Rising Mortality from Diffuse Non-Hodgkin's Lymphoma in the U.S. Adults

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Introduction/Objectives

- Diffuse Non-Hodgkin's lymphoma (NHL) continues to impose a growing mortality burden among older U.S. adults.
- Our study evaluates national trends from 1999 to 2020, examining disparities across age, sex, race/ethnicity, geographic regions, and urbanization levels.

Methods

- Adults aged ≥45 years who died from diffuse NHL were identified in the CDC WONDER database using ICD-10 codes C83.0–C83.9.
- Age-adjusted mortality rates (AAMRs) per 100,000 were calculated annually.
- Joinpoint regression was used to estimate average annual percent change (AAPC) with 95% confidence intervals.

Results

- Between 1999 and 2020, 87,411 deaths from diffuse NHL occurred in U.S. adults aged ≥45 years.
- The national AAMR rose from 2.96 (95% CI: 2.85–3.07) to 5.18 (95% CI: 5.06–5.29), with a significant overall AAPC of 2.66% (95% CI: 1.17–4.16).
- Males had a higher average AAMR of 4.78 (95% CI: 4.74–4.82) compared to females (2.34, 95% CI: 2.31–2.36), with corresponding AAPCs of 2.90% (95% CI: 1.42–4.41) and 2.34% (95% CI: 1.28–3.42), respectively.

Results

- White individuals had the highest average AAMR at 3.63 (95% CI: 3.60–3.66), followed by Hispanics (2.73, 95% CI: 2.65–2.80), and Black individuals (2.06, 95% CI: 2.00–2.11); all showed significantly rising trends with AAPCs of 2.74% (95% CI: 1.29–4.21), 4.31% (95% CI: 2.57–6.08), and 3.08% (95% CI: 0.92–5.30), respectively.
- The highest AAMR and steepest rise by age group was observed in those aged ≥85 years (AAMR: 13.3, 95% CI: 13.1–13.5 and AAPC: 4.35, 95% CI: 2.91 to 5.80.
- Non-metropolitan residents had a higher average AAMR (3.68, 95% CI: 3.62–3.74) while Metropolitan had steepest rise with AAPC of 2.78 (95% CI: 0.94 to 4.65).
- Regionally, the Midwest had the highest AAMR (4.05, 95% CI: 4.00–4.11) however, the greatest increases were observed in the Northeast (AAPC: 3.45%, 95% CI: 1.76–5.18).

Discussion

- Diffuse NHL mortality has significantly increased across the U.S. adult population aged ≥45, with disparities most pronounced by sex, race/ethnicity, region, and rurality.
- Targeted interventions are needed to address disparities and mitigate rising mortality.

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