TRENDS IN HEMATOLOGIC MALIGNANCY MORTALITY AMONG OLDER ADULTS IN THE U.S.: A CDC WONDER DATABASE ANALYSIS (1999–2020)

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Introduction

Hematologic malignancies are among the most prevalent and complex cancers worldwide. Older adults remain disproportionately affected due to age-related factors. This study explores long-term mortality trends in hematologic cancers among U.S. adults aged over 65, providing insight into demographic disparities and healthcare progress over two decades.

Aim

To evaluate national mortality trends in hematologic malignancies among adults aged >65 in the United States from 1999 to 2020.

Objectives

- Determine age-adjusted mortality trends for hematologic malignancies in the >65 age group
- Analyze variations across sex, race, geography, and census region
- Quantify demographic disparities in mortality rates

Methods

A retrospective study using CDC WONDER mortality data (1999–2020) was conducted. Patients aged >65 with ICD-10 codes C81–C96 were included. AAMRs were stratified by sex, race (Black/White), location (metropolitan vs. non-metropolitan), and census region. The Mann–Kendall test assessed temporal trends. T-tests compared continuous variables.

Results

- Total Deaths: 1,133,287
- Overall AAMR: 123.985 per 100,000 (95% CI: 123.756–124.214)
- Trend: Significant national decrease (τ = -0.948, $p < 0.001$)

Subgroup Mortality Trends – All Significant (τ, $p < 0.001$):

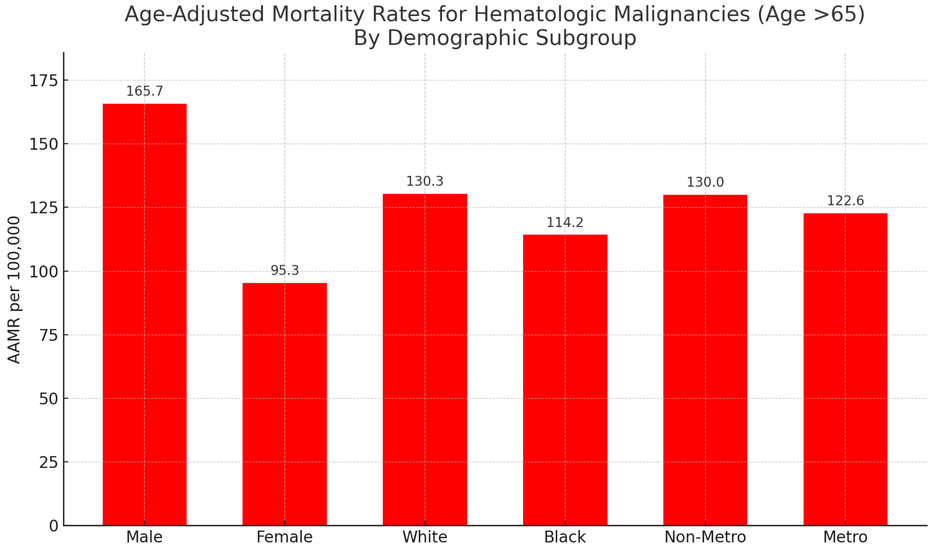
- Sex:
  - Male: τ = -0.922
  - Female: τ = -0.948
- Race:
  - Black: τ = -0.835
  - White: τ = -0.939
- Region:
  - Northeast: τ = -0.931
  - Midwest: τ = -0.887
  - South: τ = -0.931
  - West: τ = -0.905
- Location:
  - Metro: τ = -0.957
  - Non-Metro: τ = -0.896
- Comparative AAMRs:
  - Male vs. Female: 165.720 vs. 95.318 ($p < 0.001$)
  - White vs. Black: 130.299 vs. 114.206 ($p < 0.001$)
  - Non-Metro vs. Metro: 129.969 vs. 122.646 ($p < 0.001$)

Summary

Hematologic malignancy mortality in older adults has significantly declined across all demographic subgroups. However, males, White individuals, and those in non-metropolitan areas still exhibit higher mortality rates.

Discussion

Encouraging national trends suggest improvements in detection and treatment. Persistent disparities by sex, race, and geography emphasize the need for targeted interventions to ensure equitable access to cancer care and survivorship resources for older adults.



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