TRENDS IN MORTALITY DUE TO PERIPHERAL AND CUTANEOUS T-CELL LYMPHOMA FROM 1999–2020: A CDC WONDER DATABASE ANALYSIS

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Introduction

Peripheral and cutaneous T-cell lymphomas (PTCL and CTCL) are rare but aggressive lymphoid malignancies with poor prognoses. Global data suggest higher mortality in men and older adults. This study evaluates U.S. mortality trends and demographic disparities over the past two decades.

Aim

To examine national mortality trends for peripheral and cutaneous T-cell lymphomas and identify disparities across sex, age, race, and geography.

Objectives

- Assess long-term mortality trends in PTCL/CTCL from 1999–2020
- Compare age-adjusted mortality rates (AAMR) across demographic subgroups
- Identify disparities in sex, race, age, and geographic setting

Methods

Mortality data were extracted from the CDC WONDER database (ICD-10: C84.4) from 1999–2020. Age-adjusted mortality rates were calculated and stratified by sex, race (Black, White), age (15–64 vs. ≥65), and geography (metropolitan vs. non-metropolitan). Mann–Kendall trend tests were used for temporal analysis; t-tests compared continuous variables. A p-value < .05 was considered significant.

Results

Overall Mortality Trend:
- Total deaths: 27,407
- AAMR: 0.368 per 100,000 (95% CI: 0.364–0.373)
- Significant upward trend ($\tau = 0.824$; $p < .001$)

By Sex:
- Males AAMR: 0.501
- Females AAMR: 0.315 ($p < .001$)

By Age Group:
- Age 15–64 AAMR: 0.199
- Age ≥65 AAMR: 1.874 ($p < .001$)

By Race:
- Black AAMR: 0.654
- White AAMR: 0.375 ($p < .001$)

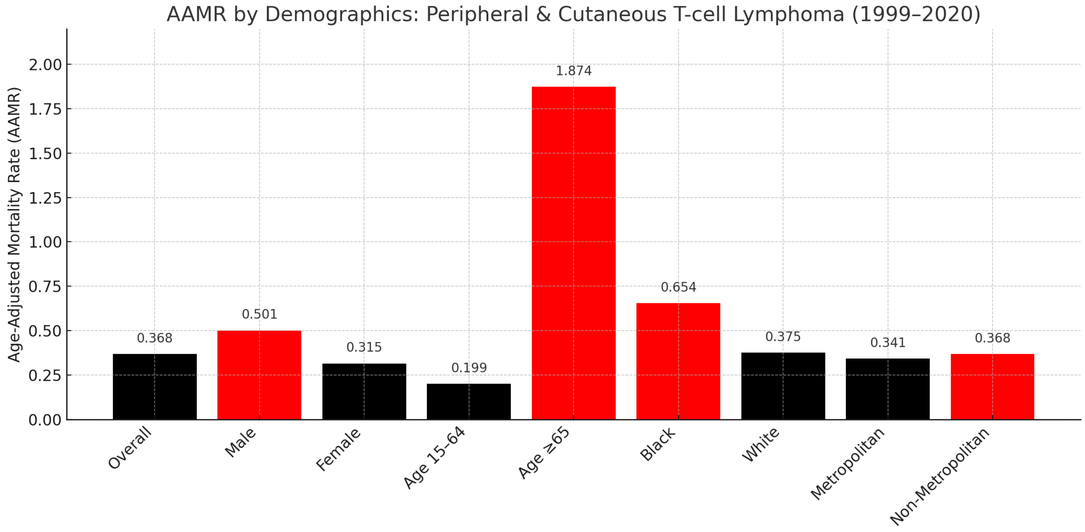
By Geographic Location:
- Metropolitan AAMR: 0.341
- Non-metropolitan AAMR: 0.368 ($p < .001$)

Summary

Mortality due to peripheral and cutaneous T-cell lymphoma has steadily increased from 1999–2020. Male sex, older age, Black race, and non-metropolitan residency were associated with higher mortality rates.

Discussion

Rising mortality trends across all groups highlight an urgent need for targeted strategies. Disparities in outcomes suggest genetic, socioeconomic, and systemic barriers that must be addressed to improve survival. These results call for more comprehensive diagnostic approaches and access to specialized lymphoma care.



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