



SQUAMOUS CELL CARCINOMA

Squamous cell carcinoma (SCC), the second most common skin cancer after basal cell carcinoma, afflicts more than 100,000 Americans each year. Squamous cell cancers may occur on all areas of the body including the mucous membranes, but are most common in areas exposed to the sun.

Although squamous cell carcinomas usually remain confined to the epidermis for some time, they eventually penetrate the underlying tissues if not treated. In a small percentage of cases, they spread (metastasize) to distant tissues and organs. When this happens, they can be fatal.

WHAT CAUSES IT

Chronic exposure to sunlight causes most cases of squamous cell carcinoma. That is why tumors appear most frequently on sun-exposed parts of the body: the face, neck, bald scalp, hands, shoulders, arms, and back. The rim of the ear and the lower lip are especially vulnerable to the development of these cancers. Tobacco users are also prone to squamous cell carcinoma.

SCC may also occur where skin has suffered certain kinds of injury such as burns, scars, long-standing sores, sites previously exposed to X-rays or certain chemicals (such as arsenic and petroleum by-products). In addition, chronic skin inflammation or medical conditions that suppress the immune system over an extended period of time may encourage development of squamous cell carcinoma. Occasionally, squamous cell carcinoma arises spontaneously on what appears to be normal, healthy, undamaged skin. Some researchers believe that a tendency to develop this cancer may be inherited.

WHO GETS IT

Anyone with a substantial history of sun exposure can develop SCC. People who have fair skin, light hair, and blue, green, or gray eyes are at highest risk. Those whose occupations require long hours outdoors or who spend extensive leisure time in the sun are in particular jeopardy.

Dark-skinned individuals of African descent are far less likely than fair-skinned individuals to develop skin cancer. More than two thirds of the skin cancers that they do develop, however, are squamous cell carcinomas, usually arising on the sites of preexisting inflammatory skin conditions or burn injuries.

PRECANCEROUS CONDITION

Certain precursor conditions, some of which, result from extensive sun damage, are worth noting.

They are sometimes associated with the later development of squamous cell carcinoma. They include:

ACTINIC, OR SOLAR, KERATOSIS

Actinic keratoses are rough, scaly, slightly raised growths that range in color from brown to red and may be up to one inch in diameter. Actinic keratoses (AKs) develop after years of sun exposure and are most common on the face, ears, hands, and forearms.

ACTINIC CHEILITIS

A type of actinic keratosis occurring on the lips, it causes them to become dry, cracked, scaly, and pale or white. It mainly affects the lower lip, which typically receives more sun exposure than the upper lip.

LEUKOPLAKIA

These white patches on the tongue or inside of the mouth have the potential to develop into squamous cell carcinoma.

BOWEN'S DISEASE

This is now generally considered to be a superficial squamous cell cancer that has not yet spread. It appears as a persistent red-brown, scaly patch which may resemble psoriasis or eczema. If untreated, it may invade deeper structures.

WHAT TO LOOK FOR

Squamous cell carcinomas occur most frequently on areas of the body that have been exposed to the sun for prolonged periods. Usually, the skin in these areas reveals telltale signs of sun damage, such as wrinkling, changes in pigmentation, and loss of elasticity. Any sore that does not heal or a persistently crusty patch of skin is suspicious for squamous cell carcinoma.

NOT A TRIVIAL CANCER

When detected in its early stages, squamous cell carcinoma is almost always curable. The larger the tumor has grown, however, the more extensive the treatment needed. Localized tumors that are not treated promptly can result in loss of an eye, ear, or nose, making early detection critical. Although squamous cell carcinoma rarely metastasizes to vital organs, when it does it is frequently fatal.

Because most treatment options involve cutting the skin, some scarring from removal of the tumor has to be expected. When a small tumor is removed, the result is generally cosmetically acceptable. Removal of a larger tumor, however, often requires reconstructive surgery, involving a skin graft or flap to cover the defect.

**POSSIBILITY OF RECURRENCE**

Anyone who has had one squamous cell tumor has an increased chance of developing another. This is because the damage the skin has already received from the sun cannot be reversed. Having had a basal cell carcinoma also makes it more likely that a squamous cell carcinoma will develop, because both types of skin cancer are usually caused by excessive sun exposure.

Even though a squamous cell tumor has been carefully removed, another may arise in the same place or nearby. Such recurrences typically occur within the first two years after surgery. Squamous cell carcinomas on the nose, ears, and lips are especially prone to recurrence. Should the cancer recur, the physician may recommend a different type of treatment the second time. Some methods, such as Mohs micrographic surgery, may be more effective than others in such cases.

It is important to examine the entire body periodically for warning signs of squamous cell carcinoma. The possibility of recurrence make it crucial to pay particular attention to any previously treated site. Even if no suspicious signs are noticed, regularly scheduled follow-up visits are an essential part of post-treatment care.

TYPES OF TREATMENTS

After a physician's examination, a biopsy will be performed to confirm the diagnosis of squamous cell carcinoma. This involves removing a piece of the affected tissue and examining it under a microscope. If tumor cells are present, treatment (usually surgery) is required.

Fortunately, there are several effective ways to eradicate squamous cell carcinoma. The choice of treatment is based on the type, size, location, and depth of penetration of the tumor, as well as the patient's age and general state of health.

Treatment can almost always be performed on an outpatient basis in a physician's office or at a clinic. A local anesthetic is used during most procedures. Pain or discomfort is usually minimal with most techniques, and there is rarely much pain afterwards.

EXCISIONAL SURGERY

The physician uses a scalpel to remove the entire growth and a surrounding border of what happens to be normal skin as a "safety margin." The incision is then closed with sutures. The removed tissue is sent to the laboratory, where it is examined microscopically to ensure that all the malignant cells have been removed.

ELECTRODESICCATION AND CURETTAGE (ELECTROSURGERY)

The physician scrapes the cancerous tissue away from the skin with a sharp, ring-shaped instrument called a curette; then uses an electric needle to burn the scraped area and a margin of normal skin around it. We repeat this process three times during the procedure. This is approximately 95% effective in removing SCC.

CRYOSURGERY

The physician uses liquid nitrogen to destroy tumor tissue by freezing. No cutting is involved in this bloodless procedure, which may be repeated several times at the same visit to ensure total destruction of malignant cells. Redness, swelling, blistering, and crusting can occur following this treatment.

MOHS MICROGRAPHIC SURGERY (MICROSCOPICALLY CONTROLLED SURGERY)

The surgeon successively removes very thin layers of the tumor. Each layer is examined immediately under a microscope. Removal and microscopic examination are repeated until the site is tumor-free. Mohs micrographic surgery saves the greatest amount of healthy tissue and reduces the rate of local recurrence. It is most often used on tumors that have recurred and on those in locations that are difficult to treat (for example, the nose, ears, and around the eyes).