DIFFUSE LARGE B-CELL LYMPHOMA MORTALITY IN THE US: CDC WONDER DATA

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Introduction

Diffuse large B-cell lymphoma (DLBCL) is the most common subtype of non-Hodgkin lymphoma, comprising approximately 30% of all cases. This study analyzed national DLBCL mortality data from 1999 to 2023 using the CDC WONDER database.

Aim

To evaluate national trends in diffuse large B-cell lymphoma (DLBCL) mortality in the United States from 1999 to 2023 using the CDC WONDER database.

Objectives

1. To assess national trends in DLBCL mortality in the United States from 1999 to 2023.
2. To quantify annual and average annual percent changes in mortality rates using Joinpoint regression.
3. To compare mortality patterns across sex and racial subgroups.

Methods

We used the CDC WONDER database to identify all deaths attributed to DLBCL in the United States from 1999 to 2023. Age-adjusted mortality rates (AAMRs) per 100,000 population were calculated and standardized to the 2000 US census. Trends were analyzed using the National Cancer Institute Joinpoint Regression Program to determine annual percent changes (APCs) and average annual percent changes (AAPCs). A change was considered statistically significant if the corresponding confidence interval did not include zero.

Results

From 1999 to 2023, 53,939 deaths in the US were attributed to DLBCL. DLBCL mortality significantly declined from 1999 to 2008, with an APC of –8.83% (95% CI, –11.79 to –6.88). This was followed by a sharp increase between 2008 and 2011 (APC, 35.72%; 95% CI, 21.46–43.02), and a sustained moderate rise from 2011 to 2023 (APC, 6.41%; 95% CI, 5.42–7.35). These temporal patterns were consistent across sex and racial subgroups, with all APCs reaching statistical significance ($P<0.000001$).

Discussion

Mortality from DLBCL in the U.S. declined until 2008, then increased, with modest but steady rises through 2023. These trends contrast with registry data showing improved survival after the introduction of rituximab and newer therapies. The divergence may be explained by increasing incidence in an aging population, differences between survival and mortality reporting, and possible changes in coding practices. Rising mortality despite therapeutic advances highlights the need for earlier detection, broader access to curative therapies, and effective strategies for relapsed/refractory disease.

References

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