MELANOMA CANADA

HELPING YOU UNDERSTAND BASAL CELL CARCINOMA (BCC)

A PATIENT GUIDE

WATCH OUR BCC VIDEO

CONTENTS

This guide is provided free of charge by Melanoma Canada
(formerly Melanoma Network of Canada)

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GET TO KNOW YOUR SKIN

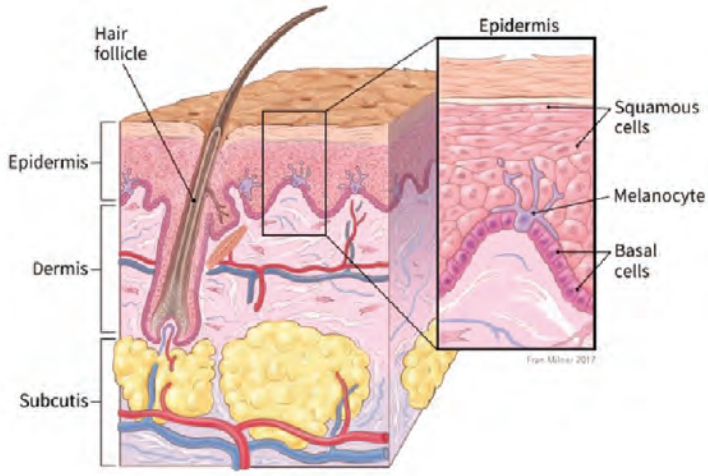
Receiving a diagnosis of basal cell carcinoma (BCC) can be upsetting and concerning. It often helps to have information to answer some of the questions about your diagnosis. Understanding the importance and function of the layers of skin may help you to understand BCC, how it develops, and how you can 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.

UNDERSTANDING THE LAYERS OF YOUR 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 BCC?

Basal cell carcinoma (BCC – also called basal cell skin cancer) is the most common form of skin cancer and it's estimated that over 80,000 people are diagnosed each year in Canada. About 8 out of 10 skin cancers are basal cell carcinomas. It develops in the basal cells, which originate in the lowest level of the epidermis layer of the skin.

BCC is most common in people with fair skin but can occur in people with any skin colour. Before being diagnosed with skin cancer, most patients with BCC usually already have evidence of sun damage such as 'age' spots, discolored skin, and wrinkles. Basal cell carcinoma can occur when sun exposure causes one of the skin's basal cells to develop a mutation in its DNA. The process of creating new skin cells is controlled by a basal cell's DNA. The DNA contains the instructions that tell a cell what to do. The mutation tells the basal cell to multiply rapidly and continue growing when it would normally die. Eventually the accumulating abnormal cells may form a cancerous tumor — the lesion that appears on the skin.

Basal cell carcinoma is very treatable when found early, so knowing the warning signs is important. When BCC 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, in rare cases or rarer types of BCC, it may spread and become invasive if not treated. This means that the cancer can grow into the deeper layers of the skin or nearby tissue.

A common sign of BCC is a small sore that never seems to heal. It can often be dismissed as a benign pimple or sore. Other symptoms include a pinkish growth or a patch of scaly skin. These cancers usually develop on sun-exposed areas, especially the face, head, and neck. They tend to grow slowly. If not removed completely, basal cell carcinoma can come back (recur) in the same place on the skin. People who have had basal cell skin cancers are also more likely to get new ones in other places.

SUBTYPES OF BCC

There are several subtypes of BCC. The following are the main subtypes:

Nodular BCC is the most common subtype. It usually develops on areas of the face exposed to the sun. Nodular BCC appears as a round, raised, pink, red or pearly white lump or an area with wide blood vessels showing on top.

Superficial BCC is the 2nd most common subtype. It usually develops on the central part of the body (trunk), arms or legs. Superficial BCC appears as a pink or red scaly area.

Infiltrative and micronodular BCCs usually develop in the head or neck area. They grow deeper into the skin and into the inner layer of the skin (dermis). Infiltrative and micronodular BCC can look like nodular BCC. They can grow and spread more quickly than nodular and superficial BCC.

Morpheaform BCC usually develops in the head or neck area. It appears as a flat, firm white or yellow area. Morpheaform BCC can look like a scar. It can grow and spread more quickly than nodular and superficial BCC. Morpheaform BCC may also be called sclerosing BCC or fibrosing BCC.

Nevoid basal cell carcinoma or Gorlin syndrome, also known as nevoid basal cell carcinoma syndrome, basal cell carcinoma nevus syndrome, Gorlin-Goltz syndrome, or basal cell nevus syndrome, is a rare genetic disorder. Gorlin syndrome can affect every organ system of the human body. People with Gorlin syndrome are at increased risk of developing basal cell carcinoma (BCC) skin cancers and non-cancerous tumors. Basal cell carcinomas are the most common manifestation of Gorlin syndrome.

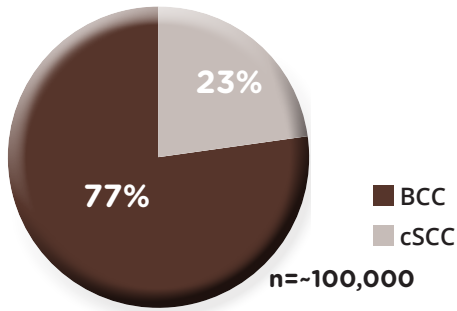
WHO GETS BCC?

Incidence rates for non-melanoma skin cancers are not generally tracked in Canada or world-wide.

In Canada, **77% of non-melanoma skin cancer cases are BCC and 23% are squamous cell carcinoma.**

The estimated incidence rates (per 100,000) for **BCC is 120.7** and for **SCC is 39.6** in both sexes.

Overall Melanoma Skin Cancer incidence rates by province show rates for most provinces ranging from **120 to 170 per 100,000**[3]



1 in 8 Canadians will develop BCC in their lifetime[3]

BCC – CAUSES & RISK FACTORS

BCC is a slow-growing skin cancer, and the symptoms can sometimes be mistaken for harmless skin conditions like a minor injury or acne scar. The majority of BCC develops as a result of long-term and prolonged exposure to the ultraviolet (UV) rays from the sun or from tanning beds or lamps. However, other factors can contribute to the risk and development of basal cell carcinoma, and the exact cause may not be clear in some cases.

If you have any known risk factors for basal cell carcinoma, be especially vigilant about skin self-checks and regular dermatology appointments. Factors that increase your risk of basal cell carcinoma include:

- **Chronic sun exposure.** A lot of time spent in the sun — or in commercial tanning beds — increases the risk of basal cell carcinoma. The threat is greater if you live in a sunny or high-altitude location, both of which expose you to more UV radiation. Severe sunburns also increase your risk.

- **Radiation therapy.** Radiation therapy to treat acne or other skin conditions may increase the risk of basal cell carcinoma at previous treatment sites on the skin.

- **Fair skin**. The risk of basal cell carcinoma is higher among people who freckle or burn easily or who have very light skin, red or blond hair, or light-colored eyes.

- **Increasing age.** Because basal cell carcinoma often takes decades to develop, the majority of basal cell carcinomas occur in older adults. But it can also affect younger adults and is becoming more common in people in their 20s and 30s.

- **A personal or family history of skin cancer.** If you've had basal cell carcinoma one or more times, you have a good chance of developing it again. If you have a family history of skin cancer, you may have an increased risk of developing basal cell carcinoma.

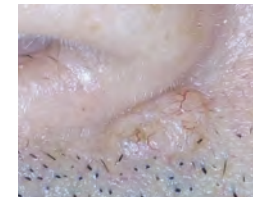
- **Immune-suppressing drugs.** Taking medications that suppress your immune system, such as anti-rejection drugs used after transplant surgery, significantly increases your risk of skin cancer.

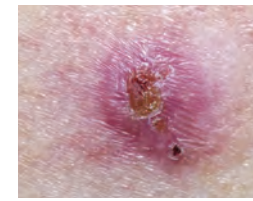
- **Exposure to arsenic**. Arsenic, a toxic metal that's found widely in the environment, increases the risk of basal cell carcinoma and other cancers. Everyone has some arsenic exposure because it occurs naturally. But some people may have higher exposure if they drink contaminated well water or have a job that involves producing or using arsenic.

- **Inherited syndromes that cause skin cancer.** Certain rare genetic diseases can increase the risk of basal cell carcinoma, including nevoid basal cell carcinoma syndrome (Gorlin-Goltz syndrome) and xeroderma pigmentosum.

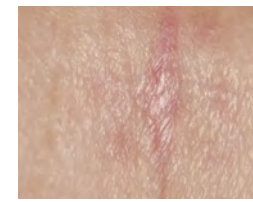
SIGNS AND CHARACTERISTICS OF BCC

The best way to identify a potential skin cancer issue right away is by performing regular skin self-checks. If you notice a new growth or sore, keep an eye on it. If it starts changing in appearance or never heals, it's time to see your dermatologist or family doctor. Basal cell carcinoma usually develops on sun-exposed parts of your body, especially your head and neck. Less often, basal cell carcinoma can develop on parts of your body usually protected from the sun, such as the genitals.









WHAT DOES BCC LOOK LIKE?

Basal cell carcinoma appears as a change in the skin, such as a growth or a sore that won't heal. These changes in the skin (lesions) usually have one of the following characteristics:

- **A pearly white, skin-colored or pink bump** that is translucent, (meaning you can see a bit through the surface). Tiny blood vessels are often visible. In people with darker skin tones, the lesion may be darker but still somewhat translucent. In the most common type of basal cell carcinoma, lesions often appear on the face, top of head or ears. The lesion may rupture, bleed and scab over.

- **A flat, scaly, reddish patch** with a raised edge is more common on the back or chest. Over time, these patches can grow quite large.

- **A white, waxy, scar-like lesion** without a clearly defined border, called morpheaform basal cell carcinoma, is the least common.

Sourced from https://www.verywellhealth.com/squamous-cell-carcinoma-1068874

HOW IS BCC DIAGNOSED?

As soon as you recognize a new skin growth or irritation, you should consult your doctor. If you have a history of skin cancer, plan to see your dermatologist for a regular skin check once per year. If you notice a new or changing skin growth, see them sooner.

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

- **Physical exam**
  - Your doctor will examine your skin for signs of BCC. 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 the spot had appeared.
  - Your doctor will examine not only the suspicious area on your skin, but may also check the rest of your body for other lesions.

- **Removing a sample of tissue for testing (biopsy)**
  - If your doctor thinks the lesion looks questionable, in order to accurately confirm a diagnosis of BCC, they may 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.

STAGING OF BCC

Determining the treatment pathway begins with the stage, or progression, of the disease. The stage of skin cancer is one of the most important factors in determining the treatment options. However, non-melanoma skin cancers, such as basal cell carcinomas rarely spread and thus don't typically require staging.

The American Joint Committee on Cancer (AJCC) has developed a uniform system for describing the stages of skin cancer. This system allows doctors to determine how advanced a skin cancer is, and to share that information with each other in a meaningful way. This system, known as the TNM system, is composed of three key pieces of information:

T (tumour) This describes the tumor's size, location and how deep it has grown into the skin.
N (lymph node involvement) This indicates whether or not cancer cells have spread to nearby lymph nodes, or the channels connecting the lymph nodes.
M (metastasis) This refers to whether the cancer cells have spread to distant organs.

BASAL CELL CARCINOMA STAGES

There are certain features that are considered to make the cancer at higher risk for spreading or recurrence, and these may also be used to stage basal cell carcinomas. These include:

- Greater than 2 mm in thickness
- Invasion into the lower dermis or subcutis layers of the skin
- Invasion into the tiny nerves in the skin
- Location on the ear or on a hair-bearing lip

After the TNM components and risk factors have been established, the cancer is given a stage. For basal cell carcinoma staging, the factors are grouped and labeled 0 to 4. The characteristics and stages of basal cell carcinoma are:

STAGE 0:
Also called carcinoma in situ, cancer discovered in this stage is only present in the epidermis (upper layer of the skin) and has not spread deeper to the dermis.

STAGE I - BASAL CELL CARCINOMA:
The cancer is less than 2 centimeters, about 4/5 of an inch across, has not spread to nearby lymph nodes or organs, and has one or fewer high-risk features.

STAGE II - BASAL CELL CARCINOMA:
The cancer is larger than 2 centimeters across and has not spread to nearby organs or lymph nodes, or a tumor of any size with 2 or more high-risk features.

STAGE III - BASAL CELL CARCINOMA:
The cancer has spread into facial bones or 1 nearby lymph node, but not to other organs.

STAGE IV (STAGE 4) BASAL CELL CARCINOMA:
The cancer can be any size and has spread (metastasized) to 1 or more lymph nodes which are larger than 3 cm and may have spread to bones or other organs in the body.

HOW IS BCC TREATED?[1]

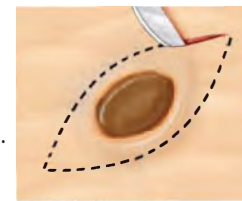
The goal of treatment for basal cell carcinoma is to remove the cancer completely. Which treatment is best for you depends on the type, location and size of your cancer, as well as your preferences and ability to do follow-up visits. Treatment selection can also depend on whether this is a first-time or a recurring basal cell carcinoma.

SURGERY

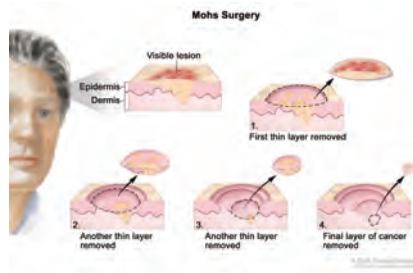
Basal cell carcinoma is most often treated with surgery to remove all of the cancer and some of the healthy tissue around it.

Options might include:

- **Simple excision**
  - In this procedure, your doctor cuts out the cancerous lesion and a surrounding margin of healthy skin. The margin is examined under a microscope to be sure there are no cancer cells. Excision might be recommended for basal cell carcinomas that are less likely to recur, such as those that form on the chest, back, hands and feet.



- **Mohs surgery**
  - During Mohs surgery, your doctor removes the cancer layer by layer, examining each layer under the microscope until no abnormal cells remain. This allows the surgeon to be certain the entire growth is removed and avoid taking an excessive amount of surrounding healthy skin. Mohs surgery might be recommended if your basal cell carcinoma has a higher risk of recurring, such as if it's larger, extends deeper in the skin or is located on your face.

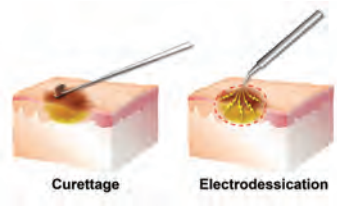


OTHER TREATMENTS

Sometimes other treatments might be recommended in certain situations, such as if you're unable to undergo surgery or if you don't want to have surgery.

Other treatments include:

- **Electrodessication and Curretage or ED&C**
  - Treatment involves removing the surface of the skin cancer with a scraping instrument (curette) and then searing the base of the cancer with an electric needle.
  - C and E might be an option for treating small basal cell carcinomas that are less likely to recur, such as those that form on the back, chest, hands and feet.

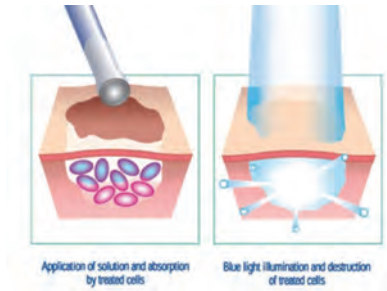


- **Radiation therapy**.
  - Radiation therapy uses high-energy beams, such as X-rays and protons, to kill cancer cells.
  - Radiation therapy is sometimes used after surgery when there is an increased risk that the cancer will return. It might also be used when surgery isn't an option.

- **Freezing**
  - This treatment involves freezing cancer cells with liquid nitrogen (cryosurgery). It may be an option for treating superficial skin lesions. Freezing might be done after using a scraping instrument (curet) to remove the surface of the skin cancer.
  - Cryosurgery might be considered for treating small and thin basal cell carcinomas when surgery isn't an option.

- **Topical treatments**.
  - Prescription creams or ointments might be considered for treating small and thin basal cell carcinomas when surgery isn't an option.

- **Photodynamic therapy.**
  - Photodynamic therapy combines photosensitizing drugs and light to treat superficial skin cancers. During photodynamic therapy, a liquid drug that makes the cancer cells sensitive to light is applied to the skin. Later, a light that destroys the skin cancer cells is shined on the area.



  - Photodynamic therapy might be considered when surgery isn't an option.

TREATMENT FOR CANCER THAT SPREADS

Very rarely, basal cell carcinoma may spread (metastasize) to nearby lymph nodes and other areas of the body. Additional treatment options in this situation include:

- **Targeted drug therapy.**
  - Targeted drug treatments such as vismodegib (Erivedge), focus on specific pathways within the cell that cause it to grow abnormally. By blocking these pathways targeted drug treatments can cause cancer cells to die. Targeted therapy drugs for basal cell carcinoma block molecular signals that would otherwise enable the cancers to continue growing. They might be considered after other treatments or when other treatments aren't possible.

Other Options may include chemotherapy, or immunotherapy. Talk to your health care practitioner about clinical trial options that may be available.

COMPLICATIONS

Fortunately, basal cell carcinoma does not have a long list of complications because it is usually caught early when it is highly curable. However, once it spreads, it can lead to other health problems. Once you have experienced BCC, you are more at risk of developing BCC again, as well as other types of skin cancers like squamous cell carcinoma and melanoma. A recurrence, or return of the original cancer, can occur if some cancer cells are not removed during surgery. These cells can then remain in the skin undetected and start growing again.

If you have experienced BCC on your nose, ears, or lips, you are at higher risk of having a recurrence. Talk with your dermatologist about how to monitor your skin and protect yourself from sun damage.

PREPARING FOR YOUR APPOINTMENT

QUESTIONS FOR YOUR DOCTOR

Below are some basic questions to ask your doctor about basal cell carcinoma. If any additional questions occur to you during your visit, don't hesitate to ask.

- Do I have skin cancer? What kind?
- How is this type of skin cancer different from other types?
- Has my cancer spread?
- What treatment approach do you recommend?
- What are the possible side effects of this treatment?
- Will I have a scar after treatment?
- Am I at risk of this condition recurring?
- Am I at risk of other types of skin cancer?
- How often will I need follow-up visits after I finish treatment?
- Are my family members at risk of skin cancer?
- Are there brochures or other printed material that I can take with me?
- What websites do you recommend?
- Are there any clinical trial options available to me?
- Take pictures to monitor changes to your leison(s) and of any new lesions that may develop to share with your Doctor.

SKIN CANCER SELF-CHECK

Basal cell carcinoma is a common skin cancer that is very treatable when found early. The best way to catch it early is by performing skin self-checks and monitoring for new skin growths, patches of scaly skin, and sores that do not heal. It is important to have any new skin growth checked out. People with risk factors of basal cell carcinoma should be especially vigilant when it comes to skin checks. If you are unsure about a change in your skin, see your dermatologist for a screening and treatment plan.

Dermatologists recommend that each of us performs a skin self-check every month and see a dermatologist for a professional check annually. Each month, take time to inspect your skin from head to toe. Examine your skin often for new skin growths or changes in existing moles, freckles, bumps and birthmarks. With the help of mirrors, check your face, neck, ears and scalp.

Start by inspecting your face, being sure to check the backs of your ears. To check your scalp, a blow dryer and a hand mirror may be helpful for seeing hard-to-reach places. Next scan your hands, arms, and torso. When inspecting your back, use a full-length mirror. Finally, inspect your legs, genitals, ankles, and feet (including the soles).

PREVENTION

To reduce your risk of basal cell carcinoma you can:

- Avoid the sun during the middle of the day or when the UV index is higher than 3. In many places, the sun's rays are strongest between about 11 a.m. and 3 p.m. Schedule outdoor activities for other times of the day, even during winter or when the sky is cloudy.

- Wear sunscreen year-round. Use a broad-spectrum sunscreen with an SPF of at least 50, even on cloudy days. Apply sunscreen generously and reapply every two hours if you are swimming, or perspiring heavily. (New evidence shows sunscreens are effective for longer then 2 hours and reapplying regularly is not required except in the above circumstances).

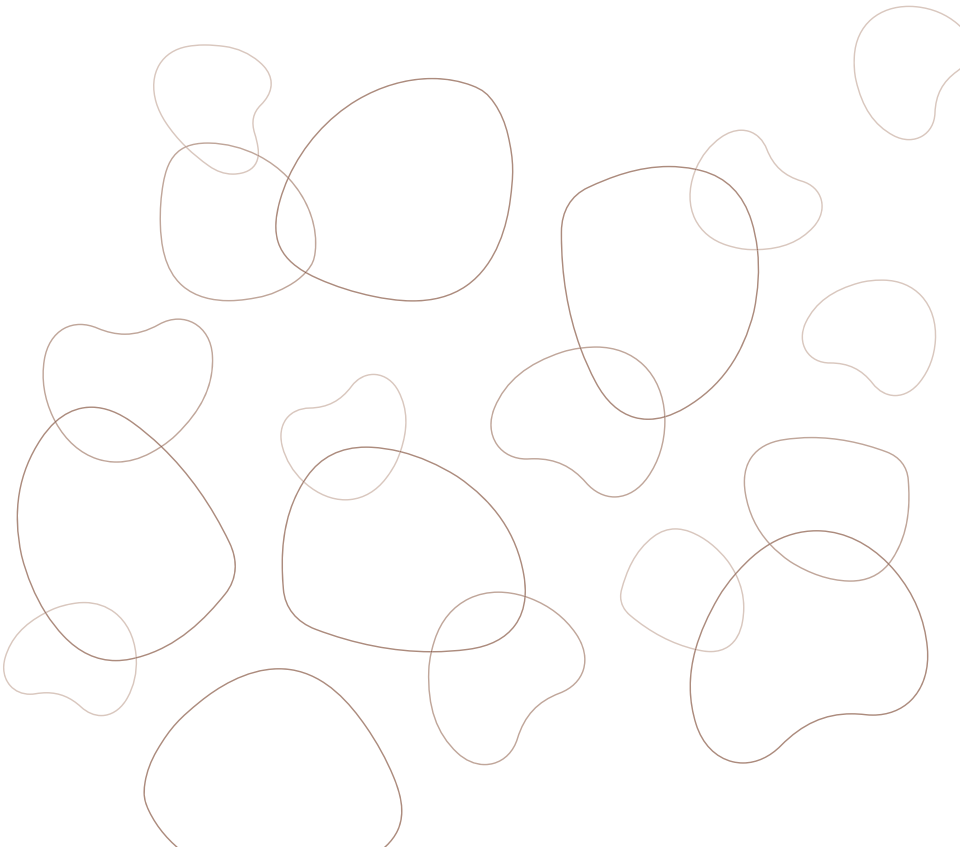
- Wear protective clothing. Cover your skin with dark, tightly woven clothing that covers your arms and legs, and a broad-brimmed hat, which provides more protection than does a baseball cap or visor. Don't forget sunglasses. Look for those that block both types of UV radiation — UVA and UVB rays.

- Avoid tanning beds. Tanning beds emit UV rays and can increase your risk of skin cancer.

HELPFUL RESOURCES

For more detailed information about BCC, please see our website, www.melanomacanada/bcc

- How to prevent skin cancer
  - https://www.melanomacanada.ca/skincancerprevention
- Sun safety
  - https://www.melanomacanada.ca/sun-safety/
- How to properly examine your skin for skin cancer
  - https://www.melanomacanada.ca/prevention
- How to prepare for/questions to ask during your appointments
  - https://www.melanomanetwork.ca/bcc/questionsbcc/
- Types of melanoma & non-melanoma skin cancer
  - https://www.melanomanetwork.ca/types-of-melanoma/



ADDITIONAL RESOURCES

You can also find additional information about BCC at:

- American Academy of Dermatology
  - https://www.aad.org/public/diseases/skin-cancer/types/common/bcc
- 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/public-patients/skin/basal-cell-carcinoma/
- Skin Cancer Foundation
  - https://www.skincancer.org/

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MELANOMA CANADA

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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