



The 65th ASH Annual Meeting Abstracts

POSTER ABSTRACTS

905.OUTCOMES RESEARCH-LYMPHOID MALIGNANCIES

Impact of Racial, Age, Marital, and Socioeconomic Status Disparities on the Survival of Hairy Cell Leukemia: A Population-Based StudyNeveen Mostafa, MD¹, Mohamed Ahmed², Yousra Alghalban, MD³, Daniel Lebovic, MD⁴, Ziad Kafri, MDMS,FACP⁵¹ Hematology/Oncology, Ascension St John Hospital and Medical Center, Clinton Township, MI² Hematology/Oncology, Cedars-Sinai Medical Center, Los Angeles, CA³ Faculty of Medicine, Menoufia University, Menoufia, Egypt⁴ Hematology/Oncology, Ascension St John Hospital and Medical Center, Detroit, MI⁵ Hematology/Oncology, Ascension St John Hospital and Medical Center, Grosse Pointe Woods, MI**Introduction**

Several studies report excellent long-term overall survival (OS) for patients with hairy cell leukemia (HCL). Other studies show that racial and socioeconomic disparities impact outcomes among cancer patients. In the US, healthcare access is closely related to insurance coverage. Hispanics are the least likely to have insurance of any racial or ethnic group; they have lower levels of educational attainment and had a poverty rate of 17% in 2019-2020. Age and Marital status were also demonstrated to be independent prognostic factors in other cancers. We assessed the effect of race, age, marital and socioeconomic status on the overall survival and cause-specific mortality of HCL, which is generally associated with a good outcome.

Methods

We queried the Surveillance, Epidemiology, and End Results (SEER) registry for patients diagnosed with HCL between 2000 and 2020. Data were collected on age at diagnosis, race/ethnicity, marital status, socioeconomic status as defined by the annual household income data, time and cause of death. The chi-squared test was used to assess the association between two categorical variables, the Mann-Whitney U test and the Kruskal-Wallis test were used for continuous data that were non-normally distributed. The Kaplan-Meier method was used for survival analysis. Statistically significant differences between the curves were estimated using the 2 tailed log-rank test. Cox proportional hazard models were used for multivariable analysis.

Results

We identified 5299 HCL patients, survival data was available for 5280 patients. The median age was 59; interquartile range (IQR) (49-71) In the study population, 38% (2019) patients were ≥ 65 years at diagnosis, and 61% (3259) were married. Male patients (4188) represented 79% of HCL. Hispanic patients (491) represented 9% of patients. Eight percent (427) had an annual household income of $< \$50K$. The median OS for the study population was 84 months; IQR (32-148.8). The HCL case fatality rate was 11% for the entire study population.

Hispanic ethnicity was associated with reduced OS with a median OS of 70 months; IQR (23.5-134.5) compared to 86 months; IQR (32-150) for the rest of the population ($p \leq 0.001$). Patients diagnosed at age < 65 years old had a higher median OS of 105 months; IQR (47-170) vs 55 months; IQR (20-106) in patients ≥ 65 years old ($p \leq 0.001$). Married patients had a better median OS of 89 months; IQR (36-156) compared to 69 months; IQR (24-134) in the unmarried group ($p < 0.001$). Patients with an annual household income $\geq \$50K$ had a better median OS of 85 months; IQR (32-150) than patients with a lower household annual income of 76 months; IQR (27-136) ($p = 0.012$).

HCL cause-specific mortality was significantly better in the patients diagnosed at age < 65 (5%), married group (10%) and household annual income $\geq \$50K$ (11%) compared to patients diagnosed ≥ 65 (22%), unmarried (15%) and patients with household annual income $< \$50K$ (16%) ($p \leq 0.001$, ≤ 0.001 , ≤ 0.001 respectively), but was not significant based on race, Hispanic (10%) versus Non-Hispanic ethnicity (11%) ($p = 0.492$).

Conclusions

Our analysis shows a significantly better effect of age < 65 , marital status being married, and socioeconomic status with household annual income $\geq \$50K$ on the overall survival and cause-specific mortality of patients with HCL. Patients of Hispanic ethnicity had reduced overall survival but no difference in HCL cause-specific mortality. Hispanic, older, unmarried, and patients with low annual income may need more support, and resources to improve their outcomes and eliminate disparities.

Disclosures No relevant conflicts of interest to declare.

<https://doi.org/10.1182/blood-2023-182869>

Kaplan-Meier Plot of Hairy Cell Leukemia Cause Specific Survival of SEER Patients in relation to household income

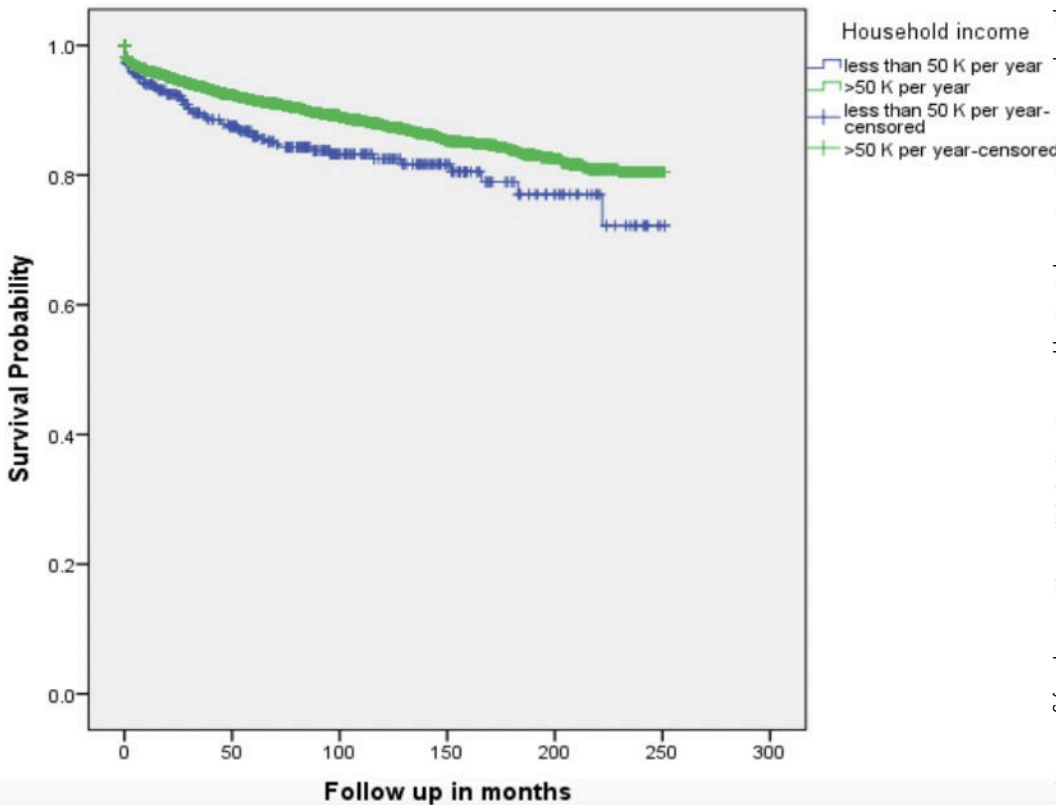


Figure 1

Survival months in relation to risk factors (no=5280)

Items	Survival months	Test of sig. p-value
	Median (IQ)	
- < 50 k (no=423)	76(27-136)	p=0.012
- ≥ 50 (no=4857)	85(32-150)	
- Male (no=4176)	85(32-149)	p=0.327
- Female (no=1104)	83(29-146)	
- ≤ 65 (no=2006)	55(20-106)	p≤0.001
- > 65 (no=3274)	105(47-170)	
- Hispanic (no=489)	70(23.5-134.5)	p≤0.001
- Non-Hispanic (no=4791)	86(32-150)	
- Married (no=3252)	89(36-156)	p≤0.001
- Non-married (no=1431)	69(24-134)	