

## **Analysis of Skin Cancer**

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Two types of cancers affect the skin are Non-Melanoma and Melanoma. Basal cell and Squamous cell carcinoma are both nonmelanoma skin cancer, resulting in the most common form people develop so much so “BCC and SCC incidence increased by 145% and 263%, respectively, from 2000 to 2010 in the United States” (Dugan et al., 2024, para 1). While Melanoma is produced from melanin which can produce fatal effects. Although this form of cancer can be fatal, both can be prevented and treated. Skin cancer is under-reported and very common diagnosis but can be prevented through knowledge of proper abnormalities on the skin, understanding modifiable risk factors, and education on preventative measures.

### **Statement of the Problem**

Skin cancer poses many risks among people today, including some risk factors that do not immediately impact the skin. Starting off, genetics play a large role in developing skin cancer. Fair skin, blonde /red colored hair, light colored eyes, family and personal history of skin cancer all are considered. Other risks include spending excessive time in front of natural UV rays, indoor tanning and smoking. The three common cancers associated with the skin are Basal cell carcinoma, Squamous cell carcinoma and Melanomas.

Basal cell carcinoma is formed in the epidermal layer of the skin, locally invasive, more prevalent but the least deadly form of skin cancer. Affected areas include head and neck, sometimes in other extremities as well. Basal cell carcinoma has an opaque appearance and very pigmented, some may have borders that curl up with a dip in the center of the skin affected. White males have a 36% risk and white women 25% risk of development over their life (Bader, 2024). The tumors are slower growing have over a 90% cure rate as they rarely metastasize and only occurring in 1 per 14,000,000 people.

Squamous cell carcinoma is still formed in the epidermal layer, but the cells are keratinized which causes this type to be more aggressive than basal cell. Squamous cell has the means to metastasize and can lead to death if they are not properly treated in a timely manner. Squamous cell affects immunosuppressed patients and patients who smoke tobacco in addition to sun exposure. In addition to the risk factors listed previously, aging has a large effect as it is more commonly seen in the older population greater than sixty years of age. Immunosuppressed are at an extreme higher risk including patients of major diagnosis's that involve vital organ transplants due to new foreign bodies affecting the remaining body composition (Dugan et al,2024). Squamous cell carcinoma will present as thin and scaly red area that does not go into the dermis of the skin, in late stages skin can ulcerate or keratinized that may look like a scale or horn on the skin.

Lastly Melanomas are formed from melanocytes. Melanocytes form the skins Melanin, and these cells form into tumors, contributing to most skin cancer related deaths. Melanoma is mostly caused from UV radiation, both natural and artificial in addition to a person's genetic makeup. Melanoma will present in irregular colors, surface, and borders. The skin can become elevated, flat, eroded, or ulcerated and generally less than one centimeter in size. Melanoma is "fifth most common cancer in the US. Melanoma incidence is rising in develop predominantly fair-skinned countries, growing over 320% in the US since 1975" (Saginala et al, 2021, para 1). There has been a major increase in melanoma over the years in the USA and cause around 80% of skin cancer related deaths (Saginala et al, 2021).

Leaving skin cancers untreated can leave the nursing community with a negative impact. Increased patient load is a large factor especially in overpopulated areas surrounding coastal areas. Prolonged waiting periods and less providers are available to assess patients with possible

skin cancer leading to high levels of stress in nurses working in the dermatology field. Another way untreated skin cancer affects the nursing community is decreased resources and updated knowledge. In order to inform the public and educate patients on these conditions, there needs to be increased research done to keep up with updated ways to treat and prevent cancer. Skin cancer going untreated and undetected cannot provide these resources to the public.

### **RISK REDUCTION/ TREATMENT OF THE PROBLEM**

Prevention is the first step to stop increasing incidents of skin cancer. Prevention starts with education pertaining to the skin and adjusting modifiable risk factors. Although nonmodifiable risk factors play a big role in developing skin cancer, about 95% of skin cancers are related to modifiable risk factors (Perez et al, 2022). Reversing modifiable risk factors including skin exposure to UV rays, untreated sunburns, smoking, tanning bed uses, etc. can decrease the amount of cancer occurrences in America. Using Products like broad spectrum sunscreen, protective hats and shirts while out in the sun, avoiding exposure during the highest levels of UV (8-12), and avoiding artificial UV such as tanning beds can make a remarkable difference in skin health.

Screening is the next step in stopping the development of skin cancer. There are many ways to screen skin cancer including ABCDE (self-checks), biopsy and yearly appointments with a dermatologist. ABCDE is a method used for patients to screen their bodies at home. A is Asymmetry, is the mole on one half the same as the other side or different. B is Border, are the edges of the site irregular, flat, scalloped, defined. C is Color, is the color the same through out the mole, are there irregular shades of brown, red, blue, black, or white. D is for Diameter, how big does the mole look, is it smaller or larger than a pencil size eraser (6mm). E is for Evolving, has the mole or site changed in size, color, and shape. Biopsies are another way to screen for

skin cancer, this includes removing a piece of skin tissue for testing under microscopic examination. Curettage biopsies are used to scrape the skin to obtain the specimen. Shave biopsy includes using a scalpel to cut the moles and lesions from the top layer of the skin which includes the epidermis and Excisional biopsies have similar use except it is making a larger incision to remove a full lesion. Lastly, Punch biopsies is a deeper incision including up to a 6mm punch to remove a piece of skin deeper in the layers of the skin. The provider moves the punched-out skin away from the edges and pulls the skin out with use of forceps and a scalpel (Brown, 2023). Following up with a dermatologist for yearly appointments is also a screening and preventative measure, ensuring a fresh set of eyes from a provider of dermatology practice will be able to note if a spot or mole on the skin can be a possible sign of cancer.

Treatment of skin cancer can include MOHs surgery, chemotherapy, and radiation. MOHs surgery is used to treat skin cancer and deemed to be very successful because it preserves more healthy skin than other surgical options due to a closer analysis on the cancerous lesion and avoiding cutting out what is not infected (Beal et al, 2023). Skin cancer can also be treated through chemotherapy and radiation as well. Radiation is used to target the outer layer of the skin around and over the area where the tumor is. Common way to receive radiation is through low energy x-ray (superficial) and electrons (electron beam radiation which does not infiltrate deep into the skin layers). Chemotherapy is often applied in a topical or dermal form. These forms of chemotherapy are preferred over intravenous and oral routes because it is less painful and decreased transmission of cancer due to no needles as well as preventing GI breakdown and distress that chemotherapy can also cause. Topical and dermal chemotherapy leads to better patient compliance (Hasan et al, 2023).

### **Planning of Teaching Content**

Teaching about skin cancer can be a tough topic to understand and grasp because the thought of cancer can be scary and worrisome to most people. Two learning objectives that will be included in the community health fair will be differentiating between the three types of skin cancer – what is abnormal and should be reported as well as understanding preventative treatments. To engage the audience, implementation will include a game, hard facts pertaining to the information provided and teach back methodology through question and answers. Teaching tools will include a tri-fold poster including the different types of skin cancer, modifiable and non-modifiable risk factors, treatment, and preventative measures. The second tool will be a game that is a series of pictures that the community will have to decipher if the mole or lesion looks cancerous or not. The last tool that will be included is free samples of mini broad-spectrum sunscreen. These tools will engage the community to think critically and gain new insight on skin cancer.

### **Conclusion**

In conclusion understanding the different types of skin cancers such as Basal cell carcinoma and Squamous cell carcinoma and melanoma can help associate risk factors and preventative measures to instill when individuals are seeking information in relation to cancer. Nurses play a vital role in recognizing skin cancer: what it looks like and what the cause maybe as well as providing knowledge and teaching about preventative measures and treatment options to take when implementing the next step for patients. Skin cancer is under-reported and very common diagnosis but can be prevented through knowledge of proper abnormalities on the skin, understanding modifiable risk factors, and education on preventative measures.

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