

Disparities in the Incidence and Mortality of Cancers in Brooklyn, New York and The United States

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Abstract—Health disparities among minority populations and socioeconomic groups are of concern for equitable health care delivery. This analysis sought to identify disparities in incidence and mortality of selected cancers in different racial groups in an underserved community, and compared those with the United States data. Higher mortality was identified for the three selected cancers in blacks and hispanics, markedly so in Brooklyn. Notably, incidence and mortality of prostate cancer was substantially higher in blacks and hispanics in Brooklyn.

I. INTRODUCTION

Health disparities in cancer are caused by multiple factors including race, ethnicity and socioeconomic status. Socioeconomic risk factors include tobacco use, poor nutrition, physical inactivity and obesity. Income, education and health insurance coverage influence access to early detection, treatment and palliative care. Such disparities are commonplace in communities with socioeconomic stratification and multiracial diversity such as Brooklyn, New York, which is home to a ~55% black and hispanic population, as compared to ~30% nationwide.

The study focuses on cancers of breast, colon, and prostate which impacts a significant population in the United States. The findings from this analysis of selected cancers among different racial groups are expected to identify segments of the population which should be targeted for efficient health care delivery and improved outcomes.

II. MATERIALS AND METHODS

SEER (Surveillance, Epidemiology, and End Results) Database (2009-2013) was reviewed for incidence and mortality of cancers of breast, colon and prostate for non-hispanic whites, and blacks and hispanics in Brooklyn and the United States [1]. The data for all age groups were recorded (per 100,000). Colon cancer data for males and females were combined. Percentage differences were calculated by the formula: where V represents absolute number of cases diagnosed or those who died [2].

III. RESULTS

The incidence of breast cancer is approximately 15% lower in blacks and hispanics in both Brooklyn and the U.S, however, the mortality from breast cancer in this group is relatively higher both locally and nationwide. Mortality from colon cancer in all racial groups was relatively higher in Brooklyn than in the U.S. Incidence of prostate cancer was substantially higher amongst blacks and hispanics than in non-hispanic whites; it is 75% higher in blacks in Brooklyn and 32% higher nationwide. Mortality follows the same trend of higher death rates for prostate cancer in blacks both locally (112%) and nationwide (45%).

IV. CONCLUSIONS

The challenge of addressing cancer disparities in minority populations is demanding and it requires collective efforts undertaken by governmental, private and nonprofit organizations, as well as researchers. This report highlights health disparities in the black and hispanic populations and identifies opportunities for interventions to address disparate disease outcomes.

VI. REFERENCES

- [1] <http://seer.cancer.gov/>
- [2] <http://www.calculatorsoup.com/calculators/algebra/percent-difference-calculator.php>

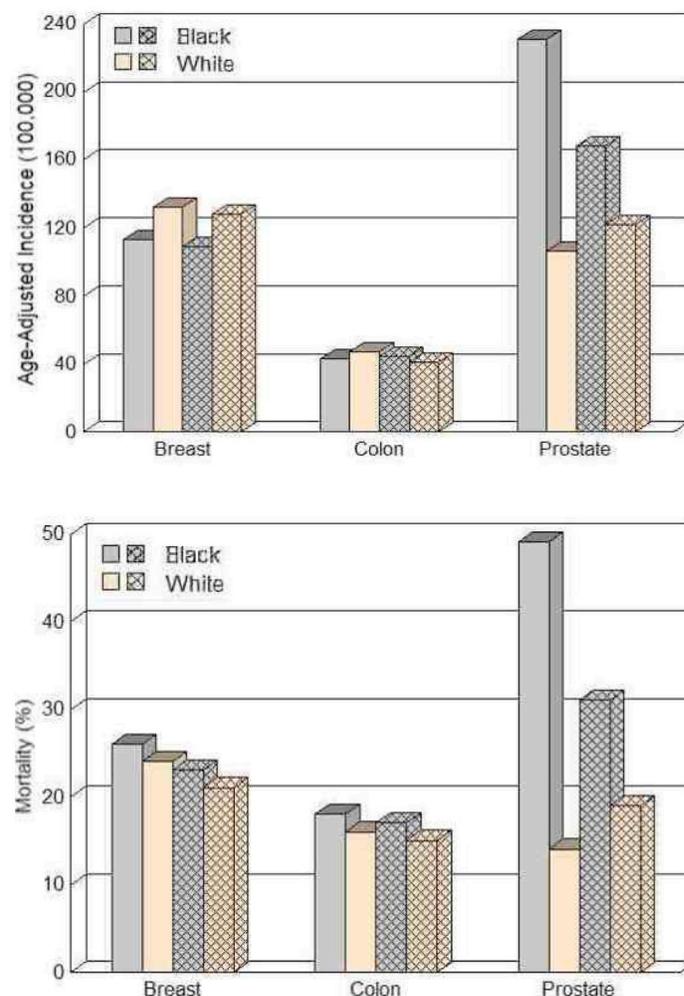


Figure. Top, age-adjusted incidence (100,000) and, bottom, mortality (%) of respective cancers among blacks and whites in Brooklyn (solid bars) and U.S. populations (hatched bars).

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