

THE FACTS

We are a society of sun worshippers and **the result is cancerous.**

Skin cancer accounts for **one-third of all cancers.**

The number of skin cancer cases across Canada has jumped from 40,000 in 1989 to **72,000 in 2002.**

Approximately **4000** of these recent cases are melanoma.

On average, one in five patients, diagnosed with **melanoma** in Canada will die.

The death rate for **squamous cell** carcinoma is significantly lower and death from a **basal cell** carcinoma is extremely rare.

Skin Cancer

BASAL CELL, SQUAMOUS CELL AND MELANOMAS

By Dr. Jennifer Klotz MD, Laura Delaney BSc., Dr. Richard Langley, MD

PREVENTION, EARLY DIAGNOSIS AND TREATMENT ARE CRITICAL IN THE FIGHT TO REDUCE THE INCIDENCE OF SKIN CANCER AND ASSOCIATED PROBLEMS. IT IS ESTIMATED THAT MORE THAN HALF OF ALL SKIN MALIGNANCIES IN CANADA COULD BE AVOIDED BY INDIVIDUALS ADOPTING A SAFER LIFESTYLE.

Epidermal Origin of Skin Cancers

Squamous cell carcinoma

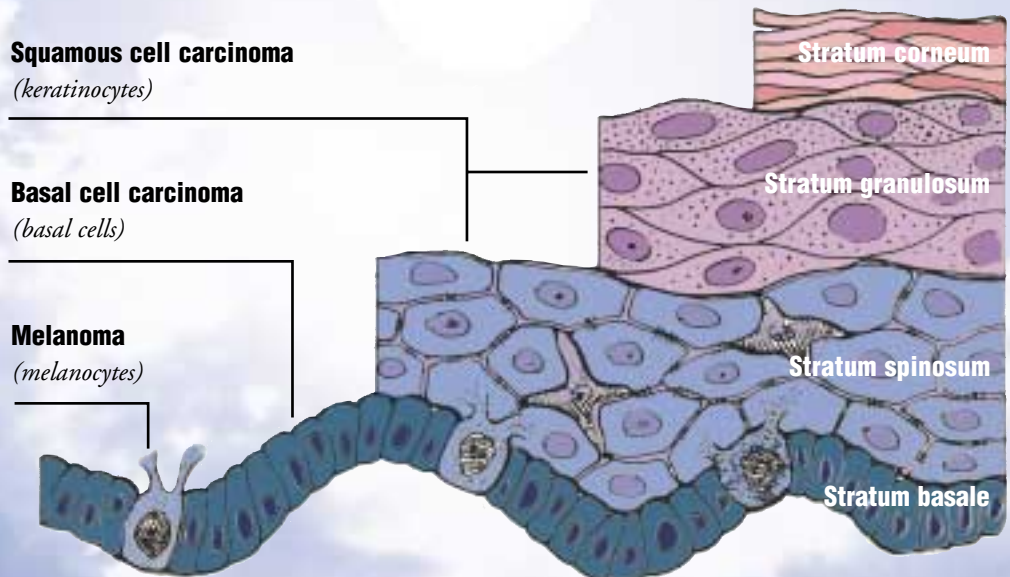
(keratinocytes)

Basal cell carcinoma

(basal cells)

Melanoma

(melanocytes)



BASAL CELL CARCINOMAS (BCC)



1

Basal cell carcinomas are the result of a malignant proliferation of basal cells at the dermal epidermal junction. About three out of every four skin cancers are BCC's. Eighty-five per cent begin on chronically sun-exposed sites such as the head and neck. As many as 50 per cent of people, who have one of these tumors, will develop another within the next five years.

Basal cell carcinomas are very slow growing, locally aggressive, but rarely metastasize.

There are two common types of basal cell carcinomas as shown in the photos on the left:

1. **Nodular basal cell carcinoma:** (skin coloured, translucent papule with telangiectasias on surface)
2. **Superficial spreading basal cell carcinoma:** (scaling erythematous plaque on the neck of a female patient)



2

SQUAMOUS CELL CARCINOMAS (SCC)



3

Squamous cell carcinomas are a malignant proliferation of epidermal keratinocytes in the upper part of the epidermis. They account for about two out of every 10 skin cancers. They usually appear on sun-exposed areas of the body such as the face, ear, neck, lips and the backs of the hands.

The mildest form of SCC is precancerous and is called **actinic** or **senile keratosis**. Another form that occurs usually in sun-exposed areas is **Bowen's disease**, a form of in situ skin cancer. They can look much like a mild eczema or psoriasis.

Invasive squamous cell carcinomas (shown left) grow rapidly, but only between two and three per cent will metastasize. This risk of metastasis depends on the degree of differentiation, depth of penetration into the dermis, and the location of the lesion. Squamous cell carcinomas on the lip and ear have a higher risk for metastasis than tumors at other sites. Shown in photos to the left:

3. Friable, bleeding, ulcerated nodule on the arm of a patient
4. Ulcerated nodule on the lip of a patient



4

MELANOMA



5



6



7



8

Melanoma skin cancers are derived from melanocytes. The incidence and mortality of melanoma is increasing at alarming rates. In Canada, the Maritimes, particularly PEI and Nova Scotia, have the highest incidence rates of melanoma.

A history of persistent and sustained change is characteristic of melanoma. The rate of change is noteworthy: usually months or years. This contrasts sharply with benign lesions, which usually change over a period of days, often the result of change in the nevus.

A change in an existing nevus or the development of a new pigmented lesion is a cardinal symptom of melanoma. Both should be viewed with suspicion.

Itching has also been noted in approximately 25 per cent of patients with early melanoma. Pruritus, although non-specific, may be important especially if it occurs in a changing nevus.

Colour change is another important diagnostic indicator. This change is often reflected as a progressive darkening of an area; variation in pigment pattern may also be prominent.

Types of Melanoma Growth as shown in photos to the left:

- 5. Superficial Spreading Melanoma** (shown in photo, asymmetrical, darkly pigmented lesion with notching of the borders)
 - 70 per cent of cutaneous melanoma
 - anywhere on the body
 - growth (1-7 years)
 - various hues
 - may appear glossy
 - irregularity of the borders usual
- 6. Nodular Melanoma** (shown in photo, rapidly growing, blue-black nodule on the shoulder of a female patient)
 - 15 per cent of melanomas
 - often on the trunk (in males) and on the legs (in females)
 - a rapidly growing papule or nodule
 - usually blue-black or bluish-red and uniform
 - difficult to diagnose, using ABCD criteria
- 7. Acral Lentiginous Melanoma** (shown in photo, highly asymmetrical lesion with variation of colour, notching of borders. Note the central elevated papule indicating invasive melanoma)
 - 5-10 per cent of melanomas
 - most often on acral locations including palms, soles and beneath the nail plate
 - majority in Blacks and Asians
 - evolve slowly
- 8. Lentigo Maligna Melanoma** (shown in photo, large, asymmetrical, irregularly pigmented patch on the cheek of an elderly male)
 - 4-15 per cent of melanomas
 - most often on the head and neck
 - seen in elderly patients
 - gradually enlarges and extends peripherally
 - striking characteristic of early disease is flatness
 - marked irregular borders with prominent notching
 - usually tan in colour
 - may appear mottled with brown or black specks

Melanoma development by sex and race

White males: commonly begins on the trunk, particularly the upper back

White females: lower legs and upper back are favoured locations

Asians: acral locations, especially the palms and soles; also mucosal sites

Identification of high risk patients for melanoma (MM RISK)

- M** *Moles* (multiple atypical ones)
- M** *Moles* (multiple common moles)
- R** *Red hair and freckling; blue eyes*
- I** *Inability to tan well.* (always burns or only tans slightly)
Immunosuppressed.
- S** *Severe sunburns* (< 14 years of age)
- K** *Kindred* (family history of melanoma)

Clinical ABCD's of Melanoma

- A** *Asymmetry*
- B** *Border* (it is very irregular and notched)
- C** *Colour* (red, white, blue, black, brown, pink and anything in between)
- D** *Diameter* (> 6 mm)

Cancer Care Nova Scotia is a program of the Department of Health. Its mandate is to evaluate, coordinate and strengthen the cancer system in Nova Scotia.

Cancer Care Nova Scotia works with and supports professionals and stakeholders in the health care system to bring about patient-centred change. Its ultimate goal is to reduce the burden of cancer on individuals, families, communities and the health care system.

In Practice is an insert for *Cancer Care Nova Scotia's* bimonthly newsletter. It is written specifically for primary care practitioners with information that we hope will make a difference in your cancer practice.

Please contact Christine Smith, Communications Coordinator, *Cancer Care Nova Scotia*, by phone at 902-473-2932 or by email at christine.smith@ccns.nshealth.ca with comments or suggestions for future topics.



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Skin Cancer

Treatment

The first line of treatment for all skin cancers (basal cell carcinoma, squamous cell carcinoma and melanoma) is usually surgery.

For melanoma, a sentinel lymph node biopsy may be preferred. Sentinel lymph node biopsy is a staging technique used to identify the first lymph node in a basin that drains from the primary melanoma. For melanomas greater than one millimetre in thickness, sentinel lymph node biopsy may be performed for accurate and minimally invasive staging of patients. Chemotherapy, radiation therapy, and biological therapy may be used separately or in combination for metastasis. Biological therapy may reinforce the body's immune system to guard against recurrence.

Prevention

Avoiding sunburns, especially blistering burns in childhood and adolescence, may reduce the incidence of melanoma. Reducing exposure to high-intensity UV radiation (the sun is strongest from 11 am to 3 pm), wearing protective clothing, and using sunscreen, with an SPF of 15 or more are also recommended.

People, whose skin tans poorly or who have a large number of abnormal moles, may also have an increased risk of developing melanoma skin cancer. These people may benefit by a monthly self skin exam. Patients should know the pattern of moles, freckles, and other marks on their skin so they will notice any changes. Self-examination is best done in front of a full-length mirror, and with a hand-held mirror.

Recent Research

- Survival is no different when primary melanoma, for localized non-metastatic disease, is diagnosed before during or after pregnancy.
- The risk of transformation of a common or congenital nevus into a melanoma is very low, especially among younger individuals.

If you have a specific question related to skin cancer, please contact Dr. Richard Langley, Chair of Cancer Care Nova Scotia's Skin Cancer Site Team at Richard.Langley@dal.ca