



Skin cancer from the perspective of public health concerns: etiology, transmission, diagnosis, treatment, and complications – correspondence

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Dear Editor,

Cancer is a condition in which the body's cells proliferate uncontrolled. Skin cancer refers to cancer that first appears on the skin. In the U.S., skin cancer is the most prevalent type of cancer. Although some people are more likely to get skin cancer than others, anyone can. Overexposure to ultraviolet (UV) light, whether from the sun or from artificial sources like tanning beds, is the greatest avoidable cause of skin cancer^[1]. Skin exposed to the sun is where skin cancer, or the abnormal proliferation of skin cells, most frequently occurs. Yet, this prevalent type of cancer can also develop on parts of your skin that are not often exposed to sunlight. The three main kinds of skin cancer are melanoma, squamous cell carcinoma (SCC), and basal cell carcinoma (BCC). By limiting or eliminating exposure to UV radiation, you can lower your risk of developing skin cancer. The early signs of skin cancer might be found by checking for abnormal changes in your skin. You have the best chance of successfully treating skin cancer if you find it early^[2]. Every day, more than 9500 Americans receive a skin cancer diagnosis. Every hour, more than two people pass away from the disease. In 2012, the most recent year for which there are updated figures, more than 5.4 million cases of nonmelanoma skin cancer were treated in over 3.3 million patients in the United States. In the United States, skin cancer diagnoses outnumber those of all other malignancies combined. By the time they turn 70, at least one in five Americans will have skin cancer. The most prevalent precancer, actinic keratosis, affects more than 58 million people in the United States.

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Sponsorships or competing interests that may be relevant to content are disclosed at the end of this article.

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Annals of Medicine & Surgery (2023) 85:2266–2267

Received 25 March 2023; Accepted 2 April 2023

Published online 14 April 2023

<http://dx.doi.org/10.1097/MS9.0000000000000662>

According to estimates, the yearly cost of treating skin cancers in the United States is \$8.1 billion, of which \$3.3 billion goes toward melanoma and \$4.8 billion goes toward nonmelanoma skin cancers^[3].

Overexposure to sunlight, especially when it causes sunburn and blistering, is the primary cause of skin cancer. Your skin's DNA is harmed by the sun's UV rays, which leads to the formation of aberrant cells. These aberrant cells divide quickly and erratically to produce a mass of cancer cells. Frequent skin contact with certain substances, such as tar and coal, is another factor in the development of skin cancer. Your risk of developing skin cancer can be increased by a variety of other factors^[4]. Cancer can spread through blood, lymphatics, and tissue. Tissue: By expanding into surrounding locations, cancer spreads from its original site. Lymph system: Cancer enters the lymph system and spreads from there. The lymphatic vessels serve as cancer's conduit to other body regions. Blood: By entering the bloodstream, cancer spreads from its original site. Further bodily parts are reached by cancer via the blood vessels^[5]. A BCC typically appears as a raised, pearly bump on the head, neck, or shoulders that is exposed to the sun. The tumor may contain little blood vessels that can be seen. Frequently, ulceration with a central depression and crusting and bleeding appear. A BCC is frequently misdiagnosed as an unhealing sore. In sun-exposed skin, SCCSCC typically manifests as a distinct, red, scaly, thickened region. SCCs can ulcerate and bleed, just like BCCs. If SCC is not treated, it could grow into a sizable mass. Most malignant melanomas are pigmented lesions that range in color from brown to black. Changes in a mole's size, shape, color, or elevation can be warning indications. A healthcare provider should be consulted if a new mole appears throughout maturity or if an existing mole develops new pain, itching, ulceration, or bleeding. The straightforward acronym 'ABCD' is helpful for determining whether a tumor is malignant: Asymmetry – The lesion has an unbalanced appearance on one side. Uneven borders may have notches or be otherwise unruly. Melanomas frequently combine black, tan, brown, blue, red, or white colors. Diameter: Although most cancerous lesions are larger than 6 mm in diameter or the size of a pencil eraser, any change in size may be significant^[6].

A visual inspection is typically the first step in skin cancer diagnosis. In order to check for potential skin cancer, the Skin Cancer Foundation and the American Cancer Society advise monthly self-examinations and yearly doctor appointments. Your doctor will initially inspect the region if a suspicious spot is discovered, taking note of the size, shape, color, and texture of the lesion as well as any bleeding or scaling. Also, your doctor might check the adjacent lymph nodes for enlargement. A dermatologist can run more sophisticated testing and provide a diagnosis if you are being evaluated by a primary care physician. Dermatoscopy,

a procedure used by dermatologists to inspect worrisome spots more carefully, may involve the use of a specialized microscope or magnifying lens. The removal of skin cancer frequently takes place at the dermatologist's office. More aggressive therapy may be necessary if a dermatologist believes the skin cancer is melanoma or Merkel cell carcinoma. Biopsies and imaging tests are the two main types of testing used to diagnose skin cancer. There are various alternative procedures for doing a biopsy, but an excisional biopsy, in which the doctor eliminates the entire tumor, is frequently enough to treat skin cancer. A punch biopsy involves the use of a specific tool to cut a tiny round portion of the tumor, including deeper layers of skin, whereas a shave biopsy involves your doctor shaving off the top layers of the lesion. To ascertain whether cancer cells have spread to internal organs and bones, a variety of medical imaging techniques may be performed. Computed tomography scanning, X-rays, and MRIs are examples of imaging techniques^[7]. When the UV index is 3 or above, we advise combining several sun safety precautions for optimum protection: Put on some apparel that offers the most skin coverage possible for sun protection. Use a broad spectrum SPF 30 sunscreen that is water resistant. Before going outside and then every 2 h following, put it on. You should never apply sunscreen to prolong your time in the sun. Put on a hat so that your face, head, neck, and ears are protected. Choose for shade. Make sure your sunglasses adhere to Australian requirements before slipping them on. When UV levels are at their highest during the day, exercise particular caution^[8].

Several factors will affect the suggested course of treatment for you. They include the size, location, type, and stage of cancer. Your healthcare team may suggest one or more of the following procedures, including cryosurgery, after taking these variables into account: The tissue is destroyed as the growth thaws after being frozen with liquid nitrogen. Excisional surgery: The doctor removes the tumor along with some nearby healthy skin. Mohs surgery: With this treatment, the tumor is eliminated layer by layer. A microscope is used to inspect each layer until no irregular cells are left. Curettage and electrodesiccation: The cancer cells are removed with a long spoon-shaped blade, and the leftover cells are burned with an electric needle. Chemotherapy: To eliminate cancer cells, this medication can be ingested, applied topically, or administered intravenously (i.v.). Laser light and medications are used in photodynamic treatment to kill cancer cells. High-powered energy beams used in radiation attack cancer cells. Biological therapy: Biological therapies amplify your body's immune response to cancer cells. Immunotherapy: Drugs are utilized to boost your immune system's capacity to eradicate cancer cells^[9]. With skin cancer, a variety of consequences could happen. The majority of nonmelanoma skin cancers are brought on by the tumor's local proliferation. Complications with

melanoma might include metastasis to other parts of the body, local cancer growth, and adverse effects from the chosen treatment choices. Secondary infection, lymphedema, scarring and/or disfigurement, metastases, recurrence, anxiety, and depression are among the complications^[10]. We focused on the following topics related to skin cancer from the viewpoint of public health issues: types, causes, spread, symptoms, diagnostic techniques, prevention, treatment, and complications.

Ethics approval

Not applicable.

Sources of funding

Not applicable

Conflicts of interest disclosure

The authors declare no conflict of interest, financial or otherwise.

Data availability statement

All data used to support the findings of this study are included in the article.

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