

## The Elimination of Cancer Health Disparities: Are We Ready to Do the Heavy Lifting?

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*Disclosures of potential conflicts of interest may be found at the end of this article.*

Clinical trials often represent the best possible treatment option for many patients with cancer, yet, at most, 5% of eligible patients participate [1, 2]. Black Americans are underrepresented in cancer clinical trials because of myriad factors, including financial and logistical barriers [3–5]. Because cancer clinical trials offer early access to the most promising novel treatments, minority underrepresentation in clinical trials likely contributes to the disparate cancer outcomes among minorities and the poor.

In the Clinical Trial Results section of this issue of *The Oncologist*, Tsao et al. report the results of a prematurely terminated phase II clinical trial of abiraterone acetate plus prednisone in black men with metastatic prostate cancer [6]. The authors should be congratulated for their thoughtful trial design in implementing a study specifically aimed at enrolling black men, an especially vulnerable population for prostate cancer. As the first prospective global treatment study in black men with metastatic castrate-resistant prostate cancer, these trial results could have been an important contribution. Unfortunately, the study was prematurely terminated because of poor accrual, with only 11 patients enrolled. There was insufficient data to allow analysis of the primary study endpoint, the correlation of germline polymorphisms in androgen metabolism genes with a posttreatment prostate-specific antigen (PSA) decline. Although the investigators artfully modified the trial design to lower barriers to participation for diverse cohorts [7], this change was insufficient to promote the study accrual. Their low accrual of black men may instead indicate a symptom of larger issues that warrants deeper consideration.

This study highlights a troubling deficiency in the ability of clinicians to improve cancer outcomes in black cancer patients, particularly black men with prostate cancer. Prostate cancer mortality among black men is significantly higher than in men of other races, with an age-standardized rate for mortality of 48.2 in black men compared with a 9.7 average for U.S. men overall [8]. This survival disparity is because of several factors, including higher tumor stage and grade at presentation and higher likelihood of presenting with comorbid illnesses [9, 10]. Moreover, the genetic and environmental factors in driving prostate cancer outcomes are poorly understood. Despite

longstanding recognition of this survival disparity, little progress has been made to improve it. Notably, one critical flaw of the U.S. Preventive Services Task Force recommendation against all PSA screening is the relative absence of black men in screening studies. This means that we have a very limited evidence base for clinical decision-making regarding screening and treatment for prostate cancer management in black men.

Some facts are clear. Black men have unequal access to care generally, leading to delayed diagnosis and treatment and lower participation in promising cancer clinical trials. Both race and poverty may contribute to the disparity in outcomes. One recent study found that in a middle-aged cohort, black men with a household income below 125% of the poverty level had a 2.7-fold greater overall mortality rate [11]. The onus for better cancer outcomes does not rest only with clinicians, however. Cultural factors and attitudes toward medical care and medical research are important in discouraging early diagnosis and effective treatment. Men in general are less likely to present for medical care even in the face of worrying medical symptoms, to participate in routine health screening, and to establish a consistent source of health care [12, 13]. Gender, as described by Griffith, is a unique social determinant of health among minority men because it is tightly bound to social status and identity [14]. Concomitant stresses that black men routinely encounter when striving for success may give rise to behaviors that negatively affect their health. Powell et al. found that black men who avoided health help-seeking behaviors tended to endorse a need for autonomy, freedom, and a sense of control [15], traits that are associated with success in this population. The authors suggested that these traits may also serve as barriers to positive health encounters. Hines corroborated these findings in older black men and noted that autonomy-seeking traits may especially encourage stoic isolation regarding health matters, even in the face of acute need [16]. Moreover, exposure to everyday racial discrimination, commonly experienced by black men, only exacerbates these effects [15]. Health-avoidant behaviors and attitudes must be addressed before cancer clinical trials targeting black men will be successful.

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In the short term, practical strategies and solutions are desperately needed to improve accrual rates in research among black patients with cancer. Yet it is clear that there are complex interrelationships among race, gender, societal structure, culture, and politics that create persistent underrepresentation of diverse communities in clinical trials [17]. In 2015 and 2016, the Lazarex-MGH Cancer Care Equity Program conducted a series of qualitative health assessments and neighborhood forums in the diverse communities of Mattapan, Dorchester, and Roxbury in the Boston metropolitan area to study black perceptions of cancer care and participation in clinical trials (K. Winkfield, L. Sprague Martinez, B. Moy et al., manuscript in preparation) [18]. Findings revealed that only 51% of survey participants agreed that clinical trials improve the quality of cancer care. Perceptions of clinical trials were largely negative, with recurring themes such as “fear,” “mistrust,” and “guinea pig.”

Critically, these surveys yielded a number of potential interventions to improve accrual. Suggestions included the need to improve community relationships through traditional and social media outlets found in communities of color. These channels may be leveraged to improve basic health and clinical research literacy and to build trust in the research enterprise. The comments from the community converged on a clear theme: success in clinical trial recruitment initiatives are contingent on sustained engagement and productive communication with individual neighborhoods of color.

Given the diversity of barriers to participation in clinical trials for black men, a multifaceted approach will be required to achieve diverse cancer trial recruitment. Solutions will likely vary within each community but should prioritize (a) the restoration of trust through sustained community engagement, (b) ongoing educational dialogue with community partners using a mix of traditional and social media, and (c) active engagement of community representatives in the research enterprise. Reaching black men can be difficult without strong community and family support. Thus, we encourage all clinicians to form partnerships with community-facing organizations, such as faith ministries and media, to identify and remove other barriers to clinical trial enrollment that may not be readily apparent. Even the modification of seemingly small barriers to participation, such as prepayment of transportation, accommodations, or child care costs, could alter the likelihood of participation for whole communities of color. We must strive to better understand the unique burden we place on patients when asking them to join our studies.

Yet before recruitment models can be effective, deep investment in basic health and clinical research literacy is necessary in underserved communities to begin the alleviation of long-held beliefs of medical racism at regional and national health centers. Importantly, educational engagement should be extended to both community members and primary care physicians to foster a more receptive audience for recruitment efforts. Researchers may additionally opt for patient navigation in clinical trials, leveraging established physician-patient relationships to facilitate enrollment. Data suggest that inclusion of personal physicians as study investigators positively influences the willingness of patients to participate in clinical trials [19]. The exclusion of primary care physicians and community-based specialists from clinical trials contributes to

a balkanization of medical practice, disproportionately affecting vulnerable populations like black men. Whatever the details, ideal models for inclusive recruitment focus on a dynamic partnership between health organizations and communities of color, particularly investing in training and communication with local physicians to promote clinical research literacy.

These strategies may also help address the underrepresentation of black men in medical careers in the longer term, the lack of black oncologists being perhaps one of the most significant barriers to recruitment of black men into cancer clinical trials. Startlingly, the number of black male matriculates in medical school has failed to exceed 1978 levels [20], and this problem is compounded in medical oncology. In 2013, the Association of American Medical Colleges (AAMC) reported that only 2.3% of medical oncologists were black [21]. Given the importance of physician-patient relationships in clinical care and participation in clinical research, the dearth of black medical oncology health professionals remains an important element in driving cancer health disparities. Solutions in medical oncology require a twofold approach: (a) a culturally proficient, multidimensional clinical trial model that engages community-based physicians to improve black health; and (b) a strategic interaction with the AAMC to engage black males early in their careers to introduce medical oncology as a career choice vital to the elimination of cancer health disparities.

Most of these ideas, both short- and long-term, require strategic commitments beyond the level of an individual clinical study. We recognize that most clinical trials, laboratories, and cancer centers may not have sufficient resources to offer a sustained presence in underserved communities. However, it is incumbent upon researchers, government and private-sector funders, leaders of clinical research institutions, and deans of medical schools to engage in serious tactical discussions to improve participation rates of minorities and the underserved in clinical trials as a critical step toward eliminating cancer health disparities. Community engagement by all clinical faculty and staff, not just those of color, must be encouraged, rewarded, and eventually normalized as a routine part of clinical trial design. In another setting, Nelson Mandela taught us that “it always seems impossible until it’s done.” Although improving the rates of accrual for black men in cancer clinical trials may be difficult, it is not impossible. The time has come, therefore, to just get it done.

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#### ACKNOWLEDGMENTS

We thank Dr. Karen Winkfield for her past leadership of the Lazarex-MGH Cancer Care Equity Program and her continued guidance. J.D.J. and B.M. were supported by the Lazarex Cancer Foundation. M.K.E. was supported by the National Institute on Aging Intramural Research Program, National Institutes of Health.

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#### DISCLOSURES

The authors indicated no financial relationships.

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**EDITOR'S NOTE:** See the related article, "Phase II Trial of Abiraterone Acetate Plus Prednisone in Black Men With Metastatic Prostate Cancer," by Che-Kai Tsao, John Sfakianos, Bobby Liaw et al., on page 1414 of this issue.