org/patient-care/ cancer-type/skin-cancers-including-melanoma
Sunsmart ............................................. www.sunsmart.com.au
The Dark Side of Tanning ..................... www.darksideoftanning.com.au
International

Macmillan Cancer Support.................................www.macmillan.org.uk
Cancer Research UK....................................www.cancerresearch.org.uk
American Cancer Society........................................www.cancer.org
US National Cancer Institute........................................www.cancer.gov
Melanoma Patients Information Page (US)...............www.mpip.org
Question checklist

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

- How thick is the melanoma?
- Has the melanoma spread?
- What treatment do you recommend and why?
- Will a doctor who specialises in melanoma treat me?
- Are there other treatment choices for me? If not, why?
- What are the risks and possible side effects of each treatment?
- What are the chances I will get lymphoedema as a result of surgery?
- How long will treatment take? Will I have to stay in hospital?
- Will the treatment affect me sexually or physically? Will I be able to do normal things?
- Is there anything that can be done to help control the side effects?
- How will I know if the treatment is working?
- How much will treatment cost?
- Will I have a lot of pain with the treatment? If I do, what will be done about this?
- Are the latest tests and treatments for this type of cancer available in this hospital?
- Are there any clinical trials of new treatments? Will I be eligible to participate in any of these trials?
- How frequently will I have check-ups?
- Are there any complementary therapies that might help me?
- Is my melanoma hereditary (one that runs in families)?
- Is there anyone else with melanoma I can speak to?
acral lentiginous melanoma
A rare type of cutaneous melanoma that occurs on the palms of the hands, soles of the feet or under the nails.

adjuvant treatment
A treatment given with or shortly after another treatment to enhance its effectiveness.

advanced cancer
Cancer that has spread deeply into the surrounding tissues or away from the original site (metastasised) and is less likely to be cured.

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

basal cell
One of the three types of cells that make up the skin’s top layer (epidermis).

basal cell carcinoma (BCC)
A type of skin cancer that develops in the basal cells of the top layer (epidermis) of the skin.

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.

Breslow thickness
A description of a melanoma’s thickness in millimetres, which is classified into four categories: less than 1 mm, 1–2 mm, 2.1–4 mm or greater than 4 mm.

cells
The basic building blocks of the body. A human is made of billions of cells that are adapted for different functions.

chemotherapy
The use of cytotoxic drugs to treat cancer by killing cancer cells or slowing their growth. Chemotherapy can also be used to reduce the size of the cancer and help lessen the pain.

Clark level
A number (1–5) that describes how far a melanoma has penetrated into the skin.

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

cutaneous melanoma
Melanoma that starts in the skin.

dermatologist
A doctor who specialises in the prevention, diagnosis and treatment of skin conditions, including melanoma.

dermis
The lower layer of the two main layers that make up the skin.

epidermis
The top, outer layer of the two main layers that make up the skin.

immunotherapy
Treatments that stimulate the body’s immune system to fight the melanoma. Also called biological therapies.
lentigo maligna melanoma
A type of cutaneous melanoma that develops in a lentigo maligna (Hutchinson’s melanotic freckle).

localised melanoma
A melanoma that has not spread from its starting point to lymph nodes or other organs.

lymph nodes
Small, bean-shaped structures forming part of the lymphatic system. Also called lymph glands.

lymph vessels
Thin tubes that drain the body’s tissue fluid (lymph) from all over the body to lymph nodes.

lymphatic system
A network of tissues, capillaries, vessels and nodes that removes excess fluid from tissues, absorbs fatty acids and transports fat, and produces immune cells.

lymphoedema
Swelling caused by a build-up of lymph fluid.

lymphscintigraphy
A procedure in which a radioactive substance is injected into the skin to identify sentinel lymph nodes.

malignant
Cancer. Malignant cells can spread (metastasise) and can eventually cause death if they cannot be treated.

melanin
Brown pigment that gives the skin its colour.

melanocyte
One of the three types of cells that make up the skin’s epidermis. Melanocytes produce melanin.

melanoma
Cancer of the melanocytes.

melanoma in-situ
An early melanoma that has not penetrated into deeper tissue (the dermis).

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

mole
See naevus.

naevus (plural: naevi)
A small dark spot on the skin that arises from skin cells called melanocytes. Also called a mole.

nodular melanoma
A type of cutaneous melanoma. Makes up about 10% of melanomas, and is often more aggressive.

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.

primary site
The part of the body where the cancer first developed.

prognosis
The expected 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. Also used to control cancer pain.

**risk factor**
A substance or condition that increases an individual's chance of developing a particular type of cancer.

**sentinel node**
The first lymph node to receive lymph fluid directly from a tumour.

**skin flap**
Nearby skin or fatty tissue which is pulled over the wound and stitched.

**skin graft**
A piece of skin taken from one part of the body to another to cover a wound.

**squamous cell**
One of the three types of cells that make up the skin's top layer (epidermis).

**squamous cell carcinoma (SCC)**
A type of skin cancer that begins in the squamous cells of the top layer (epidermis) of the skin.

**stage**
The extent of a cancer and whether the disease has spread from the original site to other parts of the body.

**superficial spreading melanoma**
The most common type of cutaneous melanoma, making up almost 50% of all cases.

**targeted therapies**
A form of cancer treatment that selectively targets proteins on the surface of cancer cells. Chemotherapy or radiotherapy affects all cells, but targeted therapies avoid damage to normal cells.

**tumour**
A new or abnormal growth of tissue on or in the body. A tumour may be benign or malignant.

**ultraviolet (UV) radiation**
The part of sunlight that causes tanning, sunburn and skin damage. It is also produced by solariums, tanning lamps and sunbeds. UV radiation cannot be seen or felt.

**wide local excision**
A surgical procedure to remove a melanoma with some of the healthy tissue around it.

**References**


Can’t find what you’re looking for?

How you can help

At Cancer Council we’re dedicated to improving cancer control. As well as funding millions of dollars in cancer research every year, we advocate for the highest quality care for cancer patients and their families. We create cancer-smart communities by educating people about cancer, its prevention and early detection. We offer many free practical and support services for people and families affected by cancer. All these programs would not be possible without community support, great and small.

Join a Cancer Council event: Join one of our community fundraising events such as 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 gift, large or small, makes a meaningful contribution to our work in supporting people with cancer and their families now and in the future.

Buy Cancer Council sun protection products: Every purchase helps you prevent cancer and contribute financially to our goals.

Help us speak out for a cancer-smart community: We are a leading advocate for cancer prevention and improved patient services. You can help us speak out on important cancer issues and help us improve cancer awareness by living and promoting a cancer-smart lifestyle.

Join a research study: Cancer Council funds and carries out research investigating the causes, management, outcomes and impacts of different cancers. You may be able to join a study.

To find out more about how you, your family and friends can help, please call your local Cancer Council.
Being diagnosed with cancer can be overwhelming. At Cancer Council, we understand it isn’t just about the treatment or prognosis. Having cancer affects the way you live, work and think. It can also affect our most important relationships.

When disruption and change happen in our lives, talking to someone who understands can make a big difference. Cancer Council has been providing information and support to people affected by cancer for over 50 years.

Calling 13 11 20 gives you access to trustworthy information that is relevant to you. Our cancer nurses are available to answer your questions and link you to services in your area, such as transport, accommodation and home help. We can also help with other matters, such as legal and financial advice.

If you are finding it hard to navigate through the health care system, or just need someone to listen to your immediate concerns, call 13 11 20 and find out how we can support you, your family and friends.

Cancer Council services and programs vary in each area.
13 11 20 is charged at a local call rate throughout Australia (except from mobiles).