African American Participation in Oncology Clinical Trials—Focus on Prostate Cancer: Implications, Barriers, and Potential Solutions

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Abstract

In the United States, the incidence and mortality rates of many cancers, especially prostate cancer, are disproportionately high among African American men compared with Caucasian men. Recently, mortality rates for prostate cancer have declined more rapidly in African American versus Caucasian men, but prostate cancer is still the most common cancer and the second leading cause of cancer deaths in African American men in the United States. Compared with Caucasian men, prostate cancer occurs at younger ages, has a higher stage at diagnosis, and is more likely to progress after definitive treatments in African American men. Reasons for racial discrepancies in cancer are multifactorial and potentially include socioeconomic, cultural, nutritional, and biologic elements. In addition to improving access to novel therapies, clinical trial participation is essential to adequately establish the risks and benefits of treatments in African American populations. Considering the disproportionately high mortality rates noted in these groups, our understanding of the natural history and responses to therapies is limited. This review will explore African American underrepresentation in clinical trials with a focus on prostate cancer, and potentially effective strategies to engage African American communities in prostate cancer research. Solutions targeting physicians, investigators, the community, and health care systems are identified. Improvement of African American participation in prostate cancer clinical trials will benefit all stakeholders.

Clinical Genitourinary Cancer, Vol. 14, No. 2, 105-16 Published by Elsevier Inc.
Keywords: Ethnicity, Racial disparities, Recruitment, Sociocultural elements, Underrepresentation

Introduction

In the United States, the incidence and mortality rates of many cancers (for example, breast, colorectal, lung, pancreas, stomach, in addition to prostate) are disproportionately high in the African Americans versus the general population.[1-3] Although cancer deaths have declined for Caucasian and African American individuals, the African American population continues to experience a greater mortality burden for the most prevalent cancer types (Figure 1).[2-4]

Oncology trial participation provides access to novel therapies, and these studies should optimally reflect the populations affected by that particular condition. Furthermore, clinical trials can provide access to potentially life-saving experimental therapy in patients for whom options are limited and prognosis is poor.[5] African American patients are underrepresented in clinical trials,[6,7] including trials of prostate cancer.[8,9] The paucity of African American participation in clinical trials is well documented.[7,8,10] Without an adequate minority sample, clinical trials are not sufficiently powered to detect differences in responses to therapy, which might lead to a suboptimal assessment of therapies for ethnic minority patients, especially African American patients.[5,7,8,11] African American underrepresentation in clinical trials might be particularly relevant for developing newer oncology treatments because specific molecular targets might be sensitive to the subtle distribution of genetic variation across different ethnic or racial backgrounds.

Recognizing the serious implications of African American underrepresentation in oncology clinical trials,[7,8] numerous strategies have been used in an effort to boost participation, with varying degrees of success. In this review, we explore this topic to provide additional insight into future approaches and policies promoting improvement in recruiting African Americans into oncology trials with subsequent benefits in outcomes, with a focus on prostate cancer.

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Submitted: Sep 9, 2015; Revised: Dec 9, 2015; Accepted: Dec 9, 2015; Epub: Dec 17, 2015

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1558-7673/$ - see frontmatter Published by Elsevier Inc.
http://dx.doi.org/10.1016/j.clgc.2015.12.003

Figure 1 Five-Year (2006-2010) Average Annual Cancer Incidence and Cancer Death Rates (2008-2012) Per 100,000 Persons, According to Race/Ethnicity and Age-Adjusted to the 2000 US Standard Population.[2] (A) Incidence and Mortality According to Race and Sex for Cancer at All Sites; (B) Incidence of the 15 Most Common Cancers in Men According to Race; (C) Mortality of the 15 Most Common Cancers in Men According to Race