MELANOMA CANADA

Helping You Understand Cutaneous Squamous Cell Carcinoma (cSCC)

A Patient Guide

WATCH OUR cSCC VIDEO

This guide is provided free of charge by Melanoma Canada.

Contents

Acknowledgments

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- **Dr. Cheryl Rosen, MD, FRCPC**, Head, Division of Dermatology Toronto Western Hospital and University Health Network Hospitals, Professor University of Toronto
- **Dr. Julia Carroll, FRCPC** – Compass Dermatology, Toronto, ON

Get to Know Your Skin

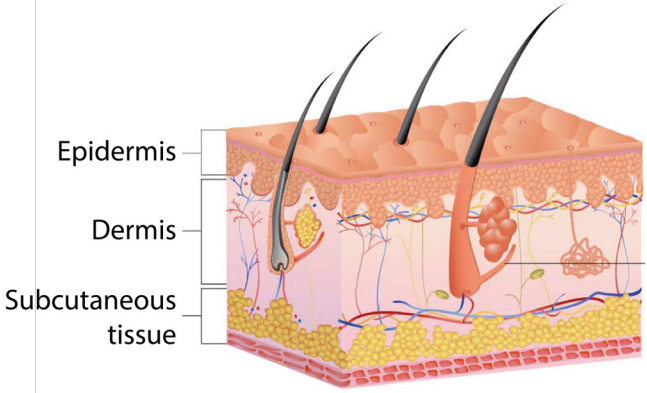
Receiving a diagnosis of cutaneous Squamous Cell Carcinoma (cSCC) can be upsetting and concerning. It often helps to have information to answer some of the questions about your diagnosis. Understanding the importance and function of the layers of skin may help you to understand cSCC, how it develops, and how you can protect your skin in the future.

The importance and function of your skin

Your skin is your body's largest organ and plays an important role in your health. Skin provides a protective layer that helps to defend and protect the body against injuries and infections. Your skin also performs many other important tasks such as preventing your body from losing water, regulating the body's heat, synthesizing vitamin D, and protecting you from ultraviolet (UV) radiation damage from the sun or artificial sources such as tanning beds.

Layers of the skin

Your skin has three layers. Each layer plays an important role and function in your body.



Adapted from Picture of the Skin, Human Anatomy by Matthew Hoffman, MD

The **epidermis** is the outermost layer of skin. It provides a protective barrier and creates the colour of our skin.

The **dermis** is below the epidermis and contains hair follicles, sweat glands, tough connective tissues, blood vessels and nerves.

The **subcutaneous tissue** is below the dermis and is made of fat and connective tissue.

What Is cSCC?

Cutaneous squamous cell carcinoma (cSCC) is a common form of skin cancer that develops in squamous skin cells that make up the outer (epidermis) layers of the skin. Squamous skin cells are more commonly called keratinocytes and cSCC may be called a keratinocyte cancer (carcinoma). The majority of cSCC develops as a result of long-term and prolonged exposure to the ultraviolet (UV) rays from the sun or from tanning beds or lamps. Consequently, cSCC is usually found on areas of the body exposed to UV rays such as the face, neck and the backs of the hands.

When cSCC is found very early and only in the epidermis, it is called cSCC in situ. It may also be called Bowen's disease or intraepidermal cSCC. The good news is it is much easier to treat effectively at this early stage. When cSCC is caught early and removed, over 90% of people are cured, and it rarely spreads to other distant areas of the body. So it is a cancer that is relatively easy to treat.

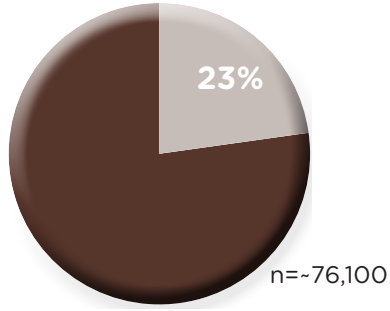
However, cSCC may spread and become invasive if not treated. This means that the cancer can grow into nearby tissue or deeper layers of skin.

Read more:
melanomacanada.ca

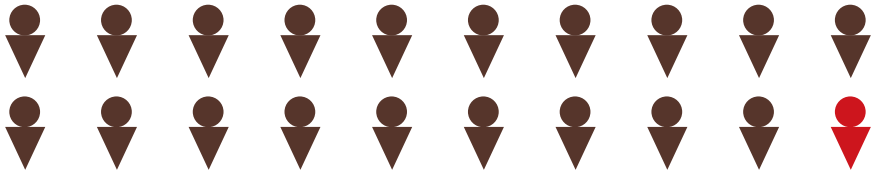
Who Gets cSCC?

Non-melanoma skin cancer is the **most common** cancer diagnosed in Canadians

Of the estimated **76,100** Canadians affected by non-melanoma skin cancer annually, approximately **23% are diagnosed** with cSCC[1]



1 in 20 Canadians will develop cSCC in their lifetime[1]



cSCC – Know The Causes & Risk Factors

It is important to know the causes and/or risk factors of developing cSCC.

- Some of your **physical traits** might put you at greater risk of developing cSCC – such as having fair skin, blonde or red hair, light-coloured eyes, or a tendency to develop freckles.

- cSCC is most often diagnosed in the **older population** due to years of accumulated sun damage.

- Some of your **previous activities** may also put you at greater risk of developing cSCC – such as the use of tanning beds and bulbs, time spent outdoors or working outdoors (exposed to the sun's UV rays), a history of sunburns or suntanning, having long-term exposure to cancer-causing chemicals (such as arsenic in the water). People who work outdoors are also at higher risk. Men are also more commonly diagnosed, likely due to UV exposure on unprotected skin.

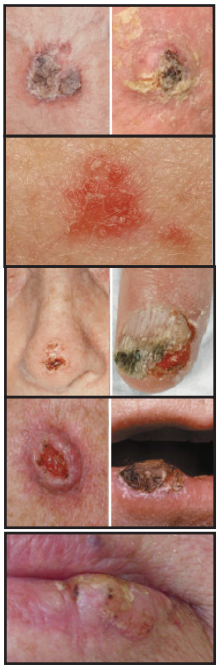
- Your **medical history** may also contain risk factors for cSCC – such as a history of precancerous skin lesions (actinic keratosis or Bowen's disease), a history of skin cancer, a weakened immune system (including having HPV, HIV, or AIDS, or having undergone organ transplants), medications that suppress the immune system, being exposed to radiation, or having a rare genetic disorder called xeroderma pigmentosum, which causes an extreme sensitivity to sunlight.

The leading cause of cSCC is **excessive UV radiation exposure** from either the sun or tanning beds.

Symptoms & Presentation of cSCC

What does cSCC look like?

cSCC typically presents itself as:

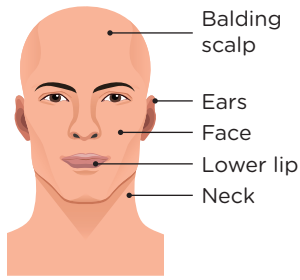


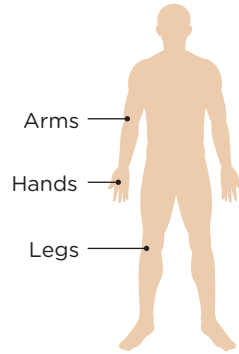
- A bump or lump on the skin that can feel rough; when it grows, it may become crusty, dome-shaped and can bleed.
- Scaly red patches (Bowen's disease).
- Open sores that don't heal, or that heal and return.
- Elevated growths with a central depression.
- Lips that feel dry constantly and may have whitish colour, lumps or feel scaly.

All of these may additionally crust or bleed. The skin surrounding them also typically shows signs of sun damage, such as wrinkling, pigment changes, freckles, age spots and loss of elasticity.

Where does cSCC occur?

cSCC can occur on all areas of the body but is most often seen on areas of the body that are frequently exposed to the sun or UV rays. The most commonly affected areas include:





How Is cSCC Diagnosed?

To confirm a diagnosis of cSCC your doctor will perform standard tests and procedures including:

- **Physical exam**
  - Your doctor will examine your skin for signs of cSCC. Your doctor will check the size, shape, colour, and texture of the spot on your skin.
  - Your doctor will also ask you questions about your medical and health history, such as your history with sunburns or tanning beds, any pain or symptoms you feel, and when you first noticed that the spot had appeared.

- **Removing a sample of tissue for testing (biopsy)**
  - If your doctor thinks the lesion looks suspicious, in order to accurately confirm a diagnosis of cSCC, they will perform a biopsy of the skin lesion.
  - A biopsy is when your doctor uses a tool to cut away some or all of the suspicious skin lesion and sends the skin tissues to a laboratory for testing.

How Does my Doctor Choose my Treatment?

Following the results of your physical exam and biopsy, your doctor will determine the best treatment options for you. Doctors often use the following risk groups to estimate the chance that the cancer may come back (recur) and help plan the best treatment.

Doctors classify most cSCC into these risk groups based on several prognostic factors, including the size of the cancer and where it is located (for example, head, neck, eyes, lips or is it on arms, legs or back). Fortunately, the majority of cSCC is caught early and treated very effectively through surgery.

Staging cSCC

When all surgical and any imaging tests have been completed and pathology reports have been received, the doctors will try to figure out if the cancer has spread, and if so, how far. This process is called staging. It helps determine how serious the cancer is and how best to treat it.

A preliminary **clinical stage** is assigned after the physical examination and initial biopsy. The final pathology report determines the **pathologic stage** and helps to determine the treatment options. These two stages can be different, but they will not change once they are defined. This is because the stage at diagnosis is important for evaluating treatment options, prognosis, and survival.

The stages of cSCC are based on several factors. The staging system used for cSCC of the head and neck is the American Joint Committee on Cancer (AJCC) TNM system, which is based on 3 key pieces of information:

T (tumour) What is the size and extent of the main tumour?
N (lymph node involvement) Has the cancer spread to nearby lymph nodes?
M (metastasis) Has the cancer spread to distant lymph nodes or distant organs?

Each letter is then assigned a numerical value which has more details about the cancer associated with it. The results of this analysis are grouped into five stages (0, I, II, III, and IV).

STAGES 0-IV

The staging system outlined below uses the pathologic stage. We have provided a simplified version of the latest TNM system as of January 2018. It is important to know that cSCC cancer staging can be complex. If you have any questions about the stage of your cancer or what it means for your treatment, ask your doctor to explain it in a way you understand.

cSCC has five stages: 0, I, II, III, IV

- **Early cSCC** is defined as stage I and stage II disease.
- **Advanced cSCC** is defined as stage III and stage IV disease.

Stage 0

- The tumour has not spread beyond the top layer of the skin (epidermis). The cancer has not spread to nearby lymph nodes or distant organs.

Stage I

- The tumour is smaller than or equal to 2 cm. The cancer has not spread to nearby lymph nodes or distant organs.

Stage II

- The tumour is between 2 and 4 cm. The cancer has not spread to nearby lymph nodes or distant organs.

Stage III

- Stage III cSCC is diagnosed if any of the following are true:
  - The tumour is larger than 4 cm.
  - The tumour has slightly worn away nearby bone (bone erosion).
  - The tumour has grown into or around nerves (perineural invasion).
  - The tumour has grown deep, past the fat under the skin (deep invasion).
  - The cancer has spread to 1 lymph node that is 3 cm or smaller.

Stage IV

- Stage IV is diagnosed if there is substantial invasion of the bone, even in the absence of lymph node involvement or distant metastases.
- Stage IV is also diagnosed regardless of the size of the tumour if the cancer has spread to at least one lymph node that is larger than 3 cm.
- Stage IV is also diagnosed regardless of tumour size or lymph node involvement if the cancer has spread to distant organs (distant metastasis).

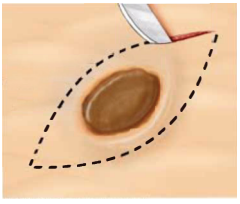
How Is cSCC Treated?

Surgery

All stages of cSCC are usually treated with surgery. There is a very high rate of cure for cSCC with surgical treatment. The treatment option that is best for you will depend on the size, location and aggressiveness of the tumour. If your skin lesion is left untreated, it may continue to grow, which can cause damage to surrounding tissue. The cancer can even spread to other parts of your body and in rare cases, can lead to death. cSCC that has spread can now be treated with immunotherapy.

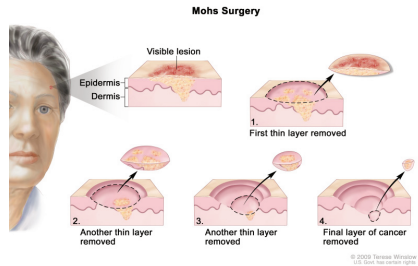
Surgical Treatments

- **Simple excision**
  - This procedure involves your doctor removing the cancerous tissue and a surrounding margin of healthy skin. In some cases, your doctor may recommend removing additional normal skin around the tumour. This is known as a wide excision. Simple excision is a standard procedure for squamous cell skin cancers.



- **Mohs surgery**
  - Mohs surgery is most often conducted for cSCC on the head or neck. During this procedure, your doctor removes the cancerous tumour and some of the surrounding tissue underneath. Your doctor then examines the margins around the excised tissue under a microscope to see if there are any other cancerous cells remaining. The procedure is repeated until clear margins are obtained.

- This procedure allows the surgeon to be sure that the entire growth is removed while avoiding removing an excessive amount of surrounding healthy skin.
- This form of surgery has the highest rate of success in treating cSCC, and is often used to treat large, recurrent tumours or tumours located in difficult-to-treat areas such as the face, eyes, ears, nose, hands, feet and shins, sparing as much normal tissue as possible.



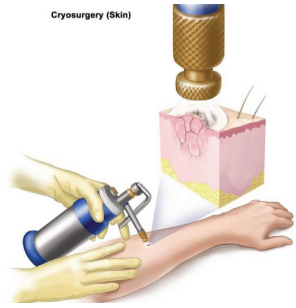
Superficial Treatments for Early Stage Disease

cSCC is usually treated with surgery. However, early stage cSCC is often treated effectively through superficial treatments that treat the top layer of the skin. Treatments for early stage (cSCC in situ, Bowen's disease or stage T or 0) may include topical chemotherapy creams or gels, cryotherapy, or photodynamic therapy (PDT).

The treatment option that is best for you will depend on the size, location and aggressiveness of the tumour. If your skin lesion is left untreated, it may continue to grow, which can cause damage to surrounding tissue. The cancer can even spread to other parts of your body and in rare cases, can lead to death.

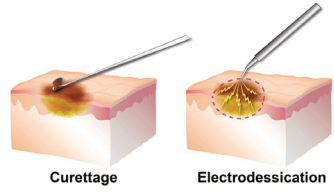
Topical Treatments

- **Topical chemotherapy**
  - These are medicines that are put directly on the skin as a cream or gel (called topical).
  - The drugs most often used in topical treatment for cSCC are 5-FU (Efudex, Actikerall), ingenol mebutate (Picato) and imiquimod (Aldara, Zyclara). These drugs are used according to various protocols, as recommended by your health care provider.
  - When put directly on the skin, these topical chemotherapies kill tumor cells on or near the skin's surface, but they can't reach cancer cells deeper in the skin or cells that have spread to other organs. For this reason, they are generally used only for precancerous conditions such as actinic keratosis and for early stage superficial skin cancers.



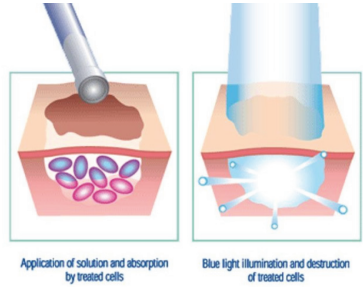
- **Cryosurgery or cryotherapy**
  - Cryosurgery for early stage in situ disease uses liquid nitrogen to freeze the cancerous cells. It burns during treatment, causing the area to blister and then scab over in 1 to 2 weeks.

- **Electrodesiccation and curettage (ED and C)**
  - ED and C treatment involves removing the surface of the visible tumour with a scraping instrument (curette) and then searing the base of the wound with an electric needle. This is intended to kill off any remaining cancer cells and help to stop the bleeding.



Photodynamic Therapy (PDT)

- This treatment combines photosensitizing drugs and light to treat superficial skin cancers.
- During this procedure, a liquid or cream drug that makes cancer cells sensitive to light is applied to the skin. Following this, a light that destroys the cancer cells is shined on the prepped area.



Radiation Therapy

- This treatment uses high-energy beams to kill cancer cells or slow their growth by damaging the cancer cells' DNA. Cancer cells whose DNA is damaged beyond repair will stop dividing or die.
- This may be an option for treating deeper tumours, or those that have a risk of becoming recurrent (coming back after treatment). It may also be used in people who are not candidates for surgery.

Systemic Drug Therapy

- Systemic drug therapy is currently used only in advanced or metastatic cases of cSCC. Systemic therapies are drugs that spread throughout the body to treat cancer cells wherever they may be. They have many different forms such as chemotherapy, targeted drugs, and immunotherapy.
- **Chemotherapy**
  - Chemotherapy has been used to treat cSCC, but it is not very effective and there is no standard chemotherapy regimen for non-melanoma skin cancer.
- **Immunotherapy**
  - Immunotherapies are a new class of drugs that have been developed to stimulate a person's own immune system to recognize and destroy cancer cells. Immunotherapies act to release the brakes, or checkpoints, of the immune system, allowing it to mount a stronger and more effective attack against cancer cells. These drugs are usually given intravenously in hospital or specialized clinic.
  - Recently, the immune checkpoint inhibitor cemiplimab (Brand name Libtayo) was approved in Canada for the treatment of adult patients with metastatic or locally advanced cSCC who are not candidates for curative surgery or curative radiation.

Additional clinical trials for other immunotherapies are currently underway in Canada. Please consult your doctor to determine if a clinical trial option is available and appropriate for you.

Questions to Ask Your Doctors

Questions about your diagnosis, treatment and prognosis

- What stage is my cSCC?
- What treatments are recommended for my stage of cSCC?
- Does my age, health or other medical conditions affect my treatment options?
- How long will surgery take and what is involved?
- Will the surgery be painful?
- Will I have any scars or disfigurement and if so, how can it be corrected, if at all?
- Will I need follow up appointments?
- How will I care for the wounds?
- What are the risks and benefits of each treatment?
- Where will I be treated? Do I need to stay in hospital or can I go home after each treatment?
- What should I do to prepare for treatment?
- When can I start treatment?
- What is my chance of being free of cSCC after treatment?
- What side effects should I watch for during treatment?
- When can I resume my normal activities?
- What is the chance my cancer will return or spread?
- What do I do after treatment is finished?
- Can I get a copy of my pathology report and other test results?

Notes

You Are Not Alone

If you are in need of support, more information, or if you wish to speak with a patient care specialist, contact Melanoma Canada as follows:

Phone and Email Support

- Available Monday to Friday, 9 am to 5 pm ET. We aim to respond to all inquiries within 48 hours.
- All calls and emails are confidential.
- For support or further information, please reach us at:
  Phone: 905-901-5121 or 1-877-560-8035
  Email: support@melanomacanada.ca

Cancer Coaching

- Meeting with a Cancer Coach can provide one-on-one support to help identify areas of desired change, set goals and make an agreed upon plan to work towards that change. Three key areas a Cancer Coach can help with include: emotional, physical and practical aspects that present during cancer diagnosis, treatment, and management.
  melanomacanada.ca

Private Facebook Support Group Cutaneous Squamous Cell (cSCC) Support Group

- A private place for people to tell their stories, ask questions and get the support they need. No one should face cancer alone. Our support groups are moderated by Melanoma Canada's patient care specialist.
  facebook.com/groups/csccsupport

Virtual Skin Cancer Support Group

- Led by Melanoma Canada, these informal meetings are a great opportunity to share information, understanding, challenges, questions and insights. Groups are free and held the first Wednesday of every month. For more information or to register, visit melanomacanada.ca

Helpful Resources

For more detailed information about cSCC, please see our website, www.melanomacanada

- **How to prevent skin cancer**
- **Sun safety**
- **How to properly examine your skin for skin cancer**
- **How to prepare for/questions to ask during your appointments**
- **Non-melanoma skin cancer**

Additional Resources

You can also find additional information about cSCC at:

- **American Academy of Dermatology**
  - https://www.aad.org/public/diseases/skin-cancer/squamous-cell-carcinoma
- **American Cancer Society**
  - https://www.cancer.org/cancer/basal-and-squamous-cell-skin-cancer.html
- **Canadian Cancer Society**
  - https://www.cancer.ca
- **Canadian Dermatology Association**
  - https://dermatology.ca/
- **National Comprehensive Cancer Network**
  - https://www.nccn.org/patients/guidelines/squamous_cell/
- **Skin Cancer Foundation**
  - https://www.skincancer.org/

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Our Mission:
Melanoma Canada advocates for and supports Canadians living with melanoma and skin cancer with helpful resources, education, psychosocial support services, and more.

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