

SKIN CANCER AWARENESS

Our skin is the largest organ in our body and functions as the first line of defense against microbes and trauma and even cancer. It produces vitamin D, regulates our body temperature, and balances salt and water content, thus preserving body homeostasis. We can feel textures, temperature, and pain through our skin, giving us information about the environment around us. Skin is also very plastic, having amazing healing and reparative properties. And it makes humans look beautiful. We judge skin to be the window into our body's health.

While plants have natural antioxidants to fight the damaging effects of carcinogenic UV light from the sun, humans are limited in our defense mechanisms, especially those who are more fair-skinned and light-eyed. Those with certain genetic diseases are also much more susceptible also as they lack the enzymes to repair UV-damaged DNA.

Any cancer starts off with DNA mutations that cause uncontrolled cell proliferation. Skin cancers account for over half of all cancers occurring in humans. We differentiate skin cancer into being either "non-melanoma" skin cancer (NMSC) or melanoma type skin cancer. UV light, in particular, sudden intense intermittent bursts during the childhood years as well as later chronic exposure to UVB rays, is the culprit for promoting most NMSCs.

There are more than 1 million cases of NMSCs per year, and are subdivided into two main groups – basal cell and squamous cell carcinomas.

Basal cell carcinomas are the most common cancer in man. They almost never metastasize and are usually easily curable. They often occur on sun-exposed areas of the face, neck, legs, arms, and back as "pearly" small flesh-colored growths that persistently bleed and grow. Basal cell carcinomas often arise in the 5th and 6th decades of life, but can arise as early as in the early 20's.

Squamous cell carcinomas often present as scaly thick plaques, also on sun-exposed areas. They also have a low metastasizing potential, but there have been unusual cases where they have spread from skin to internal organs. These cases often are in elderly, debilitated adults or in those with a suppressed immune system. However, in most cases, they are completely curable. Of note, the HPV (wart) virus or exposure to certain chemicals such as arsenic can speed up transformation of squamous cell carcinomas.

Melanomas can be the trickiest of cancers. Although also easily curable if detected early, they can be deadly if detected late. There are 60,000 cases of melanoma discovered annually, but are responsible for over 75% of skin cancer deaths, causing over 8000 deaths per year. Melanomas have the ability to escape the heartiest of immune surveillance systems. They can lay dormant for years, and then suddenly appear again in another part of the body. Though mainly arising on the skin as dark, changing, bleeding moles, melanomas unfortunately have the potential to arise in parts of the body never exposed to sun. There can be rare primary melanomas of the eye, brain and spinal cord, mucous membranes, and GI tract. Melanomas can also arise in almost any age group and often occur in individuals with a previous family history. Red-heads and blondes are most prone to being susceptible to melanomas, especially if very "moley."

Treatment of NMSCs often involve localized treatment with certain creams, acids or freezing agents. Surgical treatment includes "scraping and burning" them or excising them. For melanomas, they have to be excised with a certain amount of normal skin, and if they are a deeper growth, the lymph nodes and other organs may need to be evaluated as well.

Our vigilance against skin cancers first involves proper recognition. For NMSCs, watch for a bleeding, shiny or scaly growth that can tingle, burn, or itch. For melanomas, follow the “ABCDE” rule to single out the suspicious moles: A – asymmetry, B – border irregularity, C – color changes, D – diameter bigger than a pencil eraser, E- evolution or changes in pattern, size, color, sensations etc.. Preventative measures include use of consistent adequate sunscreen use, wearing protective clothing and eyewear, avoiding tanning parlors, protecting our children and ourselves from excessive sun exposure, especially from peak sun times of 10am to 4pm, doing monthly self-skin checks, and seeing a Dermatologist.

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