

BONE METASTATIC PROSTATE CANCER AMONG AFRICAN AMERICANS: THE SURVIVAL EQUIVALENCE PARADOX

**David P. Gordy¹, Xiaoshan Z. Gordy², Seth Lirette³, Srinivasan Vijayakumar⁴,
Vani Vijayakumar¹**

¹Department of Radiology, University of Mississippi Medical Center, Jackson, MS,

²Department of Health Sciences, University of Mississippi Medical Center, Jackson, MS,

³Department of Data Science, University of Mississippi Medical Center, Jackson, MS,

⁴Department of Radiation Oncology, University of Mississippi Medical Center, Jackson, MS

Corresponding Author: Vani Vijayakumar, M.D <vvijayakumar@umc.edu>

ABSTRACT

Prostate cancer (PC) is one of the leading causes of cancer-related deaths among men. It is well-documented that African American (AA) men in general have poorer survival outcomes than European American (EA) men. In this study, a retrospective review of prostate cancer patient charts from the past 12 years was conducted using an academic medical center's cancer registry and electronic health records. Sixty-nine AA and twenty-one EA PC patients with bone metastases were included in this study. Our analyses indicated that when treatments were equal, the survival outcomes for AA and EA were not significantly different, which conflicts with the current notion in the literature, but supports findings in a few recent studies. This study should add to the growing body of literature indicating that when equal access to treatments is provided, less racial disparities will be observed among AA and EA men.

Keywords: prostate cancer, bone metastasis, African American, European American, survival outcomes

INTRODUCTION

Prostate Cancer (PC) has many disease characteristics that are different among African Americans (AA) compared to European Americans (EA) [1-6]. These differences are listed in Table 1. These differences contribute to poorer overall survival outcomes among AA compared to EA. Health outcomes are not determined just by tumor characteristics; they are also determined by 'Social Determinants of Health' [SDH]. This is true in PC also. PC outcomes are poorer among AA compared to EA due to many disadvantaged factors among the SDH in AA population. These are listed in Table 2[7-12].

Overall survival rates are poorer among AA compared to EA [13-15]. However, most the studies have focused on either overall survival outcomes or survival among patients without metastatic disease. PC has a tendency to preferentially metastasize to bones, but few studies have looked into the survival outcomes of PC patients with bone metastasis, specifically among AA.

The purposes of the current study are as follows:

- To determine the survival outcomes among AA men with bone metastasis from PC from the time of diagnosis of metastatic disease at an academic medical center.
- To compare these survival outcomes among AA with that of EA for our population diagnosed with bone metastasis from PC.

Based on previous reports in the literature, we hypothesized that the overall survival rates of AA men with bone metastasis from PC would be statistically different.