

Skin Cancer

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Over 4.3 million Americans are treated for skin cancer every year, making it the most common type of cancer in the country, as reported by the Centers for Disease Control and Prevention (2022). Skin cancer is the abnormal growth of cells starting within the epidermis due to damage in skin cell DNA, with some types of skin cancer capable of metastasizing to other organs of the body if left untreated. There are three major types of skin cancer: basal cell carcinoma, squamous cell carcinoma, and melanoma. Basal cell carcinoma, the most common type of skin cancer, appears as a slow-growing, bleeding scab that heals and recurs without pain. It may have a flat, firm, pale area or become large and crust over. Squamous cell carcinoma (SCC) appears as a scaly, crusty, red ulceration with pearly spots that may bleed and not heal. Melanoma appears as an asymmetrical mole, with uneven brown and black color distribution and grows over time due to the excess regeneration of melanocytes. Additionally, there are also precancerous lesions that can be treated prophylactically, such as actinic keratosis. Skin cancer is incredibly common, but it could be argued that it is also both highly preventable and treatable with proper education, care, early detection, and acuity of one's own body. In this essay, I will elaborate on these concepts as well as explore treatment modalities and education.

Statement of the Problem

Skin cancer has a variety of risk factors, including excessive UV exposure, either from sun radiation without proper protection or from tanning beds; skin damage from burns or infections; radiation therapy; and psoriasis light therapy. Additionally, people who are immunocompromised, suffer from certain genetic diseases and predispositions, have fair pigmentation, blue or green eyes, and multiple moles, are also at higher risk for developing skin

cancer. Although some of these risks are modifiable, many Americans do not make choices to reduce their risk. Melanoma is responsible for the most skin cancer deaths, despite its lower incidence and prevalence ratings. In 2019, melanoma prevalence was 138 per 100,000 persons in the U.S., but with a mortality rate of 2.2. By comparison, squamous cell prevalence was 314 per 100,000 people with a mortality rate of 0.8. The same study revealed that the mortality rate of basal cell carcinoma was zero out of 100,000, although there was an incidence of 525 per 100,000 (Aggarwal et al., 2021).

Although basal cell and squamous cell carcinomas have low mortality rates, if either melanoma or SCC is left untreated, the cancer can metastasize to the brain, and other organs. Prevalence statistics demonstrate that nearly 45% of stage IV melanoma patients have intracranial metastases, and it is found in 75% of melanoma-related autopsies. Melanoma is the just behind breast and lung cancer in tendencies for the development of brain tumors (Yu et al., 2022).

Oncology nurses report a long list of work- related stressors, which include administering aggressive treatments; dealing with death, especially after developing close relationships with patients after long-term treatment; ethical issues related to care; heavy workloads; and short staffing, to name a few. Intracranial tumors can result in neurological dysfunctions, including strokes and seizures, which would place additional strain on Neuro ICU nurses. Without proper primary and preventative care, as well as education about skin cancer, these burdens will only increase (Wazqar, 2018).

Risk Reduction and Treatment of the Problem

Despite the frequency of skin cancer and the shared modifiable risk factor between the three major types being sun exposure, over 60 percent of Americans report not practicing adequate sun protection (Saginala et al., 2021). Sufficient sun protection is defined as sun avoidance during peak UV index between the hours of 10:00 a.m. and 4:00 p.m. and consistent application of an SPF higher than 30. Additional preventative measures include wearing clothes and hats that cover the skin, self-skin checks (or with the assistance of a loved one), and periodic visits with a dermatologist. When visiting a dermatologist, one can get screened via a physical and dermoscopic exam. A dermatoscope is a handheld microscope that allows for visualization in the epidermis and papillary dermis that cannot be seen with the naked eye to help a trained professional recognize abnormalities in nevi. A diagnosis is confirmed with a biopsy by examining removed cells. If the biopsy confirms cancer, and if there is suspicion of metastases, lymph nodes near the growth may be checked for malignancy with a sentinel lymph node biopsy (LaRusso, 2021). Lymph involvement would indicate stage III skin cancer, and if metastases involves other organs, then diagnosis would indicate stage IV. Stages 0 through II are localized and contained to the epidermis but differentiated by thickness. In the early stages, or in the case of a precancerous lesion, such as actinic keratosis, then cryosurgery may be indicated. Cryosurgery is when liquid nitrogen is pressurized and sprayed onto the skin abnormality in question. The spray kills the cancer cells by freezing them, and the abnormality falls off once skin temperature returns to normal. In stage III, lymph node dissection will be indicated. In stage IV, treatment varies. Surgery to remove the tumor may be curative if possible or used as palliative care through reduction of tumor size, depending on the extent, location, and organ involvement. Chemotherapy destroys cancer cells and can be used as a cure, control, or care. Chemotherapy for skin cancer can be used topically for early staging, and intravenously or orally

if indicated for later stages. In regard to prevention, some risks factors for skin cancer are nonmodifiable (e.g. a fair complexion, blonde/ red hair, blue/ green eyes, a genetic predisposition), but others can be adjusted. As mentioned previously, adequate sun protection can be used to prevent occurrence. Cessation of tanning bed use is also indicated. (LaRusso, 2021). A proper diet can help to prevent skin cancer occurrence as well as correct deficiencies that may occur because of cancer. Research shows that foods rich in resveratrol, a natural phenol, can reduce inflammation and promote antiproliferation in skin cancer cells by affecting the pathways responsible for cellular growth, and is antiangiogenic, thus preventing metastasis. These foods include blueberries, cranberries, peanuts, and red grapes with the skin. Coffee has also been found to be a preventative for skin cancer due to the antiangiogenic properties found in phenolic acids. Research suggests that the Mediterranean diet, which includes extra virgin olive oil, fatty fish, whole grains, beans, nuts, fruits, and vegetables, is the best diet for the prevention of skin cancer (Marcel, 2018).

Teaching

It is important to teach preventative measures, such as sun protection and diet, but it is also important to understand what to look for. By the end of engaging with community members or with a client receiving care, I would like for them to be able to verbally teach back to me the ABC's of skin cancer. This includes A for "asymmetry" of a mole; B for uneven "borders;" C for "Color," in which they identify the variety of colors that occur with skin cancer; D for "diameter" larger than a pencil eraser; and E for the way the appearance of the mole "evolves." After providing education, I would like for the learner to verbalize to me the ways they intend to protect themselves from the sun, including the use of SPF 30, and to name types of clothing items that help protect the skin, such as wide- brimmed hats. Since skin cancer can be detected

with visualization, pictures of different skin cancer types will be utilized in a trifold for the community health event. These pictures will include labels with information about the ABC's that were previously mentioned to help promote memorization. Samples of sunscreen with SPF 30 or above will be provided as well to enforce the message and provide community members with adequate protection.

Conclusion

As discussed throughout this paper, skin cancer is the most common cancer in the United States. Without proper education and prevention measures, it is likely to put strain on the healthcare complex. Measures, such as sun protection and annual skin exams, are likely to reduce the rates of skin cancer. Due to skin cancer being highly treatable, with a variety of modalities, it is possible that the attitude of Americans is that skin cancer is not dangerous. This is not true, as it can metastasize. Although complications can be avoided with a proactive approach to health. My hope is that Sussex Countians can continue to enjoy the beach and not fear the sun, while also possessing a strong internal locus regarding their dermatological health.

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