Childhood Cancer Survival in the Highly Vulnerable Population of South Texas: Persistent Challenges for Adolescents and Hispanic Ethnicity

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Abstract

Background: This study examines childhood cancer survival rates and prognostic factors related to survival in the majority Hispanic population of South Texas (STX), whereas most other population studies in childhood cancer survival focus on populations with relatively few Hispanics.

Methods: The population-based cohort study used Texas Cancer Registry data (1995-2017) to examine survival and prognostic factors.

Results: The 5-year relative survival rate for STX cancer patients diagnosed at 0–19 years was 80.3% for all races/ethnicity. Hispanics had statistically significant lower 5-year relative survival rates than non-Hispanic Whites (NHW) for male and female together diagnosed at age ≥ 5 years. When comparing survival among Hispanics and NHW for the most common cancer, acute lymphocytic leukemia (ALL), the difference was most striking in the 15-19 years age range, with 47.7% Hispanic patients surviving at 5 years compared to 78.4% of NHW counterparts. The multivariable-adjusted analysis showed that males [hazard ratio (HR): 1.13], patients diagnosed at age < 1 year (HR: 1.69), at 10–14 year (HR: 1.42), or at 15–19 years (HR: 1.40), and Hispanics (HR: 1.38) had significantly increased mortality risk compared to the corresponding counterparts for all cancers.

Conclusions: STX Hispanics had lower 5-year relative survival than NHW especially for ALL. Male gender, diagnosis at age < 1 year or 10–19 years were also associated with decreased childhood cancer survival. Despite advances in treatment, Hispanics lag significantly behind NHW. Further cohort studies in STX are warranted to identify additional factors affecting survival and to develop interventional strategies.