Real-World Chemotherapy (Chemo) Utilization and Survival Disparities Among Adults With Acute Myeloid Leukemia (AML): A SEER-Based Analysis (2000-2022)

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Background

- Recent therapeutic advances have improved outcomes for adults with AML
- However, disparities in real-world chemo utilization and survival remain a major concern.
- We evaluated chemo receipt and survival patterns by demographic and socioeconomic factors among adults with AML.

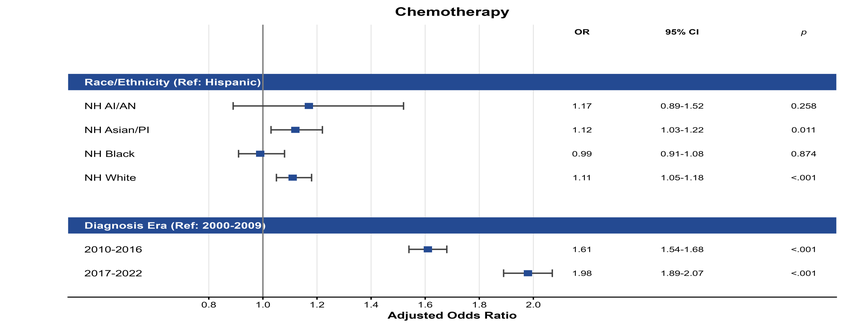
Methods

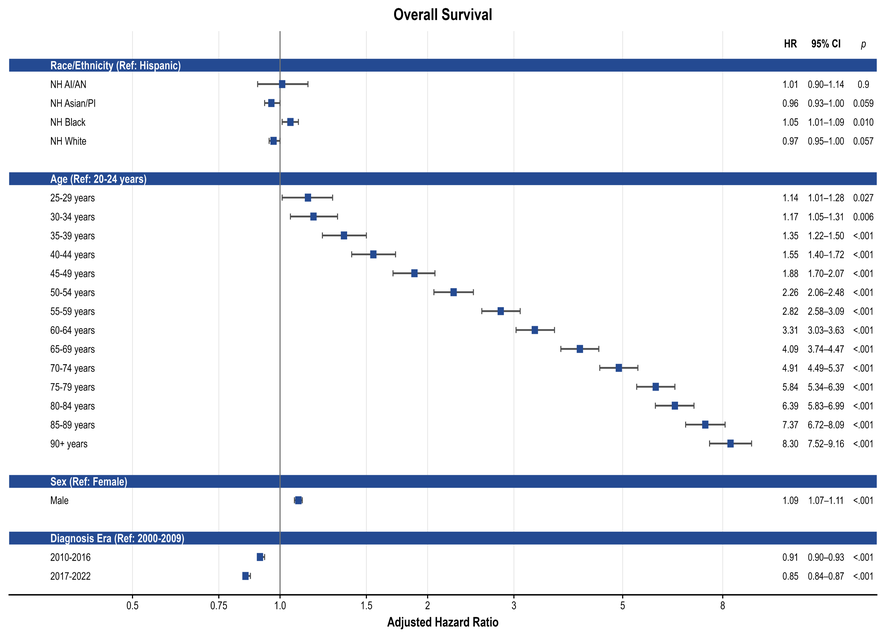
- Using the SEER database, we performed a retrospective cohort study of patients ≥20 years old diagnosed with AML from 2000-2022.
- Patients were categorized by chemo receipt, age group, race and ethnicity, sex, diagnosis era, county-level median household income, rural-urban status, and marital status.
- Multivariable regression models were used to evaluate factors associated with chemo receipt and mortality.

Results

- A total of 74,082 adults with AML were included, of whom 68.2% received chemo. Most patients were Non-Hispanic (NH) White, followed by Hispanic, NH Black, and NH Asian or Pacific Islander.
- Compared with patients aged 20-24 years, older adults had progressively lower odds of receiving chemo, with particularly low odds among patients aged 80-84 years (OR 0.05, p<0.001), 85-89 years (OR 0.03, p<0.001), and ≥90 years (OR 0.02, p<0.001).
- Compared with 2000-2009, patients diagnosed in 2010-2016 (OR 1.61, p<0.001) and 2017-2022 (OR 1.98, p<0.001) had significantly higher odds of receiving chemo.

Results





Results

- NH White and NH Asian or Pacific Islander patients had slightly higher odds of receiving chemo than Hispanic patients, whereas NH Black patients had similar odds.
- Patients in the highest income category and those who were married had higher odds of receiving chemo.
- Increasing age was associated with poor overall survival (OS), as patients aged 70-74 years having nearly fivefold higher mortality (HR=4.91, p<0.001), and those aged ≥90 years having more than eightfold higher mortality (HR=8.30, p<0.001) compared to patients aged 20-24 years.
- Compared with 2000-2009, OS improved in more recent diagnosis eras, with significantly lower mortality in 2010-2016 (HR=0.91, p<0.001) and 2017-2022 (HR=0.85, p<0.001).
- NH Black patients, male sex, lower county-level household income, and divorce were associated with worse OS.

Conclusions

- Our results demonstrate persistent disparities in chemo utilization and survival among adults with AML across age, socioeconomic status, sex, and marital status.
- These findings highlight the need for targeted strategies to improve equitable access to chemo and optimize survival in vulnerable populations.

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