# Skin Cancer: Risk Factors, Treatment Options, and Prevention

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While skin cancer is preventable, ultraviolet (UV) exposure, genetics, and lack of awareness contribute to rising cases. Skin cancer is the most common form of cancer in the United States (Centers for Disease Control and Prevention, n.d.). With about 6.1 million adults being treated for basal cell or squamous cell carcinoma each year according to the National Institute of Health, there are multiple ways to get skin cancer, some modifiable risk factors, and some non-modifiable. (Gruber & Zito, 2023). Skin cancer prevention through education, screening, and early treatment can significantly reduce its impact on those who suffer from it and staff within the healthcare system.

## Why is Skin Cancer a Problem? Who is at Risk?

Skin cancer occurs when some type of carcinogen or cancer-causing agent, most commonly UV radiation, meets the skin and results in mutated epithelial cells (Gruber & Zito, 2023). To understand the epidemic of skin cancer, it is important to know the pathophysiology of this disease, or rather, what is going wrong in the skin cells that are causing malignancy. When something alters the way our skin cells grow and mature, specifically making the cells grow quicker and with less structure, skin cancer occurs. These fast-growing cells can be benign, meaning they are not negatively impacting surrounding tissue by spreading to them; or they can be malignant, which means they are spreading to surrounding tissue and can cause potential issues. There are three main types of skin cancer: basal cell carcinoma, squamous cell carcinoma, and melanoma. Basal cell carcinoma is a malignancy that occurs in the epidermis (Taylor & Schub, 2024). This is also true for squamous cell carcinoma (Spitzer & Schub, 2024). Melanoma is a type of skin cancer that forms in the melanocytes of the skin, and this is the most serious form of skin cancer because it spreads significantly (Pierre-Louise, 2023).

Many risk factors have been identified for skin cancer. The most common non-

modifiable risk factors include family history, those who are immunosuppressed, and the Fitzpatrick skin type – or people who have pale skin and cannot tan so they only burn in direct sunlight (Gruber & Zito, 2023). The most common modifiable risk factors are tanning bed use, sun exposure, and exposure to certain chemicals (Gruber & Zito, 2023). It is important to know who is at risk of getting skin cancer, especially when lifestyle modifications can potentially prevent the occurrence.

This disease can have a significant impact on the nursing community, not only due to hospitalizations for the disease itself or adjacent issues but also the mortality rate of skin cancer. In the state of Delaware in 2021, across all races, ethnicities, ages, and genders, the rate of Melanomas of the skin was 20.8 per 100,000 people; 290 cases were reported (Centers for Disease Control and Prevention, 2024). This also increases the burden on the nursing community because it can lead us to exhaust resources for advanced cases, as well as higher costs due to needs from specialists in oncology, which causes a strain on the already demanding healthcare system. According to The National Library of Medicine, "Studies have also shown that individuals diagnosed with NMSC are at increased risk of developing a subsequent incident case of BCC, SCC, or melanoma" (Kao et al., 2023).

## Reducing the Risk for Skin Cancer; Treatment Options

As previously stated, lifestyle changes considering modifiable risk factors are the number one way to reduce the risk of developing skin cancer. The biggest takeaway for patients concerning prevention is limiting UV exposure. Wearing sunscreen when prolonged sun exposure is planned is very important in protecting the skin from the harsh carcinogens that cause skin cancer. While this is important, wearing hats and protective clothing is also important to ensure the skin is not being exposed to UV rays for too long, as this drastically increases the

risk of skin cancer.

While there are many treatment options available, the MOHs procedure is the most popular procedure done for those with skin cancer. It is oftentimes the most effective way of ridding the skin of cancerous cells. An indication for this surgery is to preserve the appearance in cases where skin cancer is on the face. This surgery is utilized when tumors are large, unresponsive to other treatments, and impeding activities of daily living. Oftentimes the patient is awake for the procedure, with a local anesthetic provided for maximum comfort (Golda & Hruza, 2023). Alternative treatment options include chemotherapy and immunotherapy, which are treatments that almost all carcinomas share. Chemotherapy involves the destruction of fast-growing cancer cells and targeting specific cancer cells and killing them to stop the spread, whereas immunotherapy works to boost the immune function of the patient to fight the cancer on their own. These therapies are typically used together to get the most effective results.

## Important Patient Education on Skin Cancer

The two biggest goals of patient teaching are that the patient will identify at least two risk factors for skin cancer and that the patient will identify at least two prevention measures for skin cancer. Our plan as a group to ensure our audience can meet these goals is to utilize a sorting game in which there will be two categories: Skin Cancer and Not Skin Cancer. There will be a pile of photos that are abnormalities to the skin, some will look malignant, and others may look like a common mole. We will have our audience sort out which they think is cancerous and which they think is not, but the trick is that they will all be skin cancer. The importance of this teaching tool is to explain to our patients that when self-screening, even the smallest and most innocent-looking lesion can be skin cancer. We will present information on a trifold poster with small pamphlets that demonstrate the information presented on the trifold, and we will have

samples of Sun Protection factor (SPF) sunscreen for audience members to take.

People need to know what they are looking for when self-screening for skin cancer. Skin cancer can manifest as a new scab, mole, or wart-appearing lesion on the surface of the skin that was not there before. Patients need to note the size and color of these lesions, and their provider, specifically their dermatologist, should be made aware of the new development. This is so the size can be tracked, and prompt treatment can be scheduled if the lesion grows. Some other patient teaching points that are important to note, and have been previously mentioned, are the use of SPF sunscreen, wearing a hat, and a thin long-sleeve shirt if a person is going to be in prolonged exposure to the sun.

## Conclusion

As stated above, many treatments are available for this disease, but thorough education about sun protection and prevention is the most effective way to reduce skin cancer rates. It has been proven through evidence-based practice that sunscreen will protect against UV rays, genetics plays a role in the risk for skin cancer, and excision of affected tissue can remove cancerous cells and prevent metastasis or spread. The importance of bringing awareness to this disease is to lower the number of cases seen across the years and to help patients catch their cancer early to preserve maximum quality of life.

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