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Race matters: analyzing the relationship between colorectal cancer mortality rates and various factors within respective racial groups.

Colorectal cancer (CRC) is the third leading cause of mortality due to cancer (with over 50,000 deaths annually), representing 9% of all cancer deaths in the U.S. In particular, the African-American CRC mortality rate is among the highest reported for any race/ethnic group. Meanwhile, the CRC mortality rate for Hispanics is 15–19% lower than that for non-Hispanic Caucasians. While factors such as obesity, age, and socioeconomic status are known to associate with CRC mortality, do these and other potential factors correlate with CRC death in the same way across races? This research linked data obtained from several sources to examine geographic and racial/ethnic differences, and develop a spatial regression model that adjusted for several factors that may attribute to health disparities among ethnic/racial groups. This analysis showed that sunlight, obesity, and socio-economic status were significant predictors of CRC mortality. The study is significant because it not only verifies known factors associated with the risk of CRC death but, more importantly, demonstrates how these factors vary within different racial groups. Accordingly, education on reducing risk factors for CRC should be directed at specific racial groups above and beyond creating a generalized education plan. (Received September 20, 2016)