Evaluating Mortality Trends and Disparities Related to T-Cell Lymphomas Among Adults in the United States: A Retrospective Analysis of Two Decades

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Background

- T-cell lymphomas are rare, and aggressive lymphomas, associated with limited treatment options and poor prognosis
- While treatment advances have improved outcomes in other lymphoma subtypes, mortality trends in T-cell lymphoma remain less well-characterized
- This study evaluates mortality trends and demographic disparities in T-cell lymphoma in the U.S.

Methods and Materials

- Retrospective analysis of adults aged ≥25 years from 1999-2020 using data from CDC WONDER Multiple Cause of Death
- Relevant ICD Code for T Cell lymphoma (C84) used
- Total deaths and age-adjusted mortality rates (AAMR) per 100000 population extracted
- Joinpoint regression used to calculate annual percent change (APC)
- Analysis further stratified by race, sex, geographic region, and urban-rural classification

Results

- Between 1999-2020, a total of **26,870** deaths attributed to T-cell lymphoma in the United States in adults aged ≥25 years
- Out of them, 16,250 deaths (60.5%) in males and 10,620 (39.5%) in females
- AAMR as shown in figures A-D, highlighting increased **AAMR in males, African Americans, Urban residents,** and in the **Northeast region**
- American Indian/Alaska Natives not included in the analysis as AAMR and APC were not calculated due to limited data reliability.
- Mortality trends showed an increase over time, with an APC of 1.95 in males and 1.38 in females (figure G)
- Mortality trends by race showed increase, with APC being highest among Hispanic individuals (2.51), followed by Black (2.09), White (1.90), and Asian/Pacific Islanders (1.02) (figure E)
- AAMR were highest in Northeast and mortality trend also rising with APCs in Northeast (2.89), South (1.79), Midwest (1.76), and West (1.60). (figure C, F)
- By location, 22,578 deaths (84.1%) occurred in urban areas and 4,292 (15.9%) in rural areas, with AAMR and APC slighly higher in Urban (APC 1.86) as compared to rural areas (APC 1.73) (figure D)

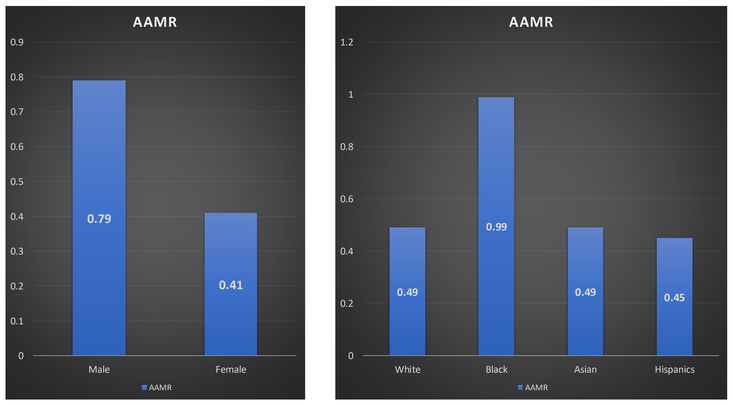


Figure A,B. AAMR stratified by sex and racial classification.

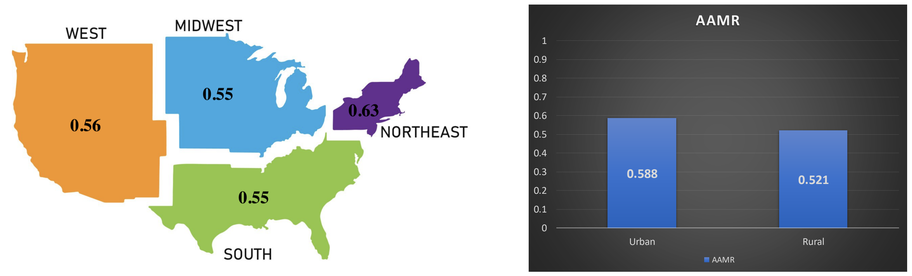


Figure C,D. AAMR stratified by geographic regions and rural-urban status.

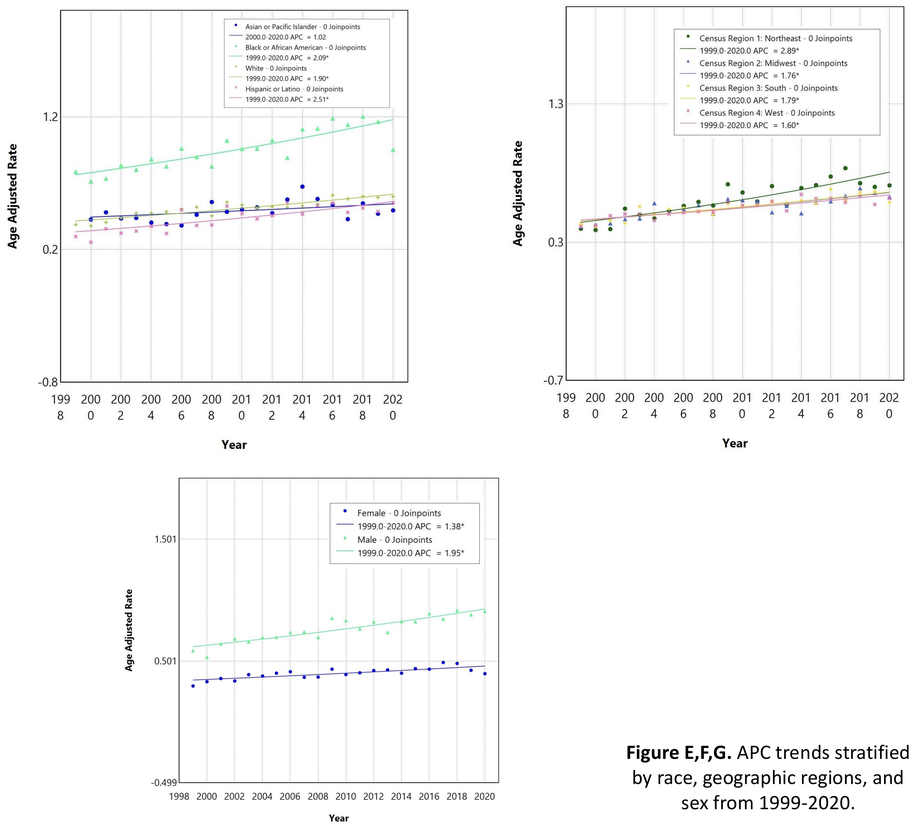


Figure E,F,G. APC trends stratified by race, geographic regions, and sex from 1999-2020.

Conclusions

- T-cell lymphoma mortality in the United States has shown an upward trend from 1999 to 2020
- There is need to expand research into novel targeted and immunotherapy options for T-cell lymphoma
- There are notable persistent disparities across demographic and geographic groups, thus also the need for targeted strategies to address inequities in access to diagnosis and treatment