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Abstract

Race, socioeconomic status and survival difference in cutaneous melanoma patients in California

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Background: Survival data for malignant melanoma patients of various ethnic backgrounds are lacking. Furthermore, the modifying effect of socioeconomic status (SES) on survival in melanoma patients is unknown. This study was performed to analyze survival differences for cutaneous melanoma patients of each major ethnicity, including analysis of the effect of SES on outcomes, using a statewide cancer registry. **Methods:** A case-only analysis of data from the California Cancer Registry database during 1992–2002 was conducted. The primary outcome measured was overall survival for each ethnic group. Univariate survival analyses were conducted using the Kaplan-Meier method and log-rank test; multivariate survival analyses were performed using Cox proportional hazards ratios. **Results:** 46,218 incident cases of invasive cutaneous melanoma were identified, including 39,741 Caucasians (93.47%), 2263 (5.32%) Hispanics, 331(0.78%) Asians, 172 (0.40%) African-Americans, and 12 (0.03%) Native Americans ($P<0.0001$). On univariate survival analysis, improved 10-year overall survival rates were noted for Hispanics (63.2%) and Caucasians (60.9%) compared to Asians (51.1%), African-Americans (39.8%), and Native Americans (30.6%) ($P<0.0001$). A statistically significant survival difference was observed for melanoma patients based on SES ($P<0.0001$), favoring those with high SES. Multivariate survival analysis revealed an increased hazard ratio (HR) for African-Americans ($HR=1.594$; $P=0.0023$) compared to Caucasians, after adjustment for age, sex, stage, Breslow depth, histologic subtype, location, and SES. Increased age, male sex, regional and remote stages, melanoma of the head/face, Breslow depth categories 2, 3, and 4, nodular melanoma, melanoma-NOS, and lowest SES quartile were independently associated with poor survival ($P<0.0001$). **Conclusions:** Among patients with invasive cutaneous melanoma, survival is significantly decreased for African-Americans compared to Caucasians. This is not explained by differences in SES, stage, Breslow depth, age, sex, histological subtype, and location. Our epidemiologic observations suggest that intrinsic differences may exist for African-American melanoma patients, adversely affecting survival.

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