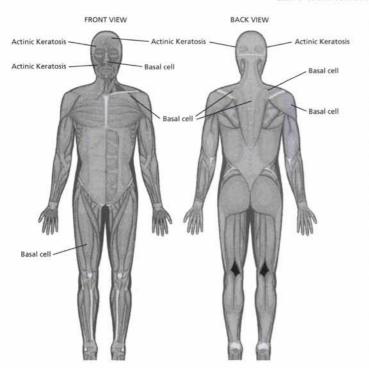
Tim Anderson, CGCS Prestwick Country Club

SKIN DEEP



"39-year-old male with history of basal cell cancer times seven. Status post Mohs' Procedure, right nasal fold. Occupation involving excessive sun exposure. Previous interventions as diagrammed below."

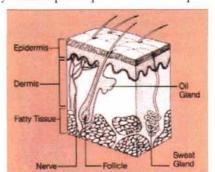
That's me. Or at least that is who I am in the eyes of my dermatologist. I was first diagnosed with a non-melanoma form of skin cancer in 1994, at the age of 30. But I am not alone. About 1 million people a year learn that they have skin cancer.



Skin

The skin is our body's outer covering. It protects us against heat, light, injury and infection. It regulates our body temperature and stores water, fat and vitamins. Our skin is made up of two layers: the outer layer, which is called the epidermis, and the inner layer, which is referred to as the dermis. The epidermis is primarily made up of squamous cells. Squa-

mous cells are flat, scale-like cells. Under the squamous cells are round cells called basal cells. The deepest part of the epidermis (outer layer of the skin) contains melanocytes. Melanocytes produce melanin, which is what gives the skin its color.



The dermis layer (inner layer of the skin) is located underneath the epidermis. The dermis contains blood vessels, lymph vessels, hair follicles and sweat glands. These glands can also produce oil, which helps to keep the skin from drying out.

What Is Skin Cancer?

In a perfect world, healthy cells grow, divide and replace themselves in an orderly manner. When normal cells lose their ability to replace themselves in an orderly manner, then chaos rules and the cells grow at an accelerated rate. Too much tissue is produced and tumors begin to form. (continued on page 12)

Tumors are classified as either benign or malignant. Benign tumors are not cancer. They do not spread, and are seldom life-threatening. Malignant tumors are cancerous. They can spread (metastasize) to other organs. When this abnormal growth involves skin cells, then it is identified as skin cancer.

Types of Skin Cancer

There are three types of skin cancer: basal cell carcinoma, squamous cell carcinoma and malignant melanoma. Carcinoma is a term used to refer to any cancer that begins in the cells that cover or line an organ. (Your skin is an organ.) Basal cell and squamous cell carcinoma are sometimes collectively referred to as non-melanoma skin cancer. Melanoma is a skin cancer that develops in the melanocytes. Melanoma is more serious than basal or squamous cell cancer. Melanoma can spread (metastasize) quickly to other parts of the body through the lymph system or blood. If left untreated, melanoma can advance, resulting in terminal skin cancer.

Another term common to any discussion of skin cancer is *actinic* keratosis. Actinic keratosis can appear

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Obviously this statistic
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as a rough, or red, scaly patch on your skin. Technically, actinic keratosis is not classified as cancer. However, such areas are important because they frequently indicate a precancerous condition and they can serve as early warning indicators for squamous cell skin cancer.

Both basal cell and squamous cell cancers are found mainly on exposed areas of the skin (head, face, neck and arms). However, skin cancer can occur anywhere on the body.

Cause and Prevention

Skin cancer is the most common type of cancer in the United States. The incidence of skin cancer is on the rise. One estimate suggests that 50% of all Americans will have skin cancer at least once. Ultraviolet (UV) radiation from the sun is the main cause of skin cancer. Your risk of skin cancer is affected by what part of the country you live in as well as your lifetime exposure to UV radiation—in other words, how much time you have spent in the sun. Most people receive 80% of their lifetime exposure to the sun by 18 years of age. Obviously this statistic doesn't hold true for people who work outdoors, such as golf course employees.

People most at risk for skin cancer have fair skin, freckles, blond hair and light-colored eyes. Some studies have found that as few as one blistering-type sunburn during your childhood can increase your chance of developing skin cancer by 50%. Maybe mom wasn't so crazy after all when she made you wear that t-shirt to the pool.

Most skin cancers don't develop until after age 50, but keep in mind that skin cancer is very slow-growing. A sunburn received this year could initiate a change in the growth of your skin cells that may take up to 20 years to develop into a cancerous condition.

The American Academy of Dermatology and the Skin Cancer Foundation recommend the following steps to reduce the risk of skin cancer:

 Minimize your exposure to midday sun (10:00 a.m. – 4:00 p.m.).

- Apply sunscreen with an SPF of 15 or higher to all exposed areas.
- Reapply sunscreen every two hours (or as needed due to perspiration) even on cloudy days.
- Wear clothing that covers your body and shades your face and neck.
- Avoid exposure to UV radiation from tanning booths.
- Protect your children. Severely limit exposure of children under the age of 6 months to UV rays.
- Protect your eyes from UV rays. Absorption of UV rays by the eye and surrounding area can cause benign or malignant growths on the eyelids or surface of the eye.
- Initiate these preventative measures at an early age and continue them through adulthood.

Symptoms

The most common warning sign of skin cancer is a visible change in the texture and/or appearance of your skin. This is especially true if you experience a new growth, notice a mole that changes size or color or develop a scab that doesn't heal. Skin cancers don't always look the same. Most commonly, skin cancer appears as:

 A small, smooth, shiny, pale or waxy lump.



2. A firm red lump.



A lump that bleeds or develops a crust.



Look for the following early warning signs (A, B, C, D):

 A – Asymmetry (common moles are round and symmetrical; asymmetrical moles could indicate an abnormal growth).

- B Border (skin cancers routinely have uneven borders).
- C Color (watch for various shades of brown, tan, black, red or blue).
- D Diameter (if a spot is larger than a pencil eraser, it should be checked).

Just because you notice a change in your skin does not mean that you have cancer. However, if a change persists, then you should have it checked by a physician. Remember, you can have symptoms present without feeling any pain or discomfort.

Detection, Self-Exam and Diagnosis

A more conservative estimate is that one out of seven people in the United States will develop some form of skin cancer during their lifetime. Given our work environment, it is extremely likely that even if we practice proper skin cancer prevention techniques, we will still develop skin cancer. This makes early detection and diagnosis key. The cure rate for skin cancer is close to 100% if it is

caught before it has a chance to spread. Frequent self-exams and periodic exams by a physician are the best means of detection. When you are doing a self-exam, you should check your skin in a well-lit room using a full-length mirror. Check all areas, including your back, scalp, underarms, feet, hands, etc. Make notes of anything that is different since your last exam. By checking your skin regularly, you will become familiar with what is normal and it will be easier to detect any unusual changes. Schedule an annual skin cancer screening with a physician. Make them aware of your above-average UV exposure. Draw the doctor's attention to any questionable areas that you have identified while conducting self-exams.

Diagnosis usually involves the surgical removal of all or part of any abnormal growths. This is called a biopsy. The biopsy is sent to a pathologist, who examines it under a microscope to determine whether or not it is cancerous. If it is cancerous, then it is classified as either local (continued on page 15)

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"Where Meadow Goes, the Water flows"

(affecting only the skin) or metastatic (spreading beyond the skin). If it is metastatic, then the physician may conduct additional biopsies of the adjacent tissue and lymph nodes, prior to determining a treatment plan.

Treatments

Any treatment plan should be developed and implemented by a trained physician. Doctors specializing in diseases of the skin are called dermatologists. When treating skin cancer, the doctor's main goal is to remove or destroy the cancer completely. Treatment methods may include surgical removal, radiation treatments, chemotherapy, Mohs' surgery, electrodessication, cryosurgery, laser treatments, skin-grafting or topical chemotherapy lotions.

New treatments currently being researched include photodynamic therapy, which combines the use of drugs (which make the cells sensitive to light) in combination with the use of a laser. Biological therapy (also called immunotherapy) is a treatment

aimed at improving the body's natural ability to fight cancer. Interferon is an experimental type of biological therapy.

As important as early detection and treatment is proper follow-up care. Once cured, skin cancer can recur in the same spot. After you have been diagnosed with skin cancer, you have a higher-than-average risk of developing a new skin cancer somewhere else on your body.

Ask the Experts

For me to be researching and writing this article is somewhat ironic. If I truly had any expertise on this topic, then I would be more effective at protecting myself from exposure to the sun.

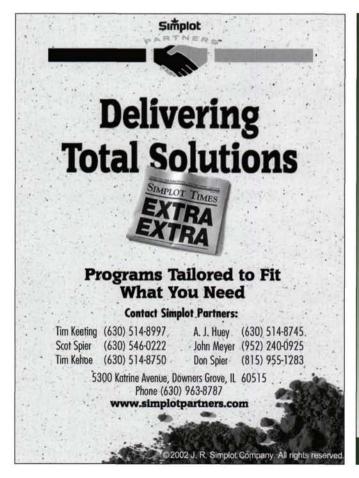
When it comes to skin cancer, expert advice should be obtained from a qualified physician. You can get references for a board-certified dermatologist by contacting the physician referral service at your local hospital, contacting the American

Academy of Dermatology, contacting the Illinois State Medical Society or obtaining a referral from your primary care physician.

Fact vs. Fiction

- Fact = Nearly half of all new cancer cases reported in the United States annually are skin cancer.
- Fact = More than 1 million new cases of skin cancer will be diagnosed this year.
- Fact = Basal and squamous cell carcinoma have a better than 95% cure rate if treated early.
- Fact = 9,800 people will die from skin cancer this year.
- Fact = In the United States, one person dies from melanoma every hour.
- Fact = Caucasian males over age 50 have the highest mortality rates from melanoma.
- Fact = Between 1980 and 2003, the incidence of melanoma has more than tripled for Caucasians.

(continued on page 17)





- Fact = In 2003, the number of new cases of melanoma reported in the United States increased by 4%.
- Fact = Currently 1 in 39 Americans will develop melanoma.
- Fact = Currently I in 67 Americans will develop metastatic melanoma.
- Fiction = Skin cancer only affects the elderly.
- Fiction = Tanning booths and sun lamps are safe sources of UV rays and do not increase the risk of skin cancer.
- Fiction = Individuals that tan or have dark complexions are not affected by UV rays and do not need to be concerned with skin cancer.

Summary (It's Your Hide -So You Better Protect It!)

This article really doesn't contain any new information beyond what we have all heard before. My purpose is rather to convince you of the following:

- Accept that given our profession, we are all at an elevated risk for skin cancer.
- Make a serious commitment to selfexamination, early detection and skin cancer protection.
- Take advantage of the opportunity that this off-season presents to make an appointment with a qualified dermatologist for skin cancer screening.

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