

SKIN CANCER

Cancer of the skin is the most common of all cancers, accounting for more than 500,000 cases each year. Fortunately, this is the easiest of all cancers to detect and most can be treated successfully. Skin cancer is linked to repeated exposure to the sun, and can be largely prevented with simple precautions. As with other cancers, skin cancer is more easily prevented than cured.

The skin is the largest organ of the body. It performs several important functions. It protects the structures underneath from injury. It regulates body temperature, excretes wastes, and prevents the loss of too much water and other compounds. The skin also serves as a sense organ for touch, pressure, cold, heat, and pain.

The skin has two main layers and several sublayers. The lower layer of connective tissue is the dermis. The thinner, uppermost layer is the epidermis.

Types of Skin Cancer

There are three types of skin cancer. Each has unique characteristics.

Basal Cell. Basal cell cancers resemble the layer of cells that form the base between the epidermis and the dermis. They are slow-growing and do not spread to other parts of the body, although they can invade deeply and widely if left untreated.

Basal cell cancers can have a high rate of recurrence; a person who develops one basal cell cancer has a 40 percent chance of developing another. Although basal cell cancer used to be considered a disease of middle age or older, it is being seen more and more among young people as a direct result of exposure to the sun's rays. Presently basal cell cancers account for 75% of all skin cancers.

Squamous Cell. Squamous cell cancers resemble the middle and uppermost layers of the skin. Squamous cell cancers grow more quickly than basal cell cancers and are more likely to invade underlying structures. They are also more likely to spread to other parts of the body. Still, only about 2% of squamous cell cancers spread, although this figure rises to 20% for such cancers forming in burn or x-ray scars and those that occur on the lips. Approximately 20% of skin cancers are squamous cell.

Malignant Melanoma. The less common most dangerous type of skin cancer, malignant melanoma begins in cells known as melanocytes. These cells produce the pigment, melanin, that results in a tan to help protect the skin from burning. Because malignant melanomas still produce this dark pigment, their coloring often includes shades of brown and black.

Melanoma is much more likely to spread than the other forms of skin cancer. Melanomas that spread to organs near the original site can still be cured in many cases, but those that migrate to distant sites often cannot. That is why melanoma accounts for only 5% of skin cancer cases, but 75% of the deaths.

Precancerous Conditions

Middle-aged individuals, particularly those with lighter skin, may develop flat, scaly patches known as solar keratoses. They, too, are caused by overexposure to the sun. They may be pink, yellow, or brown and usually appear on the head, shoulders, and shins.

Solar keratoses are slow-growing and do not usually produce any symptoms other than the visible skin patch and itch and tenderness. Although they may not be very noticeable or troubling, they can turn into squamous cell cancers if not removed.

There are other skin conditions which could become cancers. Regular examination of the skin by a physician is essential.

Early Detection of Skin Cancer

Any unusual skin condition or any change in an existing skin condition should be checked by a physician. Only a physician can determine for sure whether an abnormal growth is benign, precancerous, or cancerous.

You can notice a change only if you are already familiar with your skin and its pattern of moles, freckles and other marks. The best way to do this is to give yourself a skin examination, particularly noting the pigmented areas.

Basal cell cancers often first appear as small round or oval patches, usually white or gray, shiny, and hard, but sometimes pink or red and scaly. The appearance of squamous cell cancers is more variable, but they are usually small, round, slightly elevated, and red and crusty, often with a sore in the center that does not heal.

Although melanomas can appear suddenly on the skin, they are often associated with a mole. That's why it is important for people to become familiar with their moles and note any changes. The ABCDE rule can be used to help distinguish a normal mole or other skin mark from a melanoma.

Melanomas display one or more of the ABCDE characteristics:

Asymmetry. One half does not match the other.

Border irregularity. The edges are ragged, notched, or blurred.

Color. The color is not uniform, but may be differing shades of tan, brown, or black, sometimes with patches of red, white or blue.

Diameter. A diameter greater than 1/4 inch and any that is increasing in size may indicate a melanoma.

Elevation. A mole raised above the skin surface.

Prevention

Overexposure to the ultraviolet rays of the sun is the principal cause of skin cancer. Fair skinned people, notably redheads and blonds, are the most likely to get skin cancer, because they lack sufficient quantities of melanin, the pigment that helps prevent burning.

Skin cancer rarely occurs in childhood and the average age for discovery of a first skin cancer is 50. That age is decreasing as skin cancer becomes more common among younger people.

People who work outdoors, such as farmers and sailors, and those who play a lot of outdoors sports or lie on the beach are at high risk of developing skin cancer.

Sunlight is most intense and most damaging between 10 am and 3 pm. The risk of exposure drops considerably before and after those times. If you must be out in the sun during midday protect your skin from direct exposure to the sun.

There are two basic ways of protecting your skin from the damaging effects of ultraviolet (UV) rays:

- Blocking out all light with opaque materials such as clothing
- Using a chemical sunscreen that selectively absorbs ultraviolet rays.

Blocking out all the light is the most effective method but may not be practical. A loose-weave cotton such as a white T-shirt passes large amounts of UV light. Shade from trees or umbrellas only provides partial protection since UV light may be reflected from water, snow, equipment or soil. If you must be in bright sunlight it is best to protect yourself by wearing long sleeved shirts and wide brimmed hats.

There are many clear sunscreens available that absorb UV light. The better ones are labelled with a number called the sun protection factor (SPF). The higher the SPF the better the protection. The best sunscreens have an SPF of at least 15. Most sunscreens wash off in water so it will need to be re-applied after swimming or washing. Sunscreens will need to be reapplied if you are perspiring heavily.

You should also protect your lips from sun damage. Lip balms with sunscreen protection are available.

If **you** must be out in the sun a lot, or if you have extreme sensitivity, use an opaque sunscreen such as zinc oxide, a thick white ointment, to completely cover vulnerable areas such as lips and noses.

While we can never be completely free from cancer risk it is prudent to take whatever steps we can to reduce our chances of contracting a cancer. Skin cancer is one cancer that is clearly preventable.
