# Lower Survival for U.S. Hispanics with Blood Cancers Who Live Near Mexico

Hispanic blood cancer patients living at the U.S./Mexico border may have lower overall survival than those who live in other parts of Texas.

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In Texas, Hispanic patients with certain blood cancers had lower overall survival than non-Hispanic white patients, and Hispanic patients living at the United States/Mexico border had lower overall survival than those who lived in other parts of Texas, according to a study presented at the American Association for Cancer Research (AACR) Virtual Annual Meeting II, held online June 22-24.

“Cancer is the leading cause of death among Hispanics in the United States,” said Alfonso Bencomo-Alvarez, PhD, a postdoctoral research associate in the laboratory of Anna Eiring, PhD, at Texas Tech University Health Sciences Center El Paso. “Furthermore, Hispanics are more likely to be diagnosed with acute myeloid leukemia (AML) and acute lymphoblastic leukemia (ALL) – two types of blood cancer – at younger ages and typically have worse overall survival than non-Hispanic white patients.

“These health disparities could be due to differences in access to health care, socioeconomic status, cultural differences, or even some biological factors,” noted Bencomo-Alvarez. While health disparities for Hispanics across the U.S. have been documented, disparities in blood cancer incidence and survival in Texas and at the U.S./Mexico border remained unclear.

“In contrast to the Hispanic population across the U.S., which is heterogeneous and includes Hispanics from various countries, the majority of Hispanics in Texas and at the border are Mexican,” said Bencomo-Alvarez. “Therefore, studying Hispanics in this region gives us the opportunity to study a largely Mexican population as a way to better understand the disparities in this group.”

Bencomo-Alvarez and colleagues used the Texas Cancer Registry to examine incidence and mortality data from 62,756 cases of blood cancers diagnosed in Texas between 1995 and 2016. Of these cases, 10,822 patients identified as Hispanic, and 42,756 identified as non-Hispanic white. Data from other races were excluded due to low incidence in the analyzed regions. The analysis showed that the age of diagnosis was significantly lower in Hispanic patients than in non-Hispanic white patients for all blood cancers included in the analysis. In unadjusted analyses, Hispanic

patients with myeloid malignancies had better overall survival than non-Hispanic white patients, possibly due to the lower age of diagnosis in Hispanics, explained Bencomo-Alvarez.

However, after adjusting for age, Hispanic patients with the blood cancers ALL and acute promyelocytic leukemia (APL) had significantly worse overall survival rates, according to Bencomo-Alvarez. For patients with ALL who were between 18 and 49 years old, the 10-year survival rate of Hispanic patients was 28 percent, compared with a 39 percent 10-year survival rate in non-Hispanic whites. For patients with APL who were between 18 and 49 years old, 69 percent of Hispanic patients survived 10 years post-diagnosis compared with 76 percent of non-Hispanic white patients. No significant differences were observed for other blood cancers.

To understand how living at the U.S./Mexico border might impact survival, Bencomo-Alvarez and colleagues compared 10-year survival rates of 1,160 Hispanic patients residing in El Paso, Texas – which is adjacent to the border – to that of 9,662 Hispanic patients living in other regions of the state. They found that the 10-year survival rates for Hispanic patients with ALL, AML, or chronic myeloid leukemia (CML) were significantly lower for those who lived in El Paso than for those who lived elsewhere in Texas (ALL: 28 percent vs. 31 percent; AML: 13 percent vs. 22 percent; CML: 43 percent vs. 57 percent).

“Hispanic individuals living at the border tend to be poorer, are more likely to lack health insurance, and many could be undocumented,” said Bencomo-Alvarez. These factors could discourage individuals from visiting a physician and may therefore affect health outcomes in those residing at the border, he explained.

Ongoing work from the researchers aims to identify potential biological factors that might increase the risk of blood cancers in Hispanics. “The ultimate goal is to improve prevention and treatment,” added Bencomo-Alvarez.

A limitation of the study is that incidence and survival data about Hispanics living at the border was limited to those living in El Paso and surrounding areas. Another limitation is the small sample size for some of the subgroups.

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