Non-melanoma Skin Cancer

Understanding your diagnosis

1 888 939-3333 | cancer.ca
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 have to take in and the decisions you need to make.

“All I could hear was ‘cancer.’ I heard my doctor say something like, ‘We’re going to try and get the surgery done as soon as possible.’ I didn’t hear one word after that.”

The introductory information in this brochure can help you and your family take the first steps in learning about skin cancer. 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.

For more information

The information in this brochure provides an introduction to skin cancer. More in-depth information is available on cancer.ca. You can also call our Cancer Information Service at 1-888-939-3333 to learn more about cancer, diagnosis, treatment, support and the services we offer.
What is cancer?

Cancer is a disease that starts in our cells. Our bodies are made up of trillions 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. It’s important to find and treat malignant tumours as early as possible. In most cases, finding cancer early increases the chances of successful treatment.

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.

Cancers are named after the part of the body where they start. For example, cancer that starts in the skin but spreads to the lymph nodes is called skin cancer with lymph node metastases. Non-melanoma skin cancers are less likely to spread than other cancers.
What is non-melanoma skin cancer?

Skin cancer starts in the cells of 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 2 main layers – the epidermis and the dermis. The epidermis is the layer at the surface.

The epidermis is made up of 3 main types of cells:

- Basal cells are continually being made deep in the epidermis. Newly made round basal cells push the older cells toward the surface of the skin to become squamous cells.
- Squamous cells are old cells. As they move toward the skin’s surface, they become thin and flat.
- Melanocytes are also found deep in the epidermis, in between the basal cells. Melanocytes are cells that make melanin, which gives colour to your skin.
The dermis is the inner layer, below the epidermis. It contains nerves, blood vessels, sweat glands, oil glands and hair follicles.

Skin cancer can develop in any of the types of cells that make up the epidermis. The most common types of skin cancer are squamous cell cancer and basal cell cancer.* Both are known as non-melanoma skin cancer, and they can usually be treated successfully.

* The information in this brochure is about non-melanoma skin cancer (basal cell and squamous cell skin cancer). Melanoma is less common and is treated differently. For information about melanoma, see our brochure on melanoma skin cancer or contact our Cancer Information Service at 1-888-939-3333.
Diagnosing non-melanoma skin cancer

Your doctor may suspect you have non-melanoma skin cancer after taking your medical history and doing a physical examination. To confirm the diagnosis, you will have a biopsy. The biopsy results may also be used to “stage” the cancer and help plan treatment.

Signs of non-melanoma skin cancer: The first sign of skin cancer is usually a change on your skin, such as a new growth, a sore that doesn’t heal or a change in an old growth. Skin cancer can start anywhere on your body. It usually starts in areas of the skin that are exposed most often to the sun – the head, face, neck, hands, arms and legs.

Not all skin cancers look the same. Basal cell cancers often look like a bump or a small crater with a shiny or pearly surface. Squamous cell cancers are usually reddish and scaly. The most common signs of non-melanoma skin cancer include:

- a smooth, shiny, pale or waxy bump or crater
- a raised, solid red bump
- a sore that doesn’t heal
- a sore or bump that bleeds or develops a crust or a scab
- pink, red or brown patches that are rough and scaly and may become itchy or tender
- an area of the skin that appears blue, brown or black
Other health problems can cause some of the same signs. The process of diagnosis may seem long and frustrating, but it’s important for the doctor to rule out other possible reasons for a health problem.

**Biopsy:** A biopsy is necessary to make a definite diagnosis of skin cancer. The doctor removes all or part of the abnormal area of skin. The biopsy can be done in the doctor’s office, or you may go to the hospital as an outpatient (you do not stay overnight). A local anesthetic (freezing) is used to numb the area. There are several ways to do a biopsy:

- For an excisional biopsy, the doctor removes the entire lump or growth.
- For an incisional biopsy, the doctor removes only a sample of the lump because the tumour involves deeper layers of the skin and only part of it can be removed.
- For a punch biopsy, a sharp, hollow instrument is used to cut through all layers of the skin to get a sample of the abnormal area.
- For a shave biopsy, a sterilized razor blade or scalpel is used to slice off the top layers of skin (epidermis and uppermost part of the dermis).

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 skin cancer 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.

**Will I be okay?**

Most people with cancer want to know what to expect. Can they be cured?

A prognosis is your doctor’s best estimate of how cancer will affect you and how it will respond to treatment. A prognosis looks at many factors, including:

- the type, stage and grade of cancer
- the location of the tumour and whether it has spread
- your age, sex and overall health

Even with all this information, it can still be very hard for your doctor to say exactly what will happen. Each person’s situation is different.

Your doctor is the only person who can give a prognosis. Ask your doctor about the factors that affect your prognosis and what they mean for you.
**Staging**

Once a definite diagnosis of cancer has been made, the cancer is given a stage. This information helps you and your healthcare team choose the best treatment for you.

The cancer stage describes the tumour size and tells whether it has spread.

For squamous and basal cell skin cancer (non-melanoma), there are 5 stages.*

<table>
<thead>
<tr>
<th>Stage</th>
<th>Description</th>
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<tbody>
<tr>
<td>0</td>
<td>Cancer cells are present but in only a small area in the surface layer of the skin. Stage 0 squamous cell cancer is also called carcinoma in situ.</td>
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<tr>
<td>1</td>
<td>The tumour is 2 cm across or smaller but has not spread.</td>
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<tr>
<td>2</td>
<td>The tumour is larger than 2 cm across but has not spread.</td>
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<tr>
<td>3</td>
<td>The cancer has spread below the skin to one or more of cartilage, muscle, bone or a nearby lymph node.</td>
</tr>
<tr>
<td>4</td>
<td>The cancer has spread even more deeply to several lymph nodes or to other parts of the body.</td>
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*This table summarizes the stages of non-melanoma skin cancer according to the Union for International Cancer Control (UICC) and the American Joint Committee on Cancer (AJCC). For more in-depth information, visit cancer.ca.
Treatments for non-melanoma skin cancer

Your healthcare team considers your general health and the type and stage of the cancer to recommend the best treatments for you. You’ll work together with your healthcare team to make the final treatment choices. Talk to them if you have questions or concerns.

Sometimes all of the non-melanoma skin cancer is removed during the biopsy, and you may not need any more treatment. If the cancer was not completely removed during the biopsy, you might receive one or more of the following treatments.

**Surgery:** A decision to have surgery depends on the size of the tumour and where it is. During the operation, all or part of the tumour and some healthy tissue around the tumour is removed. Most tumours can be removed using a local anesthetic (freezing) to numb the area. If the tumour is large, a skin graft may be needed. The doctor uses skin from another part of your body (such as the thigh or behind the ear) to replace the skin that was removed. This is usually done under local anesthetic, but sometimes it’s done under general anesthetic (you will be unconscious). You may stay in the hospital for several days after the surgery.
Surgery for skin cancer can be done in several different ways.

- **Excisional skin surgery:** The surgeon removes the entire tumour and a margin of healthy tissue around it.

- **Curettage and electrodesiccation:** The surgeon removes the tumour by scraping it with a curette (a sharp tool shaped like a spoon). The area is then treated with an electric current (electrodesiccation) to destroy any remaining cancer cells and to control bleeding.

- **Mohs surgery:** Mohs surgery is a special surgical technique used to remove a tumour layer by layer. The layers are examined under a microscope right away. The surgeon continues to shave away the tissue until it is completely free of cancer cells.

If there is concern that the cancer has spread or will spread, all the lymph nodes near the tumour are removed. This is called a lymph node dissection. This is more likely to be done with squamous cell carcinoma, which can spread if it's aggressive or it's not treated quickly.

After surgery, you may have some pain and swelling. This is temporary and can be controlled.
Biological therapy: Biological therapy (sometimes called immunotherapy) uses your immune system to fight cancer or to help control side effects of cancer treatments. Natural body substances or drugs made from natural body substances are used to boost the body’s own defences against illness. A topical cream may be used to treat small and thin skin cancers. You’ll notice some redness or crusting of the skin where the cream is applied.

Radiation therapy: Radiation may be used for skin cancer, usually if surgery is not possible. 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.

Radiation side effects depend on what part of the body receives the radiation. You may notice changes to the skin (it may be red or tender) or hair loss where the treatment was given.

Cryosurgery: Cryosurgery (using extreme cold to treat tumors) may be used for small, superficial, well-defined tumours.

Photodynamic therapy: Photodynamic therapy (using drugs and light to kill cancer cells) is a newer treatment for skin cancer. Photodynamic therapy may be used as an alternative to surgery for a large tumour that is not too deep or where there are several cancers in an area.
Chemotherapy: Chemotherapy is not often used to treat skin cancer. If chemotherapy is used, it’s most often a medicated cream or lotion that is applied directly to the skin. This is called topical chemotherapy. The treatment may make your skin tender, red and swollen.

For more information on treatment, you may want to read our booklets Chemotherapy and Other Drug Therapies and Radiation Therapy.

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

Our booklet Clinical Trials has more information, including how to find a clinical trial.

Complementary therapies: Complementary therapies – for example, massage therapy or acupuncture – are used together with conventional cancer treatments, often to help ease tension and stress as well as other side effects of treatment. They don’t treat the cancer itself. 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 enough for safety or effectiveness. Using alternative treatments alone for cancer may have serious health effects.

If you’re thinking about using a complementary or alternative therapy, 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 other treatments.

*Our booklet* *Complementary Therapies* has more information.

**Side effects of treatment:** Some cancer treatments cause side effects, such as fatigue or nausea. Because treatments affect everyone differently, it’s hard to predict which side effects – if any – you may have.

Side effects can often be well managed and even prevented. If you’re worried about side effects, tell your healthcare team about your concerns and ask questions. They can tell you which side effects you should report right away and which ones can wait until your next appointment.

If you notice any side effects or symptoms that you didn’t expect, talk to a member of your healthcare team as soon as possible. They can help you get the care and information you need.
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. After treatment has ended, you should report new signs and symptoms that don’t go away to your doctor without waiting for your next scheduled appointment.

People who’ve had skin cancer have a higher chance of developing skin cancer again 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 signs to your doctor right away.

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 might feel anxious as well. If you are worried about the end of your treatment, talk to your healthcare team. They’re there to help you through this transition period.
**Self-image and sexuality**: It’s natural to be concerned about the effects of skin cancer and its treatment on your self-image. You may be worried about how your body looks and possible scarring after treatment, about having sex with a partner or that you may be rejected. It may help to talk about these feelings with someone you trust. Your doctor can also refer you to specialists and counsellors who can help you with the emotional side effects of skin cancer treatment.

*Our booklet* *Sexuality and Cancer* has more detailed information.

**Living with cancer**

*Our booklet* *Living with Cancer* has more detailed information and resources.

Many sources of help are available for people with cancer and 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**: People 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’ve had similar experiences: Talking with and learning from others who’ve had similar experiences can be helpful. Consider visiting a support group or talking with a cancer survivor in person, over the telephone or online. Try more than one option to see which one works best for you.

Yourself: Coping well with cancer doesn’t mean that you have to be happy or cheerful all the time. But it can mean looking after yourself by finding relaxing, enjoyable activities that refresh you mentally, spiritually or physically. Take some time to find coping strategies to help you through this experience. You may also want to talk to a counsellor for more help.

Talking to someone who’s been there
If you would like to talk to someone who’s had a similar cancer experience, we can help. Let us connect you with a volunteer who can listen, provide hope, offer encouragement and share ideas for coping – all from the unique perspective of someone who’s “been there.”

To find out more about what’s available in your area, you can:
• Call us toll-free Monday to Friday at 1-888-939-3333 (TTY 1-866-786-3934).
• Email info@cis.cancer.ca.
• Visit cancer.ca.

Want to connect with someone online?
If you’d like to connect with someone online, join our online community, CancerConnection.ca. There are discussions and groups that may interest you, and you’ll find caring, supportive people there.
What causes non-melanoma skin cancer?

There is no single cause of non-melanoma skin cancer, but some factors increase the risk of developing it. Some people can develop skin cancer without any known risk factors, while others who have these factors do not get it.

Risk factors for non-melanoma skin cancer include:

- exposure to radiation from the sun or from artificial UV light (such as tanning beds or sun lamps)
- light skin, eyes or hair
- skin that burns or freckles easily
- having had skin cancer before
- having had radiation therapy in the past
- exposure to arsenic
- workplace exposure to certain petroleum products, such as coal and shale
- severe skin damage, including burns or sunburns
- having had intense exposures to the sun that resulted in sunburns at an early age
- having a disease that makes the skin sensitive to the sun, such as xeroderma pigmentosum, albinism or basal cell nevus syndrome
- having a weakened immune system
- having a precancerous skin condition, such as actinic keratosis, arsenic keratosis or Bowen’s disease
Canadian Cancer Society
We’re here for you.

When you have questions about treatment, diagnosis, care or services, we will help you find answers.

**Call our toll-free number** 1 888 939-3333.

Ask a trained cancer information specialist your questions about cancer. Call us or email info@cis.cancer.ca.

Connect with people online to join discussions, get support and help others. Visit CancerConnection.ca.

Browse Canada’s most trusted online source of information on all types of cancer. Visit cancer.ca.

Our services are free and confidential. Many are available in other languages through interpreters.

Tell us what you think
Email cancerinfo@cancer.ca and tell us how we can make this publication better.
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 and our services or to make a donation.