

# Racial Differences in New-Onset Cardiovascular Disease in Men With Prostate Cancer Treated With Hormone Therapy

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### Introduction

- Cardiovascular disease (CVD) is the leading cause of death in patients with prostate cancer.
- Androgen deprivation therapy (ADT), the mainstay treatment of advanced prostate cancer has been associated with increased cardiovascular disease mortality.
- This study sought to evaluate the relationship of race with ADT-associated cardiotoxicity.

## **Methods**

Identify patients at institution with locally advanced and metastatic prostate cancer using International Classification of Diseases diagnosis and procedure codes.



White Black P-value

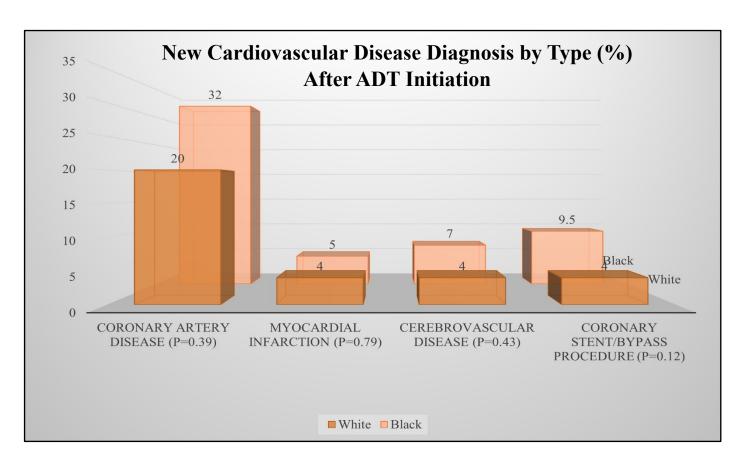
Chart review of identified patients on Androgen Deprivation Therapy from 2017-2022



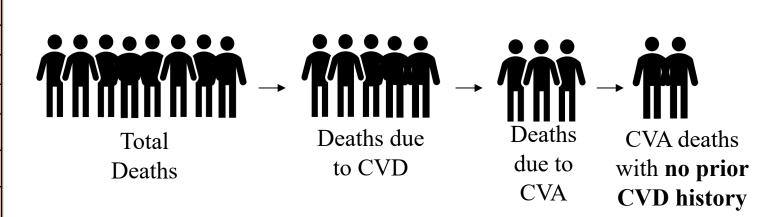
Data collection on demographics, cancer staging and treatment, CVD diagnoses and events before and after hormone treatment initiation.

### Results

- A total of 119 patients met inclusion criteria, including
   94 black men and 25 white men.
- Median age at time of diagnosis was **68** and **63**, for black and white men, respectively.
- The groups did not differ with respect to stage at diagnosis and treatment history including radical prostatectomy, radiation, and chemotherapy as well as type of ADT administered.
- All recorded 8 deaths were in patients who identified as Black. 2 of 3 deaths caused by cerebrovascular accidents (CVA) occurred in patients with no prior CVD history.



	wnite	Black	P-value
	(n=25)	(n=94)	(ANOVA)
T stage at diagnosis, n (%)			0.06
T2	10 (40)	19 (20)	
T3	7 (28)	22 (23)	
T4	8 (32)	53 (56)	
Hx of Radical Prostatectomy	5 (20)	9 (10)	0.15
Hx of Radiation Therapy	13 (52)	32 (34)	0.10
Hx of Chemotherapy	5 (20)	20 (21)	0.89
ADT By Type			0.29
GnRH agonist	17	62	
GnRH antagonist	8	23	
Orchiectomy	0	8	
Duration of Androgen			0.38
Deprivation Therapy, yrs			0.36
Median (IQR)	4.0 (3-6)	5.0 (3-17)	
Mean (st dev)	7.0 (6.82)	8.37 (6.91)	
Follow up			0.93
Median (IQR)	4.0 (3-6)	4.7 (3-7)	
Mean (st dev)	4.6 (2.4)	4.6 (2.8)	
Cardiovascular Diagnosis, n (%) Prior to ADT initiation)	7 (28)	33 (35)	0.50
New Cardiovascular Diagnosis, n (%) (After ADT initiation)	6(24)	43(45)	0.05
Multiple Cardiovascular Diagnoses	3 (12)	24 (26)	0.15
New CV medication (after ADT initiation)	3 (12)	13 (14)	0.81



#### Conclusion

 This data suggests a higher incidence of cardiovascular morbidity in Black men on androgen deprivation therapy and may translate to a higher risk of cardiovascular mortality.

## References

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