



# Skin Cancer and Skin of Color

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Caucasians are the primary victims of skin cancer. However, everyone, regardless of skin color, can fall prey to it. Unfortunately, many patients and even some physicians are under the impression that non-Caucasian people are immune to this disease. That is one reason people of color are diagnosed with skin cancer at later stages. These delays mean that skin cancers are often advanced and potentially fatal, whereas most skin cancers are curable if caught and treated in a timely manner. Tragically, this is what happened to legendary reggae musician Bob Marley: What was dismissed as a soccer injury under his toenail turned out to be an aggressive form of melanoma that ultimately caused his death at 36. Mr. Marley's story reminds us why both medical providers and the public need to be educated about skin cancer and skin of color.

## SKIN BIOLOGY 101

Human skin is comprised of three layers: the epidermis, dermis, and fat. Cells in the epidermis (the outermost layer of skin) called melanocytes produce melanin, the pigment that gives skin and eyes their color. The more melanin the melanocytes produce, the darker the skin pigmentation.<sup>1-4</sup>

Melanin helps protect the skin against effects of the sun such as skin cancers and premature aging. In African American skin, melanin provides a sun protection factor (SPF) approximately equivalent to 13.4, compared to 3.4 in white skin.<sup>6-8</sup> This discrepancy illustrates why skin cancer is more prevalent in Caucasian people; it is, in fact, the most common type of malignancy in the US among Caucasians. Their inherently light skin color and low amounts of melanin leave them vulnerable to the sun's carcinogenic (cancer-causing) ultraviolet rays. UV light, also emitted by tanning beds/lamps, is, in many cases, the causative culprit of skin cancer in Caucasian Americans.

## SKIN CANCER 101

The most common forms of skin cancer are basal cell carcinoma (BCC), squamous cell carcinoma (SCC), and melanoma. Each of these has been linked to intermittent and/or chronic sun exposure. Tanning and sunburns are analogous to cigarettes in that just one can increase your risk of cancer, regardless of skin color. **(Figure 1, p.51).**

Although skin cancer comprises only two to four percent of all cancers in Chinese and Japanese Asians, the incidence is rising. Similarly, skin cancer represents one to two percent of malignancies in African Americans and Asian Indians.<sup>8-14</sup> Unfortunately, mortality rates remain disproportionately high in darker-skinned people.



Everyone, regardless of skin color, can fall prey to skin cancer.

**PUTTING IT ALL TOGETHER**

**Basal cell carcinoma** is the most common skin cancer in Caucasians, Hispanics, Chinese, and Japanese Asians,<sup>8-10</sup> and the second most common skin malignancy in African Americans and Asian Indians.<sup>8</sup> In all races, BCC is usually linked to UV light exposure. BCCs are mainly found on body parts that receive the most sun exposure (**Figure 2**). A study from Howard University, Washington, DC, revealed that 89 percent of BCCs on naturally brown skin occur on the head or neck.<sup>6</sup> The correlation between UV light and BCC in darker skin types explains the relatively higher incidence of this malignancy among darker-skinned populations living in sunnier climates, such as Hispanics residing in New Mexico and Arizona.<sup>8,15</sup>

BCCs rarely metastasize (spread to other parts of the body). However, one study showed that when Hispanic patients develop BCCs they are more likely to have multiple lesions either at the time of presentation or in ensuing years.<sup>16</sup> Risk factors other than UV light for BCC in minority populations include previous radiation therapy, albinism (a group of genetic disorders that causes people to have a partial or total lack of melanin), trauma, burn scars (particularly among Asian Indians), other chronic scarring processes, arsenic exposure, solid organ transplantation, and genetic skin conditions.

**When to Seek Medical Care:** Any new lesion that bleeds, oozes or crusts, doesn't heal, or lasts longer than a month should be examined by a dermatologist.

**Unfortunately, many patients and even some physicians are under the impression that non-Caucasian people are immune to this disease.**

**Squamous cell carcinoma (SCC)** is the most common skin malignancy among African Americans and Asian Indians, and the second most common skin cancer among Hispanics and Chinese/Japanese Asians.<sup>6,8,17-19</sup> Information from the Singapore Cancer Registry suggests that UV light plays an appreciable role in skin cancer development among fair-skinned Asian populations,<sup>10</sup> and a Hawaiian study

revealed that the incidence of BCC, SCC, and Bowen's Disease (a type of SCC) was at least 45 times higher in the Japanese population of Kauai, Hawaii (a sunny climate) than among the Japanese population in Japan (a temperate climate).<sup>20</sup>

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UV light is *not* the primary risk factor for the development of SCC in brown-skinned persons within the African Diaspora, and the head and neck are not the most common sites for SCC. Among African Americans and native Africans, SCCs occur mainly on the legs, followed by the anogenital region (including both the anus and genitals) (**Figure 2**).<sup>6,8,21-23</sup> Skin conditions that result in scarring or chronic inflammation, such as discoid lupus; leprosy; burn scars and non-healing skin ulcerations are the main risk factors, along with radiation therapy and physical or thermal trauma.<sup>6,8,21-23</sup> Unlike the SCCs that most Caucasians develop, those occurring in people of African descent due to scarring or chronic inflammation can be aggressive, and have a higher tendency to lead to metastasis and death (**Figure 3**). One reason for this is, again, later detection and treatment.

**When to Seek Medical Attention:**

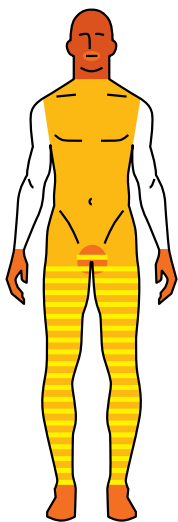
Non-healing ulcers, growths and sores next to scars or areas of previous physical trauma/inflammation should be evaluated by a dermatologist, particularly if they are located on the legs. Also make sure to have anal/genital warts evaluated. Organ transplant recipients and anybody with a depressed immune system (e.g., HIV-positive patients) should have regular skin checks.

**Melanoma** is the third most common type of skin cancer among all racial groups. Although UV light plays a role in the etiology of melanoma in Caucasians, the primary risk factor for melanoma in people of color is undetermined<sup>8</sup>, though

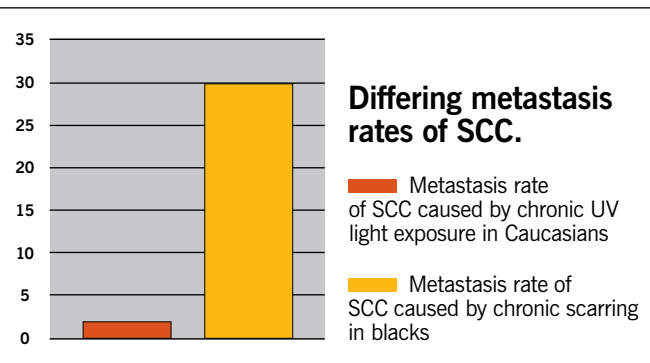
**DID YOU KNOW** that everyone, regardless of skin color, can sunburn? In fact, a survey conducted by the Centers for Disease Control and Prevention revealed the following sunburn rates in each of the listed ethnic groups:

Ethnic Group	Male respondents reporting at least one sunburn in the preceding year	Female respondents reporting at least one sunburn in the preceding year	Respondents reporting >4 sunburns in the preceding year
American Indian/Alaskan Natives	30.4%	21.5%	19.6%
Asian/Pacific Islander	16.2%	16.1%	15.5%
Hispanics (dark-skinned)	12.4%	9.5%	19.1% (light-skinned)
African Americans	5.8%	5.8%	12.3%

**Figure 1.** Sunburn rates amongst various ethnic groups.<sup>29</sup>

Type of Cancer	Primary Predisposing Factor	Most Common Location
<b>Basal Cell Carcinoma</b>	sunlight	
<b>Melanoma</b> (African Americans, Asians, Hawaiians, Native Americans, Darker-skinned Hispanics)	unknown	
<b>Melanoma</b> (Lighter-skinned Hispanics)	unknown	
<b>Squamous Cell Carcinoma</b>	chronic, non-healing wounds/ulcerations, scars and chronic inflammatory skin conditions (e.g. discoid lupus, lichen sclerosis, lichen planus)	

**Figure 2.** Skin cancer and skin of color.



**Figure 3.**





incidence among Japanese and Hispanics residing in both Puerto Rico and South America and Hispanics residing in New Mexico have increased.<sup>8,24-26</sup> Among African Americans and others of African descent, Asians, Hawaiians, and Native Americans, melanomas are most likely to appear in the mouth, or in the form of acral lentiginous melanoma — melanomas on the palms of the hands, soles of the feet and under the nails (as in Bob Marley’s case) (Figures 2, 4). Among fair-skinned Hispanics, evidence suggests the trunk and legs as the most likely areas of involvement, and the feet as the most common location

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in dark-skinned Hispanics.<sup>8</sup>

Other reported risk factors for melanoma in minority populations include: albinism, burn scars, radiation therapy, trauma, immunosuppression, and preexisting moles (especially on the palms/soles and mouth).

Due to delayed diagnoses and advanced stage at disease presentation, the five-year mortality rates of non-Caucasians who have melanoma are higher (in many instances significantly) than those of their Caucasian counterparts.<sup>27</sup>

**When to Seek Medical Care:** New or existing moles (brown, pink, or flesh colored spots) that are asymmetric, have an irregular border, change in color, appear larger than the size of a pencil eraser, or change in any way should be examined by a dermatologist, as should any brown spots on the hands, soles, or under the nails.

#### RECOMMENDATIONS

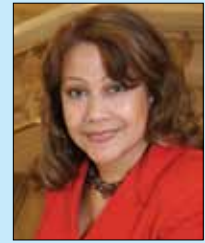
To stop the development of skin cancer and delay skin aging, people of all ethnicities are encouraged to follow The Skin Cancer Foundation’s Prevention Guidelines: [www.skincancer.org/Prevention-Guidelines.html](http://www.skincancer.org/Prevention-Guidelines.html).

The US Census Bureau projects that by the year 2050, 50 percent of the US population will be comprised of Hispanics, Asians, and African Americans.<sup>28</sup> Now, more than ever, it is pivotal to raise awareness of skin cancer in people of color. ■

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References available on p.111.



#### CASE STUDY

In 2006, Ivis Febus-Sampayo noticed that the small mole on the right side of her face looked a bit darker. Within weeks, it appeared to protrude. “I thought, ‘This can’t be skin cancer!’— I’m of Hispanic heritage and olive-skinned,” Febus-Sampayo recalls. Living in the Northeast, she rarely went out in the sun, and didn’t wear sunscreen.

But due to her history of breast cancer, she had the mole evaluated anyway. “I was extremely surprised when my pathology results showed melanoma. I was devastated.”

Luckily, the melanoma was caught and treated early. Febus-Sampayo now uses sunscreen daily and dresses to minimize sun exposure. “I also talk to others about the importance of learning everything you can to defend yourself against cancer. We need to educate both medical providers and the public on skin cancer in communities of color.”



Figure 4. Acral Lentiginous Melanoma in a brown-skinned patient.