



Canadian Cancer Society Société canadienne du cancer

Melanoma

Understanding your diagnosis



Let's Make Cancer History

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Melanoma

Understanding your diagnosis

When you first hear that you have cancer you may feel alone and afraid. You may be overwhelmed by the large amount of information you will have to take in and the decisions you will need to make.

The introductory information in this brochure can help you and your family take the first step in learning about melanoma. A better understanding may give you a sense of control and help you work with your healthcare team to choose the best care for you.

What is cancer?

Cancer is a disease that starts in our cells. Our bodies are made up of millions of cells, grouped together to form tissues and organs such as muscles and bones, the lungs and the liver. Genes inside each cell order it to grow, work, reproduce and die. Normally, our cells obey these orders and we remain healthy.

But sometimes the instructions in some cells get mixed up, causing them to behave abnormally. These cells grow and divide uncontrollably. After a while, groups of abnormal cells form lumps, or tumours.

Tumours can be either *benign* (non-cancerous) or *malignant* (cancerous). Benign tumour cells stay in one place in the body and are not usually life-threatening.

Malignant tumour cells are able to invade nearby tissues and spread to other parts of the body. Cancer cells that spread to other parts of the body are called *metastases*.

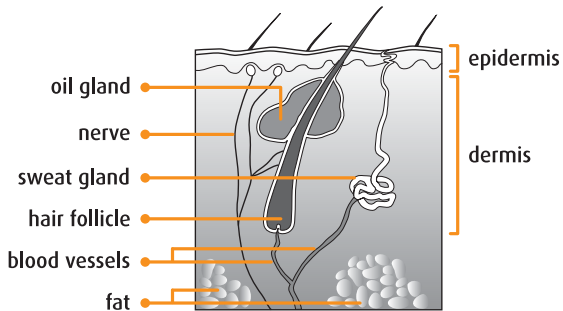
The first sign that a malignant tumour has spread (metastasized) is often swelling of nearby lymph nodes, but cancer can spread to almost any part of the body. It is important to find and treat malignant tumours as early as possible.

Cancers are named after the part of the body where they start. For example, melanoma that starts in the skin but spreads to the liver is called melanoma with liver metastases.

What is melanoma?

Melanoma is a cancer that most often starts in the skin. The skin is the body's largest organ. It protects the organs inside your body from injury, infection, heat and ultraviolet light from the sun. The skin helps control your body temperature and gets rid of waste materials through the sweat glands. It also makes vitamin D and stores water and fat.

The skin has two main layers. The layer at the surface is called the *epidermis*. Below the epidermis is the inner layer, the *dermis*.



Deep in the epidermis are cells called *melanocytes*. Melanocytes make melanin, which gives colour to your skin. When skin is exposed to the sun, the melanocytes make more melanin and cause the skin to tan or darken. Sometimes melanocytes cluster together and form moles (called *nevi*). Moles are common and are usually not cancerous.

The dermis contains nerves, blood vessels, sweat glands, oil glands and hair follicles.

There are three types of skin cancer.*

- *Squamous cell skin cancer* starts in the squamous cells (thin flat cells found on the surface of the skin).
- *Basal cell skin cancer* starts in the basal cells (round cells that lie under the squamous cells).
- *Melanoma* starts in the melanocytes.

Melanoma is less common than squamous cell and basal cell skin cancers (sometimes called *non-melanoma skin cancers*).

Melanoma can start in other places in the body where melanocytes are found, such as the eyes, the mouth, the vagina or under the fingernails. These types of melanoma are rare.

Causes of melanoma

There is no single cause of melanoma, but some factors increase the risk of developing it:

- exposure to ultraviolet radiation from the sun or from artificial UV light (such as tanning beds and sun lamps)
- unusual moles (called *dysplastic nevi*) - they may be irregular in shape or larger or darker than normal moles
- lots of moles (more than 50)
- light skin, eyes or hair
- skin that burns or freckles easily
- personal history of melanoma - a person who has had melanoma before has an increased chance of getting the disease again

* The information in this brochure is about melanoma. Non-melanoma skin cancers are less serious and are treated differently. For information about non-melanoma skin cancers, please contact our *Cancer Information Service* at 1 888 939-3333.

- family history of melanoma in one or more relative
- severe sunburn during childhood

Increased exposure to ultraviolet radiation is the most common risk factor for melanoma. People who work, play or exercise in the sun for long periods of time are at greater risk.

Some people develop melanoma without any of these risk factors.

Signs of melanoma

Most often the first sign of melanoma is a new, unusual-looking growth on the skin. Or you may notice a change in a mole that you have had for a long time. Melanoma can start anywhere on your body, but it usually starts in areas of the skin that are exposed most often to the sun – the head, face, neck, hands, arms and legs.

All melanomas look different. Signs of a melanoma include a mole that:

- is asymmetrical in shape (shape of one half does not match shape of other half)
- has irregular border or jagged edges
- is more than 1 colour (may be shades of black, brown or blue and sometimes white, grey, red or pink)
- is more than 6 mm in diameter (bigger than a pencil eraser)
- is itchy
- changes in texture (becomes hard or lumpy)
- oozes or bleeds

Other health problems can cause some of the same symptoms. Testing may be needed to make a diagnosis.

Diagnosing melanoma

After taking your medical history and completing a physical examination, your doctor may suspect you have melanoma. To confirm the diagnosis, you will have a biopsy. The biopsy results may also be used to “stage” the cancer.

Biopsy: A biopsy is necessary to make a definite diagnosis of melanoma. The doctor will try to remove all of the unusual-looking growth or mole. This type of biopsy is called an *excisional biopsy*. If the doctor cannot remove all of the growth, then a sample of the tissue will be removed. This is called an *incisional biopsy*. The biopsy can be done in the doctor’s office or you may go to the hospital as an outpatient (you will not stay overnight). A local anesthetic (freezing) will be used to numb the area. Stitches may be needed to close the cut.

The tissue sample is checked under a microscope. If the cells are cancerous, they may be studied further to see how fast they are growing.

Further testing: If the biopsy shows that the melanoma may have spread deeper into the skin, your doctor may order other tests such as a biopsy of nearby lymph nodes, imaging studies or blood tests.

Staging

Once a definite diagnosis of cancer has been made and your healthcare team has the information it needs, the cancer will be given a stage.

The cancer stage describes the tumour size and tells whether it has spread beyond the place where it started to grow.

For melanoma, there are five stages.

Stage	Description
0	The melanoma has not spread in the skin. It is in the top layer of the skin. Stage 0 is sometimes called <i>in situ</i> .
1	The melanoma is in only the surface layers of the skin and has not spread to nearby lymph nodes: <ul style="list-style-type: none">• It is smaller than 1 mm, with or without ulceration (a hole in the skin that shows the layer underneath). OR <ul style="list-style-type: none">• It is 1–2 mm, without ulceration.
2	The melanoma is in only the surface layers of the skin and has not spread to nearby lymph nodes: <ul style="list-style-type: none">• It is 1–2 mm, with ulceration. OR <ul style="list-style-type: none">• It is greater than 2 mm, with or without ulceration.
3	The melanoma cells have spread to surrounding skin or to one or more nearby lymph nodes.
4	The melanoma cells have spread to other skin areas, to distant lymph nodes or to other parts of the body, such as the lung.

It is important to know the stage of the cancer. This information helps you and your healthcare team choose the best treatment for you.

Treatments for melanoma

Your healthcare team will consider your general health and the type and stage of the cancer to recommend what treatments will be best for you. The thickness of the melanoma and whether it has spread will also help guide the treatment decision. You will work together with your healthcare team to make the final treatment choices. Talk to them if you have questions or concerns.

Treatments affect everyone in different ways. It's hard to predict which side effects you will have. Your healthcare team will tell you what to expect with each treatment. They will also let you know what side effects you should report right away and which ones you can wait to tell them about at your next appointment. If you notice any side effects or symptoms that you did not expect, talk to a member of your healthcare team as soon as possible.

Patients often worry about the side effects of cancer treatment. However, side effects can often be well managed and even prevented with medicine. Be open with your healthcare team. Tell them your concerns and ask questions. They will help you get the care and information you need.

For melanoma, you might receive one or more of the following treatments.

Surgery: A decision to have surgery depends on the size and thickness of the melanoma and where it is. Most tumours can usually be removed using a local anesthetic (freezing) to numb the area. If the tumour is large, a skin graft may be needed. The doctor will take a piece of skin from another part of your body (such as the thigh or behind the ear) to replace the skin that was removed. This may be done under a local anesthetic or under a general anesthetic (you will be unconscious). You may stay in the hospital for several days after the surgery.

The doctor may be able to completely remove a very thin melanoma during the biopsy and you may not need any more surgery. If the melanoma was not completely removed during the biopsy, then the doctor will remove the rest of the melanoma as well as some healthy tissue (called a *margin*) around the tumour.

During surgery, the doctor may also remove some nearby lymph nodes to see if the cancer has spread. This is called a *lymph node dissection*. You may be offered a newer procedure called *sentinel lymph node biopsy*, which may mean fewer lymph nodes are removed.

If lymph nodes are removed, lymph fluid may build up and cause swelling. This is called *lymphedema*. Lymphedema can

happen soon after surgery, or months or even years later.

Chemotherapy: Chemotherapy may be given as pills or by injection. Chemotherapy drugs interfere with the ability of cancer cells to grow and spread, but they also damage healthy cells. Although healthy cells can recover over time, you may experience side effects from your treatment like nausea, vomiting, loss of appetite, fatigue, hair loss and an increased risk of infection. Chemotherapy is not used very often to treat melanoma. For melanoma on a leg or arm, chemotherapy drugs may be put directly into the bloodstream of that limb. This is called *isolated limb perfusion*. Isolated limb perfusion may not be available in all cancer centres.

Biological therapy: Biological therapy (sometimes called *immunotherapy*) is a treatment that uses your immune system to fight cancer or to help control side effects of other cancer treatments. Natural body substances or drugs made from natural body substances are used to boost the body's own defences against illness. Biological therapy can target specific cells without damaging healthy cells. Side effects of biological therapy can be mild or severe, depending on the type of treatment. They may include rashes or swelling where the treatment is injected or flu-like symptoms, such as fever and chills. Whether severe or mild, side effects usually go away when the treatment is over.

Radiation therapy: In *external beam radiation therapy*, a large machine is used to carefully aim a beam of radiation at the tumour. The radiation damages the cells in the path of the beam - normal cells as well as cancer cells.

Side effects will be different depending on what part of the body receives the radiation. You may feel more tired than usual, have hair loss in the treatment area, or notice changes to the skin (it may be red, dry or tender) where the treatment was given.

Radiation therapy may be used to help control melanoma that has spread to other parts of the body. It can also help relieve pain or other symptoms.

Clinical treatment trials: Clinical treatment trials investigate new approaches to treating cancer, such as new drugs, new types of treatments or combinations of existing treatments. They are closely monitored to make sure that they are safe for the participants. Ask your doctor if there is a clinical trial suitable as a treatment option for you. You may benefit and so may future cancer patients.

Complementary therapies: Complementary therapies are used *together with* conventional treatments. More research is needed to understand if these therapies are effective and how they work.

Alternative therapies are used *instead of* conventional treatments. Alternative therapies haven't been tested for safety or effectiveness. It is still unknown whether they will harm you or be effective in the treatment of cancer.

If you are thinking about using a complementary or alternative therapy, it is important to find out as much as you can about the therapy and talk to your healthcare team. It's possible that the therapy might interfere with test results or regular treatments.

After treatment

Follow-up care helps you and your healthcare team monitor your progress and your recovery from treatment. At first, your follow-up care may be managed by one of the specialists from your healthcare team. Later on it may be managed by your family doctor.

The schedule of follow-up visits is different for each person. You might see your doctor more often in the first year after treatment, and less often after that.

People who have had melanoma have a chance of developing a new melanoma in the same area or on another part of the body. Learn how to examine your skin, know what to look for and do it regularly. Report any skin changes, lumps, swelling or other symptoms to your doctor without waiting for your next scheduled appointment.

Some side effects of treatment for melanoma can be long lasting, such as lymphedema.

Lymphedema is swelling in the arm, leg or other part of the body caused by a buildup of lymph fluid. This may happen if lymph nodes have been removed by surgery. It is difficult to predict who will get lymphedema. The risk is higher if you have had many lymph nodes removed.

Lymphedema can be a temporary or long-term condition. Often lymphedema causes only mild symptoms that can be controlled very well. Be sure to call your doctor if you notice any swelling, redness or signs of infection in the area close to where lymph nodes were removed.

The end of cancer treatment may bring mixed emotions. You may be glad the treatments are over and look forward to returning to your normal activities. But you could feel anxious as well. If you are worried about your treatment ending, talk to your healthcare team. They are there to help you through this transition period.

Living with cancer

There are many sources of help available for people with cancer and for their caregivers.

Your healthcare team: If you need practical help or emotional support, members of your healthcare team may be able to suggest services in your community or refer you to cancer centre staff or mental health professionals.

Family and friends: Those closest to you can be very supportive. Accept offers of help. When someone says “Let me know how I can help,” tell them what they can do. Maybe they can run errands, cook a meal or give you a ride to your doctor’s office.

People who have had a similar experience: Consider visiting a support group or talking with a cancer survivor in person, over the telephone or online. Talking with and learning from others who have had similar experiences can be helpful. Try more than one option to see which one suits you best.

Yourself: Try to stay positive. Staying positive is about figuring out how to deal with cancer in the best way that you can – and everyone will do this their own way. It doesn’t mean that you must seem happy or cheerful all the time or avoid talking or thinking about the difficulties of having cancer. But it can mean looking after yourself by finding relaxing, enjoyable activities that refresh you mentally, spiritually or physically.

What we do

The Canadian Cancer Society fights cancer by:

- doing everything we can to prevent cancer
- funding research to outsmart cancer
- empowering, informing and supporting Canadians living with cancer
- advocating for public policies to improve the health of Canadians
- rallying Canadians to get involved in the fight against cancer

Contact us for up-to-date information about cancer, our services or to make a donation.



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