

# Are We Overlooking Skin Cancer in Ethnic Minorities?

Skin cancers in Hispanic and African American patients may be detected at more advanced stages, leading to poorer prognoses and long-term outcomes compared to non-Hispanic whites.

By Shasa Hu, MD

**A**mong Hispanic and African American patients, detection of melanoma and non-melanoma skin cancers is often delayed, leading to poorer prognosis and worse long-term outcomes in these populations compared to non-Hispanic whites (NHW). Ethnic minorities are thought to be 1.96 to 3.01 times as likely to die from melanoma as age- and sex-matched whites.<sup>1</sup> Multiple factors, such as lower knowledge and awareness among minority populations/health care providers, limited access to care, and differences in sociocultural values that influence health care decisions, may account for such disparity in outcomes.

There is a common misperception in both the lay public and some segments of the medical community that patients with darker skin tones and certain racial/ethnic origins are not at risk for developing skin cancer.<sup>2</sup> While it is true that more deeply pigmented skin confers greater protection against skin malignancies from ultraviolet (UV) radiation than fair skin, it is not accurate to conceptualize darker-skinned populations as risk-free or even very low risk. In fact, age-adjusted incidence rates for melanoma are estimated at 4.5 per 100,000 among Hispanics and 1.0 per 100,000 among blacks. Though much lower than the estimated incidence of 21.6 per 100,000 among NHW, these rates are nonetheless concerning.<sup>3</sup> More alarmingly, recent studies have called attention to a developing melanoma epidemic among Hispanics: The incidence of melanoma among Hispanics in the US has increased 2.9 percent annually in the last 15 years ( $P < 0.05$ ), comparable to the 3.0 percent annual increase among NHW.<sup>4</sup> In Florida, melanoma incidence has increased signifi-

## Key Points

Among Hispanic and African American patients, detection of melanoma and non-melanoma skin cancers (NMSC) is often delayed, leading to poorer prognosis and worse long-term outcomes in these populations compared to non-Hispanic whites (NHW). Ethnic minorities are thought to be 1.96 to 3.01 times as likely to die from melanoma as age- and sex-matched whites. Multiple factors, such as lower knowledge and awareness among minority populations, health care providers; limited access to care; and differences in sociocultural values that influence health care decisions, may account for disparity in outcomes. There is a common misperception in both the lay public and some segments of the medical community that patients with darker skin tones and certain racial/ethnic origins are not at risk for skin cancer.

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Clinicians may have a lower index of suspicion for melanoma and NMSC in black and Hispanic patients, contributing to delayed diagnosis and poor prognosis. Poor risk-perception status may contribute to a lower rate of risk avoidance behaviors and delayed presentation for care in certain populations.

When comparing Hispanics and non-Hispanics with similar access to health care, Hispanics performed less frequent skin self-examinations (SSE). Among high school students, HWs were 60 percent less likely to have heard of SSE ( $P < 0.01$ ) and 70 percent less likely than NHWs to have ever been told to perform SSE ( $P=0.03$ ). Low prevalence of full-body skin exams and SSE is likely to be associated with low knowledge on skin cancer screening methods and low awareness of skin cancer warning signs among minority populations.

TABLE 1. MELANOMA

Age-adjusted Incidence Rates for Melanoma <sup>3</sup>	
Hispanics .....	4.5/100,000
Blacks .....	1.0/100,000
Non-Hispanic Whites .....	21.6/100,000

cantly among Hispanics, especially among Hispanic white (HW) women, at an annual increase of 3.4 percent (P = 0.01) from 1990-2004.<sup>5</sup> Data from the California Cancer Registry also show markedly increased rates of invasive melanoma among Hispanics, primarily with increased thicker tumors, associated with worse prognosis.<sup>6</sup> Hispanics also have poorer survival rates from melanoma than whites.<sup>7,8</sup> The five-year relative survival rates of melanoma is 77.1 percent for HW males, 86.8 percent for HW females, 86.5 percent for NHW males, and 92.2 percent for NHW females.<sup>9</sup> Delayed melanoma diagnosis is the primary cause of higher mortality from melanoma among HW compared to NHW in the US, highlighting the need for better secondary prevention measures among Hispanics.<sup>10</sup>

Reliable data regarding the incidence of basal cell carcinoma (BCC) or squamous cell carcinoma (SCC) in blacks and Hispanics are not available. However, it has been shown that nonmelanoma skin cancers (NMSC) carry a significant burden<sup>11</sup> and impart substantial morbidity among Hispanics and other minorities.<sup>12</sup> The delayed diagnosis of skin cancers among minority populations may also be attributable to the cancers' atypical locations. While melanoma occur most commonly on sun exposed areas among NHW populations, Hispanics and blacks experience higher proportion of melanomas occurring in acral areas and lower extremities.<sup>13</sup> Squamous cell carcinomas occur more commonly on sun-protected sites, particularly legs, among black patients, compared to rates reported in the general population.<sup>12,14</sup>

**Disparities in Melanoma Among US Hispanics**

The delayed diagnosis of melanoma among Hispanics, along with their worse survival, represents a significant public health challenge. This is because both the Hispanic populations are on the rise and their melanoma incidence is increasing. US Census predicts one of four Americans will be Hispanic by 2050.<sup>15</sup> Emerging studies suggest there are several unique trends characterizing melanoma rates, diagnosis, and treatment among US Hispanics. An analysis of 42,770

US patients diagnosed with melanoma from 2004 through 2006 showed that Hispanics were significantly more likely to be diagnosed with nodular melanoma or acral lentiginous melanoma (ALM) and less likely to be diagnosed with superficial spreading melanoma or Hutchinson's melanotic freckle and less likely to present with multiple primary cancers.<sup>10</sup> Furthermore, Hispanics were less likely to receive surgical interventions for their melanomas. Whereas 8.5 percent percent of NH subjects died during the study period, and 4.8 percent from melanoma specifically, the mortality rate was significantly higher for Hispanics. During the study period, 12.4 percent of Hispanics died, with 7.3 percent specifically from melanoma.

A recent study of ALMs recorded by the Surveillance, Epidemiology, and End Results (SEER) Program found that HW had the highest overall incidence rates of ALM (2.5 per 1,000,000 person-years; P = .007) compared to NHW and blacks (both had similar rates of 1.8 per 1,000,000 person-years).<sup>13</sup> The ALM five- and 10-year melanoma-specific survival rates were highest in NHW (82.6 percent and 69.4 percent), intermediate in blacks (77.2 percent and 71.5 percent), and lowest in HW (72.8 percent and 57.3 percent) and Asian/Pacific Islanders (70.2 percent and 54.1 percent).

A large retrospective analysis of 41,072 melanoma cases collected from 1990 to 2004 by the Florida Cancer Data System found 17.8 percent of melanoma cases diagnosed in HW were at either regional or distant stage, significantly higher than that seen in NHW (11.6%) (P < 0.01), and for HW there was little improvement in melanoma diagnosis over this time period, which was seen in NHW.<sup>5</sup> Black patients in this time period also had more advanced melanoma at diagnosis: 26.4 percent of blacks presented with either regional- or distant-stage melanoma (P < .001).

**The Problem of Risk-Perception**

Based on the lower incidence of melanoma and NMSC in ethnic minorities, along with a false perception of the actual risk, clinicians may have a lower index of suspicion for melanoma and NMSC in black and Hispanic patients,<sup>3</sup> contributing to delayed diagnosis and poor prognosis. Poor risk-perception status may contribute to a lower rate of risk avoidance behaviors and delayed presentation for care in certain populations, including ethnic minorities.<sup>16</sup> In Miami-Dade County, Hispanic high school students were more likely to sun bathe and to use tanning salons, and were much less likely to practice sun protection compared to their NHW peers.<sup>17</sup> After adjustment for age, sex, skin sensi-

TABLE 2. SKIN EXAMS

Rates of Physician Exams	
3.7% of HW patients versus 8.9% of NHW patients <sup>21</sup>	
16.2% of Black patients & 17.1 % of Hispanic patients versus 25.5% of NHW <sup>22</sup>	

tivity to sun, and family history of skin cancer, HW students were 2.5 times more likely than NHWs to have used a tanning bed in the past year (95 percent confidence interval, 1.1-5.6).<sup>17</sup> This is alarming because even a one-time exposure to tanning beds before 35 years of age increases a person's risk for melanoma by 75 percent.<sup>18</sup> Additionally, HW high school students had a significantly lower level of skin cancer knowledge and awareness after adjusting for skin sensitivity to the sun and family history of skin cancer. Adult Hispanics from Chicago suburban area also showed low awareness of melanoma risks.<sup>19,20</sup>

A recent analysis of responses on the Health Information National Trends Survey (HINTS), shows that blacks, the elderly, and people with less education all perceived themselves as being at reduced risk for skin cancer. Furthermore, these groups, along with Hispanics, tended to believe that they could not reduce their skin cancer risk or that recommendations for risk reduction were too unclear for them to adopt appropriate strategies.<sup>16</sup> This suggests that black and Hispanic patients may be less likely to adopt UV avoidance strategies, use sunscreens, or conduct regular skin self-examinations.

Low perceived risk is thought to contribute to delayed presentation for medical care, while low index of suspicion among care providers and suboptimal access to health care also contribute to delayed diagnosis of skin cancer among minority populations. Data from National Health Interview Surveys showed Hispanics are screened for skin cancer less frequently than NHW.<sup>21</sup> In 2000 only 3.7 percent of HW had a recent skin examination by physicians, compared to 8.9 percent NHW surveyed. Another study of skin cancer screening practices found that only 16.2 percent of black patients and 17.1 percent Hispanics patients compared to 25.5 percent of NHWs have received full body skin examinations (FBSE) by their primary care physicians (P=0.05).<sup>22</sup> Such differences in delivery/utilization of healthcare resources are likely influenced by a complexity of factors such as socioeconomic status (SES), skin cancer awareness, and sociocultural values.

Socioeconomic factors, such as poverty and lack of health insurance, influence access to and use of cancer screening services and treatment, thus contributing to current disparities in cancer burden among minority groups.<sup>23</sup> For melanoma, while higher SES is associated with an increased risk for melanoma, lower SES populations present with later stage disease and experience worse survival rates.<sup>24</sup>

Skin self-examinations (SSE) is another important secondary prevention strategy; it is associated with thinner (better prognosis) melanomas at diagnosis.<sup>25</sup> When comparing Hispanics and non-Hispanics with similar access to health care, Hispanics performed less frequent SSE.<sup>20</sup> Among high school students, HW were 60 percent less likely to have heard of SSE (P < 0.01) and 70 percent less likely than NHWs to have ever been told to perform SSE (P=0.03) after adjusting for skin type and family history of skin cancer.<sup>17</sup> Low prevalence of FBSE and SSE is likely to be associated with low knowledge of skin cancer screening methods and low awareness of skin cancer warning signs among minority populations.

### Implications

Overcoming the disparity in skin cancer diagnosis and outcomes among blacks and Hispanics in the US will require collaborative efforts aimed at health providers as well as the public to:

- Improve the knowledge and awareness of skin cancer and suspicious skin lesions among medical professionals;
- Familiarize clinicians and patients with key features that characterize melanoma and NMSC in non-white patients;
- Educate health care providers to more effectively communicate risks and detection strategies to minority patients;
- Enhance and expand public education campaigns about skin cancer risks, early signs of skin cancer, prevention practices, and the importance of early detection in formats that are culturally and linguistically appropriate for each minority population.

### Conclusion

Melanoma and NMSC occur less frequently in blacks and Hispanics but overall are diagnosed at more advanced stage and impart great morbidity and mortality compared to those among NHW. Both patients and

clinicians must raise their suspicion for skin cancers in patients from ethnic minorities, and clinicians must be especially attentive to the features of skin cancer in these patient groups. Sun-safe behavior and self-skin examination education targeted at ethnic populations is important, as are strategies to improve access to care and raise provider awareness for these patients.

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