

# Skin Cancer in Hispanics in the United States

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## ABSTRACT

The Hispanic population has been the principal driver of U.S. demographic growth in the last two decades. In 2016, Hispanics accounted for 18% of the nation's population and were the second-largest racial or ethnic group behind whites making the people of Hispanic origin the nation's largest ethnic or racial minority. Non-melanoma skin cancer (NMSC) is the most common malignancy in the U.S. with over 3.5 million diagnosed in over 2 million people, incidence rising at about 2.6% per year. In Hispanics, Loh et al showed a retrospective 5-year one-institution study that revealed an incidence of 3% for NMSC, in a population that is younger and mainly females as compared to Caucasian and Asians. In the past two decades, melanomas incidence among Hispanics has risen by 20%. Hispanics are younger at diagnosis, present with thicker tumors (>1mm, 35% to 25%), regional involvement (12 to 8%), and distant metastasis (7 to 4%), having the worst survival rate as compared to whites. In general, even though increasing, the incidence of NMSC and MM is lower in Hispanics than Caucasians, however, the mortality is higher. The later stage at diagnosis and worse prognosis in Hispanics have been attributed to several factors: 1.) Less awareness of risks or symptoms leading to a lack of linguistically or culturally targeted screening efforts.<sup>20</sup> 2.) Decline in sun-safe behaviors because of increasing acculturation.<sup>21, 22</sup> 3.) Less access to health insurance— more than 15% Hispanics in last census lack medical coverage causing delays in seeking treatment.<sup>23</sup> Many of these factors may be associated with lower socioeconomic status (SES). For cancer control efforts to succeed, we must better understand the major causes of advanced presentation of melanoma in Hispanics (Hispanics and Latinos) who represent the most rapidly expanding demographic segment in the U.S. Increased awareness of skin cancer and ways to prevent it on the part of providers and patients has the potential to decrease incidence, increase early diagnosis, and improve outcomes among Hispanics. Primary care physicians and dermatologists can dispel the myth that melanoma only affects NHWs and educate Hispanic patients in a culturally appropriate manner on melanoma risk factors, how to recognize sunburn, how to identify abnormal lesions, and the need to check non-sun-exposed areas for ALMs that are comparatively more common among Hispanics than among NHWs.

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## INTRODUCTION

The Hispanic population in the United States has reached nearly 58 million in 2016 and has been the principal driver of U.S. demographic growth, accounting for half of national population growth since 2000. In 2016, Hispanics accounted for 18% of the nation's population and were the second-largest racial or ethnic group behind whites making the people of Hispanic origin the nation's largest ethnic or racial minority.<sup>1</sup>

The projected Hispanic population of the United States is 119 million by 2060. According to this projection, the Hispanic population will constitute 28.6 percent of the nation's population by that date.<sup>2</sup>

Hispanics are the youngest major racial or ethnic group in the United States. About one-third, or 17.9 million, of the nation's Hispanic population is younger than 18, and about a quarter, or 14.6 million, of all Hispanics are Millennials (ages 18 to 33 in 2014), according to a Pew Research Center analysis of U.S. Census Bureau data. The Hispanic population within the United States is younger than the Caucasian population. Fifty-seven percent of Hispanic married-couple households had children younger than 18 present in 2014, whereas for the nation it was

40.1 percent.<sup>3</sup> This population is made of 64% born within the U.S. and 36% immigrants.<sup>1</sup> Hispanics of Mexican origin account for 63.3% (36 million) of the nation's Hispanic population in 2015, by far the largest share of any origin group, but down from a recent peak of 65.7% in 2008. Another 9.5% were of Puerto Rican background, 3.7% Cuban, 3.7% Salvadoran, 3.3% Dominican, and 2.4% Guatemalan.<sup>4</sup> The five states that have the largest concentration of Hispanics are California, Texas, Florida, New York, and Illinois. Nearly half of all Hispanics live in California and Texas. Fifteen million live in California, 10.4 million in Texas, 4.2 million in Florida, 3.4 million in NY, and 2 million in Illinois.<sup>5</sup>

### Skin Cancer in Hispanics

The American Cancer Society reported that Cancer remains leading cause of death in Hispanics.<sup>6</sup> Lung cancer for men and breast for women. Non-melanoma skin cancer (NMSC) is the most common malignancy in the United States, over 3.5 million in over 2 million people, incidence rising at about 2.6% per year.<sup>7</sup> In Hispanics, Loh et al showed a retrospective 5-year one-institution study that revealed an incidence of 3% for NMSC, in a population that is younger and mainly females as compared to Caucasian and Asians.<sup>8</sup>

Ultraviolet radiation is the single most common cause of skin cancer including NMSC and malignant melanomas (MM).<sup>9</sup> UVA and UVB cause DNA mutations -thymidine dimers - that are the footprint for most skin cancers.<sup>10</sup> Chronic sun exposure is associated with NMSC and acute or seasonal sun exposure with MM in Caucasians and is undetermined in darker skin.<sup>11</sup> Reported risk factors for MM in darker skin patients include albinism, radiation therapy, trauma, immunosuppression, and preexisting moles.<sup>11</sup> Tanning bed users increase their melanoma risk by 15% as compared to non-users, while doubling their risk for SCC.<sup>12,13</sup>

Basal cell carcinoma (BCC) is the most common skin cancer in Caucasians, Hispanics, Chinese Asians, and Japanese, estimated at 3.5 million diagnosed annually.<sup>14</sup> And, it is the second most common in African Americans and Asian Indians. The incidence is 1/100,000 in African Americans, 6 in Chinese, 15-17 in Japanese, 50-171 in Hispanics, and 185-340 in Caucasians. Thirty-six percent arise in an actinic keratosis.<sup>14,15</sup> There is a significantly increased incidence in Hispanics in New Mexico.

Squamous Cell Carcinoma (SCC) is the most common cutaneous malignancy in African Americans and Asian Indians. It is the second most common skin malignancy in Caucasians, Hispanics, Chinese Asians, and Japanese; and most nations around the world. The incidence is 17-360/100,000 in Caucasians, 14-33 in Hispanics, 3 in African Americans and Chinese Asians, and tends to be more aggressive in African Americans in non-sun exposed areas of chronic inflammation or scarring with a 20-40% risk of metastasis. Sixty-five percent will arise in an actinic keratosis.<sup>15</sup>

Malignant melanoma (MM) is the sixth most common cancer in U.S. and the most common skin cancer among 25-29 years old and second most common among 15-29 years old. Melanoma incidence rates in the U.S. are lower among Hispanics (4.5 per 100,000) than among NHWs (21.6 per 100,000), 0.5-1.5 for Asians and African Americans. However, early stage diagnosis is less among African Americans (48%) and Hispanics (74%) than among Caucasians (91%).<sup>15,16</sup> The most common type in Hispanics and Caucasians is superficial spreading melanoma; acral lentiginous melanomas (ALM) is the most common for African Americans and Japanese.<sup>11-16</sup>

In the past two decades, melanomas incidence among Hispanics has risen by 20%. Hispanics are younger at diagnosis, present with thicker tumors (>1mm, 35% to 25%), regional involvement (12 to 8%), and distant metastasis (7 to 4%), having the worst survival rate as compared to whites.<sup>17-19</sup> A cross-sectional and retrospective analysis of melanoma cases, with known stage and ethnicity reported from 1990-2004, was done to evaluate any disparity in melanoma incidence among different ethnicities. All cases were obtained from Florida cancer data system.<sup>18</sup> There were 41,072 cases identified. The incidence of MM was

found increased in white non-Hispanic women (3%) and men (3.6%), respectively, and white Hispanic women (3.4%).<sup>18</sup> However, the most concerning finding was that regional and distant metastasis were documented in 12% of Caucasians as compared to 18% of Hispanics. Another study compared the incidence of MM in people of color in Florida with incidence of MM in the rest of the U.S. The incidence of MM was found to be 20% higher in Hispanic males as compared to their male counterparts in other regions of the U.S.<sup>19</sup>

In general, even though increasing, the incidence of NMSC and MM is lower in Hispanics than Caucasians, however, the mortality is higher. The later stage at diagnosis and worse prognosis in Hispanics have been attributed to several factors: 1.) Less awareness of risks or symptoms leading to a lack of linguistically or culturally targeted screening efforts.<sup>20</sup> 2.) Declines in sun-safe behaviors because of increasing acculturation.<sup>21, 22</sup> 3.) Less access to health insurance— more than 15% Hispanics in last census lack medical coverage causing delays in seeking treatment.<sup>23</sup> Many of these factors may be associated with lower socioeconomic status (SES).<sup>24</sup>

A survey concerning weekly sun exposure and sun-protective behavior was conducted in a city clinic that services AA, Hispanics and Asians. A hundred patients were asked about sun exposure practices, evidence of sunburn, self-examination and awareness of skin cancer potential. Although 43% reported their ability to sunburn, less than 35% perceived some risk of developing skin cancer.<sup>20</sup> A large subset of Hispanics in these group perceived that despite sun burning they were not at risk for skin cancer. Multivariate analysis of race and ethnicity and awareness of skin cancer potential had reveal that Hispanics rarely perform self-skin exams, rarely go to the doctor for skin exams, that despite knowing that skin cancer can happen in skin of color, they do not perceive that they are at risk and only half of the Hispanics surveyed apply sunblock regularly as compared to 96% of Caucasians.<sup>21</sup> Three-hundred and sixty-nine high school students were surveyed in Florida, 148 white non-Hispanics and 221 white Hispanics, for behavior under the sun. These two populations with comparable skin phototypes and thus comparable risk of cutaneous malignancy, had totally different perceptions of skin cancer risk. Less than 40% of the Hispanics were aware of self-skin exams, were less aware of protective clothing, sunblock protection, were 2.5x more likely to have used tanning beds in the last year and were tanned. More than 43% of Hispanics never or rarely use sunscreens. Only a third of children with ethnic skin use sunscreen.<sup>20-22</sup>

Previous research by the U.S. Centers for Disease Control and Prevention has shown that Hispanics are twice as likely as non-Hispanic blacks and three times as likely as non-Hispanic whites to lack a regular health care provider.<sup>23</sup> The Pew Hispanic Center/Robert Wood Johnson Foundation Latino Health

survey of 4,013 Hispanic adults explores not only their access to health care, but also their sources of health information and their knowledge about a key disease (diabetes) at greater depth and breadth than any national survey done to date by other research organizations or the federal government. It finds that among Hispanic adults, the groups least likely to have a usual health care provider are men, the young, the less educated, and those with no health insurance. A similar demographic pattern applies to the non-Hispanic adult population. The new survey also finds that foreign-born and less-assimilated Latinos—those who mainly speak Spanish, who lack U.S. citizenship, or who have been in the U.S. for a short time—are less likely than other Latinos to report that they have a usual place to go for medical treatment or advice.<sup>23</sup>

To clarify the impact of race and ethnicity on late-stage melanoma diagnosis, a spatial analysis of geocoded melanoma cases diagnosed in Florida, 1999–2008 was done to identify geographic clusters of higher-than-expected incidence of late-stage melanoma and developed predictive models for melanoma cases in high-risk neighborhoods accounting for area-based poverty, race/ethnicity, patient insurance status, age, and gender. In the adjusted model, Hispanic ethnicity and census tract-level poverty are the strongest predictors for clustering of late-stage melanoma. Hispanic whites were 43% more likely to live in neighborhoods with excessive late-stage melanoma ( $P<0.001$ ) compared with non-Hispanic whites (NHW). For every 1% increase in population living in poverty, there is a 2% increase in late-stage melanoma clustering ( $P<0.001$ ). Census tract-level poverty predicted late-stage melanoma similarly among NHW and Hispanic whites. The impact of insurance coverage varied among populations; the most consistent trend was that Medicaid coverage is associated with higher odds for late-stage melanoma. The finding that Hispanics are most likely to reside in high-risk neighborhoods, independent of poverty and insurance status, underscores the importance of addressing, and overcoming community-level barriers to melanoma care.<sup>24</sup>

The largest analysis of melanoma incidence in U.S. Hispanics to date, observed that the distribution and overall burden of cutaneous melanoma, and particularly the associations between SES and melanoma incidence and thickness, differed substantially between Hispanic Californians and NHW Californians.

It was observed a much stronger burden of disease among lower SES Hispanics than among NHWs, particularly for men. The association between low SES and higher risk of thicker tumors at diagnosis was also much stronger among Hispanic men.<sup>25</sup> Melanomas in low-SES Hispanics were more than twice as likely to be >2mm thick than those in high-SES Hispanics.

Melanoma histologic subtype differed strongly by SES among

Hispanic men, with less SSM and more NM (the subtype accounting for thicker melanomas) in lower SES Hispanic men. It was observed that roughly 66% the melanoma burden among Hispanic men occurred among those in the middle SES and low SES groups. By contrast, >60% of melanomas among NHWs occurred among those in the high SES group.<sup>25, 26</sup>

## RESULTS

These results suggest that lower-SES Hispanics may have poorer access to social, cultural, educational or job-related benefits which increases the physician delay in melanoma diagnosis compared with their lower-SES NHW counterparts. Differences between lower- and higher-SES Hispanics are likely to be complex and may involve language barriers, knowledge about and access to health institutions, and/or other difficult-to-measure components of social capital. Sun-related behaviors and cultural norms may also differentially impact melanoma risk and detection among lower-SES Hispanics.

## CONCLUSIONS

For cancer control efforts to succeed, we must better understand the major causes of advanced presentation of melanoma in Hispanics (Hispanics and Latinos) who represent the most rapidly expanding demographic segment in the U.S. Increased awareness of skin cancer and ways to prevent it on the part of providers and patients has the potential to decrease incidence, increase early diagnosis, and improve outcomes among Hispanics.<sup>15</sup> Current recommendations for behavioral counseling by health care providers on skin cancer prevention only include fair-skinned youth ages 10–24.<sup>27</sup> Although this recommendation is based on skin tone and not race, some providers may not consider Hispanics fair-skinned despite their actual skin tone<sup>15</sup> and miss an appropriate opportunity to educate young patients. Hispanics may be more likely to believe that there is little they can do to prevent skin cancer, to believe their risk is below average compared with others of similar age, and to report they are unsure about which prevention recommendations to follow.<sup>28–30</sup> Primary care physicians and dermatologists can dispel the myth that melanoma only affects NHWs, and educate Hispanic patients in a culturally appropriate manner on melanoma risk factors, how to recognize sunburn, how to identify abnormal lesions, and the need to check non sun-exposed areas for ALMs that are comparatively more common among Hispanics than among NHWs.<sup>31–32</sup>

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