

Comparative Analysis of Long-Term Survival between Black and White Patients with Chronic Lymphocytic Leukemia/Small Lymphocytic Lymphoma in the Post-BTKi era using Real-World Data

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OBJECTIVE

To examine the 5- and 10-year racial differences in overall survival and relapse free survival in CLL/SLL patients following the introduction of bruton kinase inhibitors (BTKi) using real world data.

METHOD

Study type: Retrospective analysis between 01/2014-12/2025 using data from US collaborative network of TriNetX global health research database

Primary exposure: Race either African American/Black or White

Outcomes: Overall and relapse-free survival at 5- and 10-years

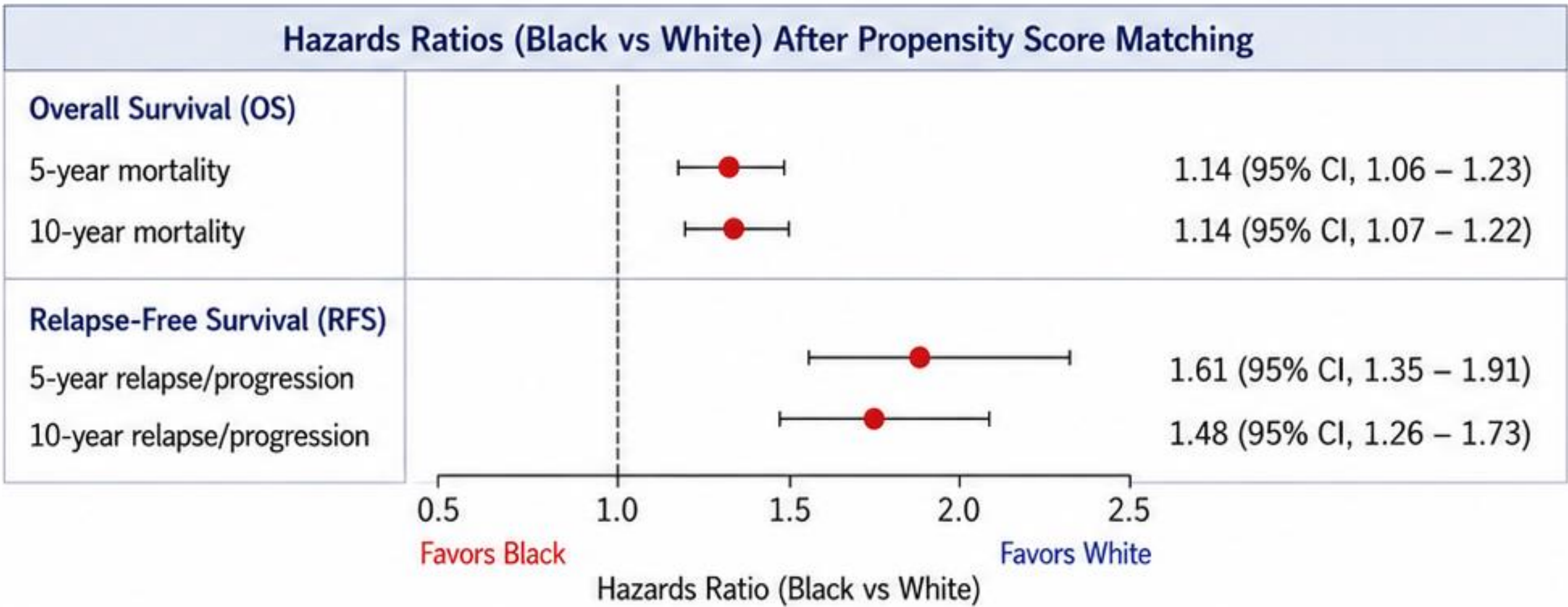
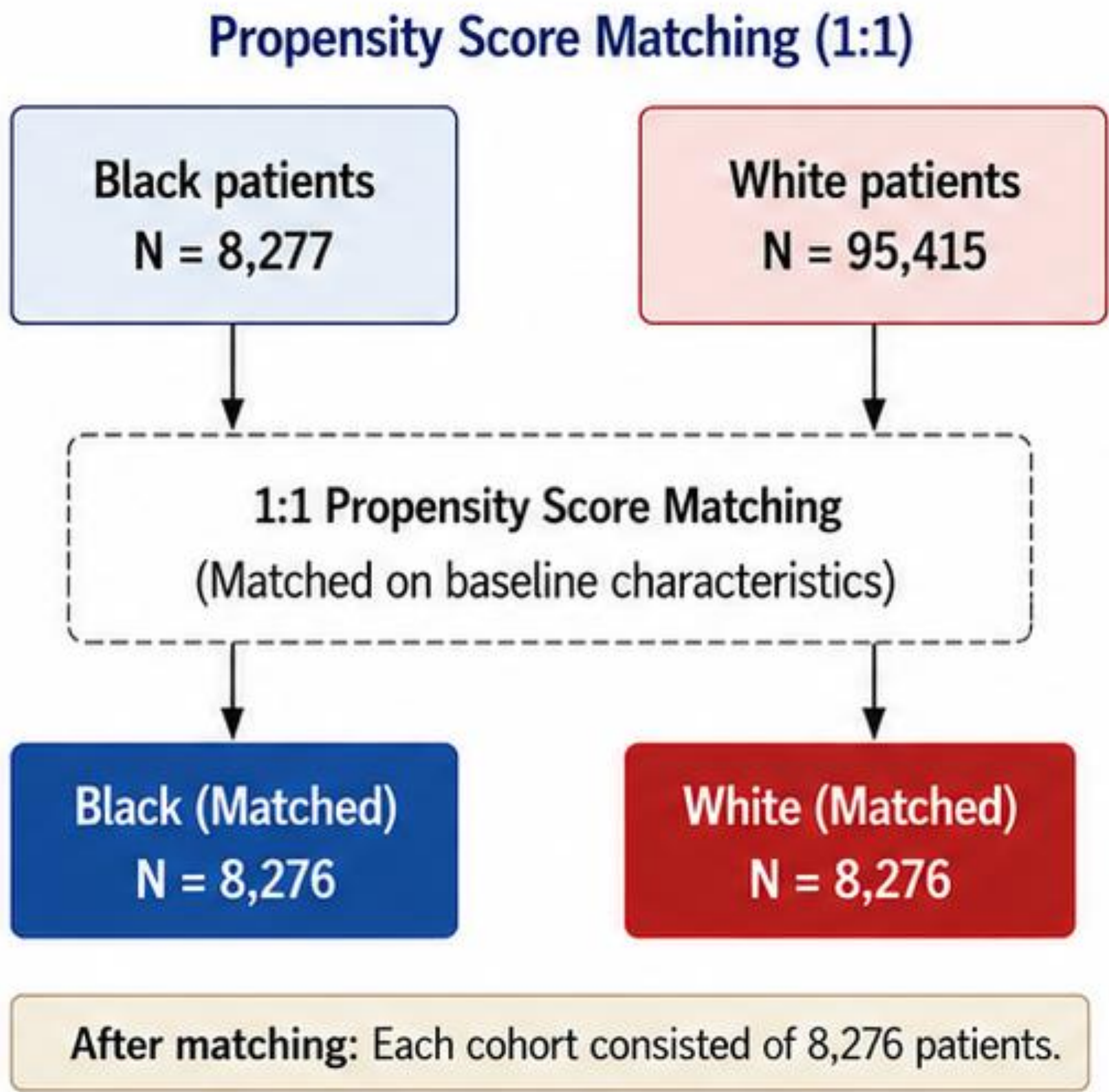
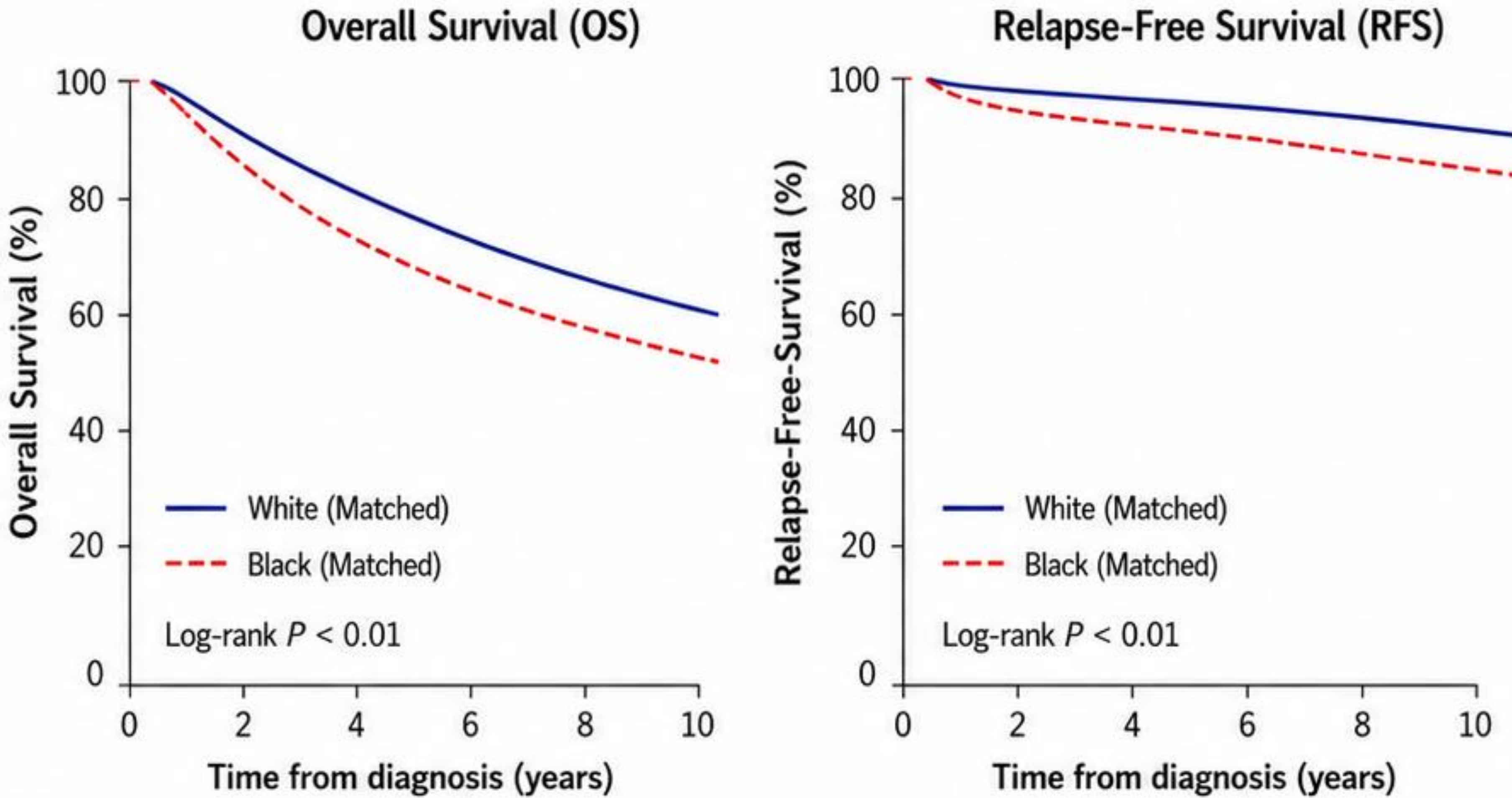
Analysis: 1:1 propensity score matching (PSM) to balance cohorts by age at diagnosis, sex, independent use Ibrutinib, Acalabrutinib, Zanubrutinib, and Venetoclax, comorbidities (hypertension, diabetes, and overweight/obesity), and pre-specified categories of baseline hemoglobin (<10 g/dl, ≥10 g/dl), platelet count (<100,000 cells/mm³, ≥100,000 cells/mm³) and leukocyte count (<25,000 cells/mm³, 25,000 to <50,000 cells/mm³, 50,000 to <100,000 cells/mm³, 100,000 to <150,000 cells/mm³, ≥150,000 cells/mm³).

RESULTS

Baseline Characteristics Before Propensity Score Matching

Characteristic	Black (N = 8,277)	White (N = 95,415)	P value
Age at diagnosis, median (IQR), years	67 (17)	71 (15)	<0.01
Male sex, n (%)	4,446 (53.7%)	56,196 (58.9%)	<0.01

Survival Outcomes After Propensity Score Matching



CI, confidence interval; OS, overall survival; RFS, relapse-free survival; IQR, interquartile range.

Key takeaway: After matching, Black patients had consistently lower **overall survival (OS)** and **relapse-free survival (RFS)** at both 5 and 10 years compared with White patients.

LIMITATION

Future research is needed to determine whether these disparities are driven by unmeasured differences in comorbidities, disease biology, access to novel therapies, treatment patterns, or social determinants of health.

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Disclosure: AI was used in the creation of the infographic