Title

Reply to “Contextualizing racial associations in prostate cancer to expose structural causes”

Journal

Cancer, 130(4)

ISSN

0008-543X

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Publication Date

2024-02-15

DOI

10.1002/cncr.35167

Peer reviewed

DOI: 10.1002/cncr.35167

REPLY

Reply to "Contextualizing racial associations in prostate cancer to expose structural causes"

We thank Rollin et al. for their interest in our study[1] and for highlighting the need for more nuance in describing implied genetic differences along racial lines that are arguably primarily a social construct. We also agree on using the term *White* instead of *Caucasian* as advocated by Rollin et al.

However, our study noted significant differences in the chemokine profile of CXCL2, CXCL5, and CCL23 across African American (AA) samples versus White samples—with no direct or implied association with underlying drivers of these differences. As noted in our article, the genetic and/or environmental associations of chemokine profiles in AA patients with prostate cancer versus White patients with prostate cancer have been described previously. As some of our notable observations track with previous reports, we have expressed our inferences along these lines as well.

We agree that numerous racial differences that have been described between AAs and Whites with respect to prostate cancer (and other cancers) may be highly influenced by socioeconomic factors and environmental exposures in a way similar to the association of allostatic load with several other metrics of health and disease. However, a notable body of peer-reviewed literature, including studies specifically in prostate cancer,[2–4] also points to genetically based differences between self-identified racial groups underlying certain health and disease predispositions. Our findings, however, are descriptive in nature, and we do not provide mechanistic data concerning whether these differences are due to genetic, racial, or socioeconomic aspects.

In order not to draw inferences beyond what our data afforded, we discussed whether the increased levels of CXCL2 and CXCL5 in the AA subjects were a result of genetics (genetics of race) or the environment, including diet and lifestyle (a part of structural racism), while we kept in view the fact that AAs are a heterogeneous group of people with varying life experiences and social and environmental exposures. We agree that a direct role of Duffy antigen receptor for chemokines (DARC) is not linked with prostate cancer; however, increased levels of CXCL2 and CXCL5 have been studied in cancer progression and metastasis. Although the literature has established the role of DARC, a protein that specifically binds to CXC chemokines, including CXCL5, an association of an increase in serum CXCL5 chemokine levels due to the loss of DARC could be viewed as a causative effect but not as a direct consequence of racial genetics. We acknowledge that a larger cohort of patients needs to be analyzed to establish if increased levels of CXCL2 and CXCL5 in AA subjects are a result of racial genetics (White vs. AA) or structural barriers among AA men. Nonetheless, increased serum levels of CXCL2 and CXCL5 in AA subjects, regardless of cancer, indicated an association with race (this could be racial genetics or associated with prostate cancer disparities based on structural racism). On the contrary, chemokine CCL23 could account for structural racism, as we observed both race- and cancer-specific differences. Overall, even as our study accurately reports noted "racial differences in serum chemokines in prostate cancer patients,"[1] it does not purport to resolve the question of the underlying cause—whether it is genetic, environmental, or perhaps a combination of these factors.

CONFLICT OF INTEREST STATEMENT

Kenneth A. Iczkowski reports consultancy for e-Century. The other authors declare no conflicts of interest.

FUNDING INFORMATION

National Cancer Institute, Grant/Award Number: R01CA204786

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