

Cancer of the skin is a change in your skin cells causing them to grow abnormally. As the cells become more and more abnormal, they may develop the ability to damage local tissue through rapid growth and invasion. These aggressive skin cells can form a malignant tumor. This means the abnormal cells can spread through your body, invade your organs, and continue to grow in new areas, a process called metastasis. Many tumor cells first spread to lymph nodes close to the tumor. They also may go to lungs or other areas of the body.

The skin is the largest organ by surface area. It is the most common part of the body in which cancer develops. Squamous cell carcinoma is the most common type of skin cancer of the hand. The next most common type is basal cell carcinoma. Melanoma is also a common skin cancer. Melanoma is the most dangerous type to spread and possibly result in death if not recognized and treated early. There are other, more rare forms of skin cancer such as Kaposi's sarcoma, dermatofibrosarcoma protuberans, sweat gland tumors, and Merkel cell carcinoma.

Causes

Squamous cell carcinoma, basal cell carcinoma, and melanoma are all associated with chronic sun exposure. Some people are at higher risk for skin cancer. These people often get sun burns easily and therefore, burn more often. This skin type may be described as light or fair skin. Patients who have immune suppression from other disorders or medications may be at higher risk. Other factors that increase risk of developing skin cancer include exposure to radiation or certain chemicals such as arsenic. Certain genetic conditions such as xeroderma pigmentosum and Gorlin syndrome have higher risk of skin cancer also.

It may be more likely that you will suffer from melanoma if you have the following:

- Actinic keratosis (scaly, crusty growths)
- Cutaneous horns (cone-like bumps on the skin)
- Bowen's disease
- Certain family history
- Certain types of moles

Signs and Symptoms

Squamous cell carcinoma

This type of skin cancer may look like small, firm nodules on the skin. They are often brown or tan in color and may result in scales, ulcers, bleeding or crusting. The scaly, crusty top layer can build up, creating a cutaneous horn



Figure 1: Squamous cell carcinoma, a type of skin cancer, with small cutaneous horn



Figure 2: Squamous cell carcinoma, a type of skin cancer, may look like a cut or infection that does not heal. This is an example of one in the nail bed.

(Figure 1). Some people may mistakenly think that the cancer is just a cut or infection that won't seem to heal (Figure 2). For some, squamous cell carcinoma will result in large, mushroom-like growths. This type of skin cancer has a high potential to spread, especially to lymph nodes.

Basal cell carcinoma

This type of skin cancer results in small, well-defined nodules with a translucent, pearly border. These too may ulcerate and look like a chronic sore. They tend to be slower-growing, with less of a tendency to spread.

Melanoma

Melanoma often look like a mole or birthmark. Any of the signs shown below, also known as the ABCDEs of

melanoma, can be a sign of melanoma.

- A – Asymmetry (shape is irregular)
- B – Border is irregular
- C – Color (varied colors or shades)
- D – Diameter is greater than 6 mm (1/4 inch)
- E – Evolving (changing in any way)

How is Skin Cancer Diagnosed?

Diagnosis starts with you asking your doctor to inspect your skin. A careful history and physical examination will be performed. If there are concerning features of a skin lesion, your surgeon may suggest taking a sample of tissue called a biopsy. By analyzing the tissue under the microscope using special stains and molecular techniques, they can determine if the skin lesion is dangerous. Some biopsies are performed by only taking a small part of a bigger mass to define the lump. This is called an incisional biopsy. Because only part of the mass is removed to establish the diagnosis, a second more thorough biopsy may be required. When the entire mass is removed it is called an excisional biopsy. Depending on size and location sometimes an excisional biopsy can be performed, avoiding a two-step process. However, depending on what type of mass is identified on the initial biopsy, sometimes a wider margin is needed. A margin is the amount of normal tissue removed outside of the tumor. Different tumors need different margin widths to try to be certain all of the cells are gone and won't come back. It is important for the pathologist to provide a detailed report. The report may have information such as how close tumor cells come to the edge of the specimen, how deep the cells go below the skin, how many dividing cells are seen, and how abnormal the cells and their nuclei look.

The lymph nodes should also be examined, as they are a common site for spread, especially for melanoma and squamous cell carcinoma. Sometimes lymph nodes may need to be removed to determine if the cancer spread.

In order to find the main lymph node that drains the area where the tumor is located, some dye or a small amount of safe radioactive material may be injected. This makes it easier for the surgeon to find the main lymph node and try to leave some others behind to provide continued limb drainage which may help avoid chronic swelling.

Other evaluations such as a CT scan, and/or PET scan may be needed to check for spread, especially with melanoma.

Treatment

The standard treatment for skin cancer is surgical removal of the cancer. The amount of tissue surrounding the mass that requires removal will vary based on tumor type, tumor depth, and other factors. For smaller lesions they may be able to have the wound heal without stitching the wound. Other times a larger wound is made around the lesion which can then be stitched closed to make a straight line scar. Larger wounds may not be able to be directly closed and could require local tissue rearrangement flaps or skin grafting. Advanced, malignant skin cancers could require amputation to obtain local control, prevent spread, and decrease chances of dying from the cancer. Additional treatments such as radiation and/or chemotherapy may also be needed.

The best treatment for this cancer is prevention. Be sure to take the following precautions:

- Wear protective clothing and sunscreen in the sun. Limit sun exposure when possible. The sun's ultraviolet rays can penetrate windows. Thus, you can get sun exposure even in a car or indoors.
- Avoid exposure to high-risk chemicals such as arsenic.
- Check your skin regularly. New lumps or changes in any old lumps or moles should be evaluated by a doctor or health care provider.