Determinants of racial and ethnic survival disparities among children with acute lymphoblastic leukemia in California, 1988-2011

Renata Abrahão
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Patients and Methods

- Observational, population-based study: data obtained from the California Cancer Registry (CCR)
- 9349 children aged ≤19 years with acute lymphoblastic leukemia (ALL)
- Non-Hispanic White (White), Non-Hispanic Black (Black), Non-Hispanic Asian/Pacific Islander (Asian) and Hispanic (Hispanic)
- Survival analysis using Kaplan-Meier and Cox regression models
- Other covariates: sex, age, health insurance, treatment (chemotherapy and radiation), immunophenotype, treating facility, time to chemotherapy, and socioeconomic status (SES)
Results & conclusion

- Survival improved steadily over time, however...
- Racial and ethnic disparities persisted even after controlling for all variables in the model
- Non-white children had a 34% – 55% increased risk of death
- Disparities were most striking between Black and White children and within 5 – 10 years after diagnosis – cumulative relapse?
- Children residing in the lowest SES neighborhoods had a 43% increased risk of death than those in the highest SES neighborhoods

 SES and biology seemed to be the main contributors to survival disparities among children of different race and ethnicity with ALL in California.
Suggestions for future studies:

• Specific biologic and socioeconomic information is needed to better understand the causes of survival variations among our study population and guide interventions.

• The value of the California population-based cancer registry can be increased by collaboration with the cancer registries of the Children Oncology Group – affiliated hospitals.
“No child should die in the dawn of life”

Danny Thomas