Melanoma in Hispanics: We May Have It All Wrong

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To the Editor:

We read with interest the commentary by Srivastava et al,[1] "The Dayanara Effect: Increasing Skin Cancer Awareness in the Hispanic Community," concerning former Miss Universe Dayanara Torres and her diagnosis of metastatic melanoma; however, we believe it misses the mark. A quick Google search shows that Ms. Torres has fair skin and blue eyes. She has lived most of her life in Puerto Rico, the Philippines, and California—places where sun exposure is high and may have contributed to her diagnosis. Factors that have been linked to an increased risk for melanoma are fair skin, red or blonde hair, blue or green eyes, intense intermittent sun exposure and sunburns, a weakened immune system, and a family history of skin cancer.[2] Although we do not know her complete medical history, Ms. Torres' skin phenotype and likely chronic UV exposure made her a candidate for skin cancer. Although Srivastava et al[1] acknowledged that the Hispanic community encompasses a wide variety of individuals with varying levels of skin pigmentation and sun sensitivity, they overlooked Ms. Torres' risk for skin cancer because of her ethnic background. This form of generalization may negatively affect patient care and safety. By 2060, Hispanics are projected to account for almost 30% of the US population,[3] and we must acknowledge the flaws that exist in our overall methodology for assessing skin cancer risk among this population to provide patients with unbiased care.

In the early 1970s, the United States adopted the ethnonym *Hispanic* as a way of conglomerating Spanish-speaking individuals from Spain, the Caribbean, and Central and South America.[4] The goal was to implement a common identifier that enabled the US Government to study the economic and social development of these groups. Nevertheless, considerable differences exist among distinct Hispanic communities, and variations in skin pigmentation and sun sensitivity are no exception. Although Hispanic countries are an amalgam of diverse races due to colonization, some have stronger European, African, or Amerindian influences, limiting the use of ethnicity during melanoma risk assessment. Another misconception reflected in the commentary by Srivastava et al[1] is the belief that the terms *white* and *Hispanic* are mutually exclusive. A study examining melanoma rates in the Chilean population supports this claim.[5] The genetic composition of the Chilean high socioeconomic strata is 5% Amerindian and 95% white, while the low socioeconomic strata is approximately 40% Amerindian and 60% white. Patients from the low socioeconomic strata had higher rates of acral malignant melanoma, which typically is seen in patients with skin of color. On the other hand, males from the high socioeconomic strata had higher rates of truncal melanoma, which is more common among the white population.[5] These results suggest that while both groups are considered Hispanic, it is ancestral origin that contributes to the differential rates and types of malignant melanoma.

When analyzing data regarding melanoma rates in Hispanics, particularly data collected in the United States, we must question if the results are representative of the entire population. One point worth emphasizing is that melanoma data in the Hispanic community often is flawed. The North American Association of Central Cancer Registries considers Europeans such as Spaniards, as well as citizens of Andorra, the Canary Islands, and the Balearic Islands as Hispanic.[6] Additionally, the Florida Cancer Data System uses data such as country of birth, ethnicity, and surname or maiden name recorded by the hospital tumor registry to identify Hispanic patients with melanoma.[7] In 2006, Hu et al[7] used the Florida Cancer Data System to analyze melanoma data

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in Miami-Dade County in South Florida, which has the second largest Hispanic community in the United States. One limitation to such data is that ethnicity often is self-reported by patients or assigned by a health care provider. In addition, women whose maiden names are not available may be misclassified through marriage depending on whether their husbands have Spanish or non-Spanish last names.[7] Finally, with societal norms evolving, Americans are now more accepting of interracial marriages. In 2017, the Pew Research Center reported that 17% of all newlyweds in the United States were intermarried and 42% of these marriages were between a white individual and a Hispanic individual, comprising the most prevalent form of intermarriage reported.[8] In 2015, 27% of newlywed Hispanics were intermarried. This percentage varied depending on whether they were born in the United States or abroad. Although 15% of Hispanic immigrants married a spouse from another race, 39% of Hispanics born in the United States married a non-Hispanic (eg, white, black, Asian, or Native American who is not Hispanic).[8] This type of marriage and subsequent offspring might lead to an increase in the white genetic pool. As a result, the risk for melanoma development may be increased or misrepresented. Remaining aware of these changes in the population is crucial, as it exemplifies why the current methodology for gathering and reporting melanoma data is unreliable.

Labeling Ms. Torres as Hispanic due to her Puerto Rican nationality did not tell us anything about her risk for developing melanoma. To correctly assess the risk for melanoma among Hispanics, it is imperative that we reevaluate our approach. We agree with He et al[9] that our efforts should be dedicated to better understanding the impact of pigmentation, race, genetics, and sunburn on the risk for melanoma. Until we know more about this possible correlation, we should reconsider how we study melanoma using Hispanics as an ethnicity. We may have it all wrong.

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Authors' Response

While Ms. Cruzval-O'Reilly and Dr. Lugo-Somolinos highlight many important points on conducting meaningful research for the Hispanic community, they seem to have misunderstood the overall purpose of our commentary,[1] which was to highlight the increased skin cancer awareness that a notable and vocal member of the Hispanic community brought to our academic dermatology clinic, rather than to discuss skin types within the Hispanic community. As the authors mentioned, the term *Hispanic* is a descriptor of ethnicity rather than race, and Hispanic patients may have varying levels of skin pigmentation and sun sensitivity. While Dayanara Torres may have risk factors for developing melanoma, minimizing her connection with the Hispanic community because of her fair skin and light eyes would be a mistake. It not only isolates members of the Hispanic community that are of skin types I and II, but it also discounts the power of her story and language in raising awareness. We observed an increase in Hispanic patients presenting to our clinic who were concerned about skin cancer after Ms. Torres shared her diagnosis of metastatic melanoma through social media, followed by Spanish language educational videos on melanoma.

Several studies have described disparities among Hispanic patients diagnosed with melanoma as compared to their non-Hispanic white counterparts, including younger age at diagnosis, later stage of presentation, increased presence of regional involvement, and worse mortality.[2-6] Furthermore, a small study of high school students by Ma et al[7] showed disparities in skin cancer knowledge, perceived risk, and sun-protective behaviors among Hispanic whites and non-Hispanic whites, which remained significant ($P<.05$) after controlling for skin pigmentation and sun sensitivity. We agree with the authors that further analysis of skin type, race, genetics, and other risk factors may help refine the research on skin cancer disparities within the Hispanic community. We suspect that disparities may persist even when examining these factors. There have been several studies showing that knowledge-based interventions, especially

when delivered in Spanish, improve understanding of skin cancer, personal risk, and self-examinations, and we support Ms. Torres' efforts in utilizing her platform to provide information about melanoma in Spanish.[8-12]

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