Mapping the Gaps: Understanding Survival Disparities in Follicular Lymphoma Across Socioeconomic Demographics (2000–2021)

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Introduction

- Follicular lymphoma (FL) is a common subtype of non-Hodgkin lymphoma with varied outcomes influenced by biological and sociodemographic factors.
- Despite therapeutic advances, survival disparities persist across populations. Understanding how race, gender, income, and location impact survival is critical for health equity. Prior studies have noted these factors in cancer outcomes, but FL-specific evaluations are limited.
- Our study aims to assess the impact of socioeconomic disparities on survival outcomes in patients diagnosed with FL.

Aim

To evaluate the impact of sociodemographic factors—including sex, race/ethnicity, income, and geographic residence—on 5-year cause-specific survival in patients with follicular lymphoma using SEER population-based data (2000–2021).

Objectives

To determine the association between sociodemographic factors—sex, race/ethnicity, income, and geographic residence—and 5-year cause-specific survival among patients with follicular lymphoma using SEER data (2000–2021).

Methods

- We analysed data from the SEER Registry, including adult patients (>18 years) with FL (ICD-O 3 code 9690/3) from 2000–2021.
- We excluded patients with missing or unknown race, income, and location. The primary outcome was cause-specific survival. Kaplan-Meier analysis was used to estimate overall survival (OS), and Cox proportional hazards regression was applied for multivariable analysis.
- Differences between groups were assessed using log-rank test, with hazard ratios (HRs) reflecting 5-year OS.

Results

Total Patients: 64,398 met inclusion criteria
- Males: 32,446
- Females: 31,952

Gender:
- Men had significantly worse outcomes compared with women
- HR 1.1 (95% CI 1.1–1.1, *P*<0.001)

Race/Ethnicity (vs Hispanic, n=7,835):
- White (n=50,149): HR 1.14 (95% CI 1.09–1.2, *P*<0.001)
- Black (n=2,834): HR 1.16 (95% CI 1.08–1.2, *P*<0.001)
- AI/AN (n=305): HR 1.33 (95% CI 1.11–1.6, *P*=0.002)
- Asian/Pacific Islander (n=3,275): HR 0.93 (95% CI 0.87–1.1, *P*=0.07) → No significant difference

Income:
- Household income <$70,000/year associated with worse outcomes
- HR 1.3 (95% CI 1.3–1.3, *P*<0.001)

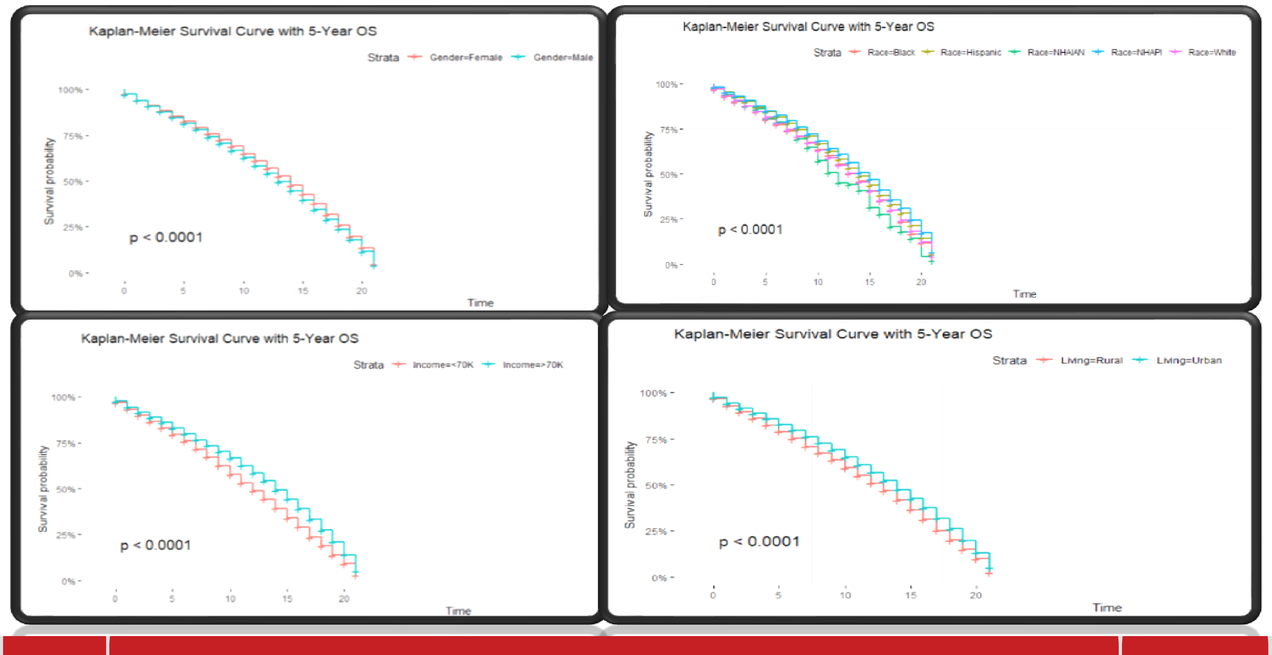
Residence:
- Rural residents had worse survival than urban
- HR 1.2 (95% CI 1.2–1.2, *P*<0.001)

Category	Reference (N)	Comparison (N)	HR (95% CI)	P-value
Gender	Female (31,952)	Male (32,446)	1.1 (1.1–1.1)	<0.001
Race	Hispanic (7,835)	White (50,149)	1.14 (1.09–1.2)	<0.001
		Black (2,834)	1.16 (1.08–1.2)	<0.001
		AI/AN (305)	1.33 (1.11–1.6)	0.002
		Asian/PI (3,275)	0.93 (0.87–1.1)	0.07
Income	≥ $70,000	< $70,000	1.3 (1.3–1.3)	<0.001
Residence	Urban (59,198)	Rural (5,200)	1.2 (1.2–1.2)	<0.001

Conclusion

- In this large population-based analysis of follicular lymphoma patients, **sociodemographic disparities** significantly influenced 5-year survival.
- **Worse outcomes** were observed in:
  Males, Patients with **lower household incomes**, **Rural residents** **White, Black, and American Indian/Alaska Native** patients
- These results highlight the **persistent impact of sociodemographic factors** on cancer survival.
- Findings emphasize the need for **targeted public health interventions** and **equitable access to care** to improve outcomes in vulnerable groups

Kaplan Meier Curves



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