Skin Cancer Mortality in Patients With Skin of Color

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Skin cancers in patients with skin of color are less prevalent but have a higher morbidity and mortality compared to white patients. Challenges to early detection, including clinical differences in presentation, low public awareness, lower index of suspicion among health care providers, and access to specialty care, likely contribute to observed differences in prognosis between skin of color and white populations.

Skin cancer is the most common malignancy in the United States, accounting for approximately 40% of all neoplasms in white patients but only 1% to 4% in Asian American and black patients.[1,2] Largely due to the photoprotective effects of increased constitutive epidermal melanin, melanoma is approximately 10 to 20 times less frequent in black patients and 3 to 7 times less common in Hispanics than age-matched whites.[1] Nonmelanoma skin cancers including squamous cell carcinoma (SCC) and basal cell carcinoma also are less prevalent in darker skin types.[3,4]

In the United States, Hispanic, American Indian, and black patients have a 2- to 3-fold higher risk of mortality from malignant melanoma than white patients overall, even when diagnosed at the same stage.[2,5] The most recent Surveillance, Epidemiology, and End Results (SEER) Program cancer statistic review found that the 5-year relative survival of individuals with all stages of malignant melanoma from 2006 to 2012 was 91.1% for white patients and 67.3% for black patients. Fortunately, the mortality rate for black patients decreased approximately 0.8% per year from 1975 to 2013.[5,6] No statistically significant change was seen in other ethnic groups, though research in East Asia suggests that age-standardized mortality rates from melanoma have increased by up to 7.4% per year over the last 30 years, with the greatest rise seen in Korean females.[5,7] Further epidemiologic research looking at the relative survival of Asian Americans and Pacific Islanders in the United States is needed.[8,9]

Similar to melanoma, the mortality from SCC is disproportionately increased in skin of color populations, ranging from 18% to 29% in black patients.[3,10,11] There is a paucity of population-based studies in the United States looking at mortality rates of nonmelanoma skin cancers and their trends over time, but a 1993 study suggests that mortality rates are declining less consistently in black patients than white patients.[11]

Factors that may contribute to higher mortality rates in patients with skin of color include a greater propensity for inherently aggressive skin cancers (eg, higher risk of SCC) and delays in diagnosis (eg, late-stage diagnosis of melanoma).[1,4] For melanoma, increased mortality has been attributed to a predominance of acral lentiginous melanomas, which are more frequently diagnosed at more advanced stages than other melanoma subtypes.[6,12,13] Black patients, Hispanics, Asians, and Pacific Islanders are all more likely to present with thicker tumors and metastases on initial presentation than their white counterparts ($P<.001$).[2,8,9,12-14] The higher risk of death from SCC results from the predominance of lesions on non–sun-exposed areas, particularly the legs and anogenital areas, and within sites of chronic scarring or inflammation.[4] Unlike sun-induced SCC, the most commonly observed type of SCC in lighter skin types, SCCs that develop in association with chronic inflammatory or ulcerative processes are aggressive and invasive, and they metastasize to distant sites in 20% to 40% of cases (versus 1%–4% in sun-induced

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SCC).[1,3,4] For all skin cancers, poor access to medical care, patients' unawareness of their skin cancer risk, lack of adequate skin examinations, and prevalence of lesions on uncommon sites that may be inconspicuous or overlooked have all been suggested to delay diagnosis.[1,15,16] Given that more advanced disease is associated with worse outcomes, the implications of this delay are enormous and remain a cause for concern.

The alarming skin cancer mortality rates in patients with skin of color are a call to action for the medical community. The consistent use of full-body skin examinations including close inspection of mucosal, acral, and genital areas for all patients independent of skin type and racial/ethnic background is paramount. Advancing skin cancer education in skin of color populations, such as through distribution of patient-directed educational materials produced by organizations such as the American Academy of Dermatology, Skin Cancer Foundation, and Skin of Color Society, is an important step toward increased public awareness.[16] Use of social and traditional media outlets as well as community-directed health outreach campaigns also are important strategies to change the common misconception that darker-skinned individuals do not get skin cancer. We hope that with a multipronged approach, disparities in skin cancer mortality will steadily be eliminated.

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