Chemotherapy and Survival Disparities in Older Adult AML: A SEER-Based Study

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Introduction

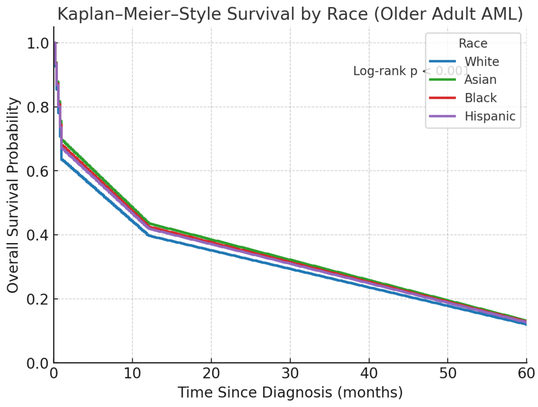
- Acute myeloid leukemia (AML) carries high early mortality in older adults. Chemotherapy improves outcomes, but disparities in treatment and survival persist.
- We used data from the US Surveillance, Epidemiology and End Results (SEER) program to evaluate the effect of chemotherapy on early and long-term mortality in AML patients aged >60, with attention to racial disparities.

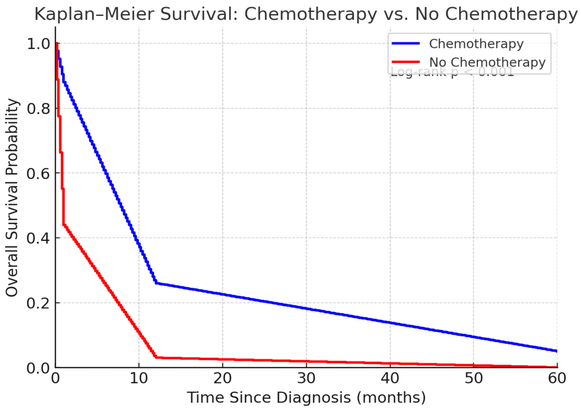
Methods

- We included AML patients >60 years from SEER (2000–2020). Early mortality was defined as cancer-related death within 30 and 60 days of diagnosis.
- Logistic regression evaluated the impact of chemotherapy on 30-day mortality, adjusted for race and sex.
- A Kaplan–Meier-style survival distribution was created using time-based bins for cancer-related

Results

- Among 46,050 older adult AML patients, 66% received chemotherapy. Treated patients had significantly lower 30-day mortality (21.6% vs 42.4%, *P*<0.001) and 60-day mortality (27.6% vs 45.8%, *P*<0.001).
- Chemotherapy reduced the adjusted odds of 30-day mortality (OR 0.22; 95% CI: 0.21–0.23).
- In the survival distribution analysis, 56% of patients not receiving chemotherapy died within the first month, compared with only 12% of those who received treatment.
- Long-term survival beyond 1 year was seen in >25% of treated patients vs <4% of untreated patients.
- Racial disparities were evident: Non-Hispanic White patients had the highest 30-day mortality (36.5%) and lowest chemotherapy rates (58.8%). Asian patients had the lowest mortality (30.4%) and higher chemotherapy use (62.7%). Black and Hispanic patients had intermediate chemotherapy use (≈61%) and mortality (32%–33%).).





Summary

- Chemotherapy significantly improves early and long-term survival in older adult AML patients. A Kaplan–Meier-style distribution visually reinforced the treatment benefit.
- Racial disparities in treatment access and mortality outcomes remain substantial and warrant targeted interventions.

References

Juliusson G, Antunovic P, Derolf Å, et al. Age and acute myeloid leukemia: real world data on decision to treat and outcomes from the Swedish Acute Leukemia Registry. *Blood*. 2009;113(18):4179-4187.
Medeiros BC, Satram-Hoang S, Hurst D, Hoang KQ, Momin F, Reyes C. Big data analysis of treatment patterns and outcomes among elderly acute myeloid leukemia patients in the United States. *Ann Hematol.* 2015;94(7):1127-1138.