COMPARATIVE MORTALITY TRENDS IN MYELOID AND LYMPHOID MALIGNANCIES ACROSS SEX AND RACE IN THE UNITED STATES (1999–2020): A CDC WONDER DATABASE ANALYSIS

F. KHAN[1], A. AHMAD[2], M. AYYAZUDDIN[2], A.S. JAVED[2], M.U. RAFIQUE[2], S. ARSHAD[3], and I. BAIG[2]
[1] Department of Internal Medicine, The Brooklyn Hospital Center, Brooklyn, New York, USA
[2] CMH Lahore Medical College and Institute of Dentistry, Lahore, Pakistan
[3] Department of Community Medicine, Rashid Latif Medical College, Lahore, Pakistan

Introduction

Therapeutic advances have improved survival in certain subtypes of hematologic malignancies. However, mortality trends remain heterogeneous across malignancy types and demographic groups. This study evaluates temporal mortality trends in myeloid vs. lymphoid malignancies in the U.S. from 1999 to 2020.

Aim

To compare age-adjusted mortality trends between myeloid and lymphoid malignancies in the United States across sex and racial groups using national mortality data.

Objectives

- Analyze national mortality data from 1999–2020.
- Compare age-adjusted mortality rates (AAMRs) for myeloid vs. lymphoid malignancies.
- Stratify trends by sex and race.
- Identify significant disparities and variations in mortality over time.

Methods

Mortality data were extracted from the CDC WONDER database (1999–2020). Deaths due to myeloid and lymphoid malignancies were identified using ICD-10 codes C81–C95. AAMRs were calculated and stratified by sex and race. The Mann–Kendall trend test assessed temporal trends, and t-tests compared continuous variables.

Results

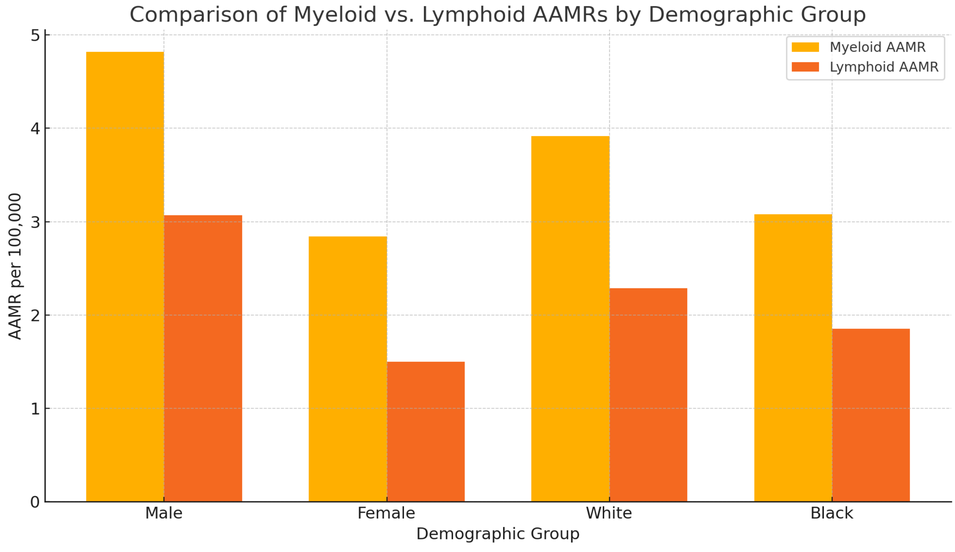
- Myeloid malignancies: AAMR = 3.686/100 000; no significant trend (τ = -0.264, P = 0.085).
- Lymphoid malignancies: AAMR = 2.152/100 000; significant decreasing trend (τ = -0.954, P < 0.001).
- Sex-stratified:
  - **Lymphoid**: decreasing trend in both males and females (P < 0.001)
  - **Myeloid**: decline only in females (τ = -0.506, P = 0.001).
- AAMR comparison (per 100 000):
  - Males: 4.817 (myeloid) vs. 3.070 (lymphoid) (P < 0.001)
  - Females: 2.839 vs. 1.498 (P < 0.001)
  - Whites: 3.915 vs. 2.287 (P < 0.001)
  - Blacks: 3.080 vs. 1.851 (P < 0.001)

Summary

Lymphoid malignancies showed a consistent decline in mortality across all demographics, whereas myeloid malignancies exhibited no overall improvement, with modest declines only in females. Myeloid cancers carried higher mortality across sex and race groups.

Discussion

The stagnation in myeloid malignancy outcomes highlights the need for targeted research, improved therapy access, and strategies to reduce demographic disparities. Continued progress in lymphoid malignancies illustrates the potential impact of such focused efforts.



The abstract reports original research; no funding was required. All authors declare no conflicts of interest.© 2025. All rights reserved.