

Racial Disparities in Incidence of Non-Hodgkin Lymphoma as a Second Primary Malignancy Following Prostate Cancer: A Population Based Study



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INTRODUCTION

Prostate cancer is the most common solid malignancy in U.S. men, with higher incidence and mortality in Black men than White men. Whether race influences risk of non-Hodgkin lymphoma (NHL) as a second primary malignancy after prostate cancer is not well established. We used SEER to characterize racial differences in NHL incidence, subtype, age at onset, and latency following an index prostate cancer diagnosis.

AIM

To characterize racial disparities in the incidence, subtype distribution, age at onset, and latency period of non-Hodgkin lymphoma (NHL) as a second primary malignancy following prostate cancer, stratified by race (White vs. Black), using national SEER registry data.

METHOD

Data source: SEER Research Data, 17 registries; Multiple Primary-Standardized Incidence Ratio (MP-SIR) sessions.

Cohort: 828,796 White and 158,238 Black male prostate cancer patients (7,047,555 and 1,214,736 person-years follow-up, respectively).

Analysis: Observed-to-expected (O/E) ratios with 95% CIs computed for combined and subtype-specific NHL (nodal vs. extranodal). Incidence rates per 100,000 person-years, mean age at NHL, and mean latency calculated by race.

CONCLUSIONS

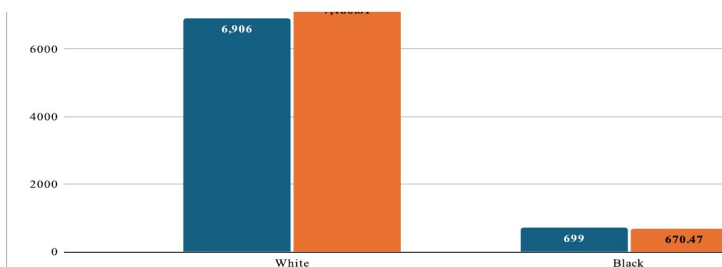
After prostate cancer, Black men have a significantly elevated relative risk of NHL (O/E 1.04), while White men exhibit a protective effect (O/E 0.93).

This disparity is driven by extranodal NHL (O/E 1.18 in Black vs. 0.92 in White) and is accompanied by younger NHL onset (72.0 vs. 75.9 yrs) and shorter latency (7.50 vs. 8.36 yrs) in Black patients.

Findings support race-conscious post-prostate cancer surveillance and warrant investigation of biologic, treatment-related (ADT, radiation), and access-related drivers.

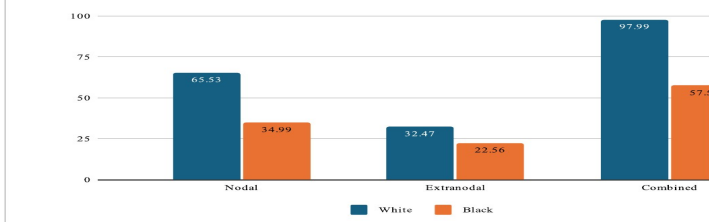
RESULTS

Observed vs. Expected NHL Cases by Race

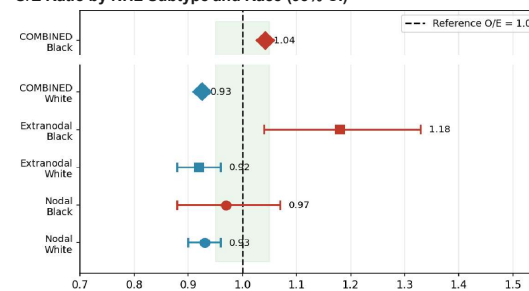


NHL Incidence Rate per 100,000 Person-Years

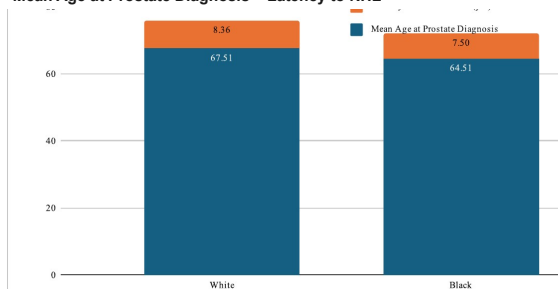
NHL Incidence Rate per 100,000 Person-Years by Subtype and Race



O/E Ratio by NHL Subtype and Race (95% CI)



Mean Age at Prostate Diagnosis + Latency to NHL



REFERENCES

1. National Cancer Institute. SEER Research Data, 17 Registries, 2000–2019. Surveillance, Epidemiology, and End Results Program. <https://seer.cancer.gov>
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3. Howlader N, et al. SEER Cancer Statistics Review, 1975–2020. National Cancer Institute, 2023.