

## **A Two State-Wide Population Based Analysis of Hepatosplenic T-Cell Lymphoma in Hispanic Vs Non-Hispanic Patients in Texas and Florida**

### **Introduction:**

Peripheral T-cell lymphomas (PTCLs) are a diverse, aggressive form of neoplasms that are rare and constitute <15 % of all non-Hodgkin lymphoma cases (Am J Pathol, PMID:1698028). A subset of PTCLs is hepatosplenic T-cell Lymphoma (HSTCL) which is described as an extra-nodal T-cell lymphoma of mature gamma or delta T-cells (Am J Pathol, PMID:1698028). HSTCL is extremely rare accounting for less than 1% of all cases of NHL and because of this, epidemiological research is lacking (Blood PMID: 21300984). Hispanics (H) are one of the fastest growing races in the US but tend to have poorer cancer related health outcomes in comparison to non-Hispanic (NH) (J Lat Psychol. PMID: 27429867). Per the 2020 Census, 39.7% Texans and 26.4% of Floridians identify as Hispanic (H) composing the third and fifth highest H population in the nation. Despite the rapid growth of H, research remains lacking in this population. The goal of this study is to compare demographic, treatment patterns, and survival outcomes in H v Non-Hispanic (NH) of Texas (TX) and Florida (FL).

### **Methods:**

This is a retrospective study of a cohort of patients diagnosed with HSTCL from the Texas and Florida Cancer Registry databases. The population included in this study were adults of 18 years (y) of age and older during 2006-2017, patients were identified by the International Classification of Diseases for Oncology Third Edition (ICD-O-3) code list, and data was provided to us completely de-identified. Patients were divided into H and NH for comparison. Standard demographic, socioeconomic, clinical, and survival variables were reviewed. All statistical testing was determined using Fisher's Exact test, Pearson's Chi-square test, T-test or Wilcoxon test, as appropriate. Survival time was measured using the day of diagnosis to last date of follow up or death. Survival distribution were calculated based on Kaplan-Meier curves. All statistical testing was two-sided with a significance level of 5%.

### **Results:**

A total of 27 patients in TX and 29 patients in FL met the inclusion criteria for the analysis. From those, 2 in TX and 4 in FL were H, and 25 in each state were NH. The median age at diagnosis in y was 46 y for H and 50 y for NH in TX [p-value 0.69] versus 53 y for H and 49 y for NH in FL [p-value 0.67]. In TX, 32% of NH patients fell within the poverty indicator of 5-9.9% while 50% of H patients were between 10-19.9% and 50% between 20-100%. In FL 36% NH fell within 10-19.9% versus 50% H fell within poverty index of 5-9.9%. However, there was no statistical significance between poverty index or race in either state. Although no statistical difference was noted, in TX 39.1% of NH had private insurance versus 100% of H (n=2) whereas in FL 64% of NH and 50% of H had private insurance. In TX, both NH and H were more likely to receive chemotherapy with multiple agents, 48% and 100%, respectively. In FL 56% of NH and 50% H received chemotherapy with multiple agents. The median survival time for H in TX was 0.5 y vs 0.6 y of the NH in contrast to the H in FL with 5.1 y vs 1.0 y of NH. In TX, the survival probability at 2 and 5 y for the H was 0.5 (CI 0.125-1) and 0.5 (CI 0.125-1) vs 0.254 (CI 0.122-0.529) and 0.191 (CI 0.076-0.481) for the NH. In FL, the H survival probability at 2 and 5 y was 0.5 (CI 0.188-1) and 0.5 (CI 0.188-1); for the NH, the survival probability at 2 y was 0.29 (CI 0.148-0.558), at 5 y 0.19 (CI 0.08-0.459) and 10 y 0.19 (CI 0.08-0.459).

## Conclusion:

There were no statistical differences when comparing survival time, demographics, treatment, or insurance status between NH and H in either TX or FL. Of note, the median survival time was greater for H in FL when compared to H in TX while most H patients in FL fell within a lower poverty index compared to H patients in TX. It is possible to deduce that socioeconomic status plays a role in healthcare outcomes in the H regardless of insurance status. This is imperative because healthcare literacy can be correlated to socioeconomic status which can potentially affect adherence to medications, follow-up appointments, and understanding of the disease process and its impact on quality of life. Although this data does not show any statistical differences between patient populations, it highlights the importance of the progress that needs to be made to determine how ethnicity and socioeconomic status impact disease burden in H.

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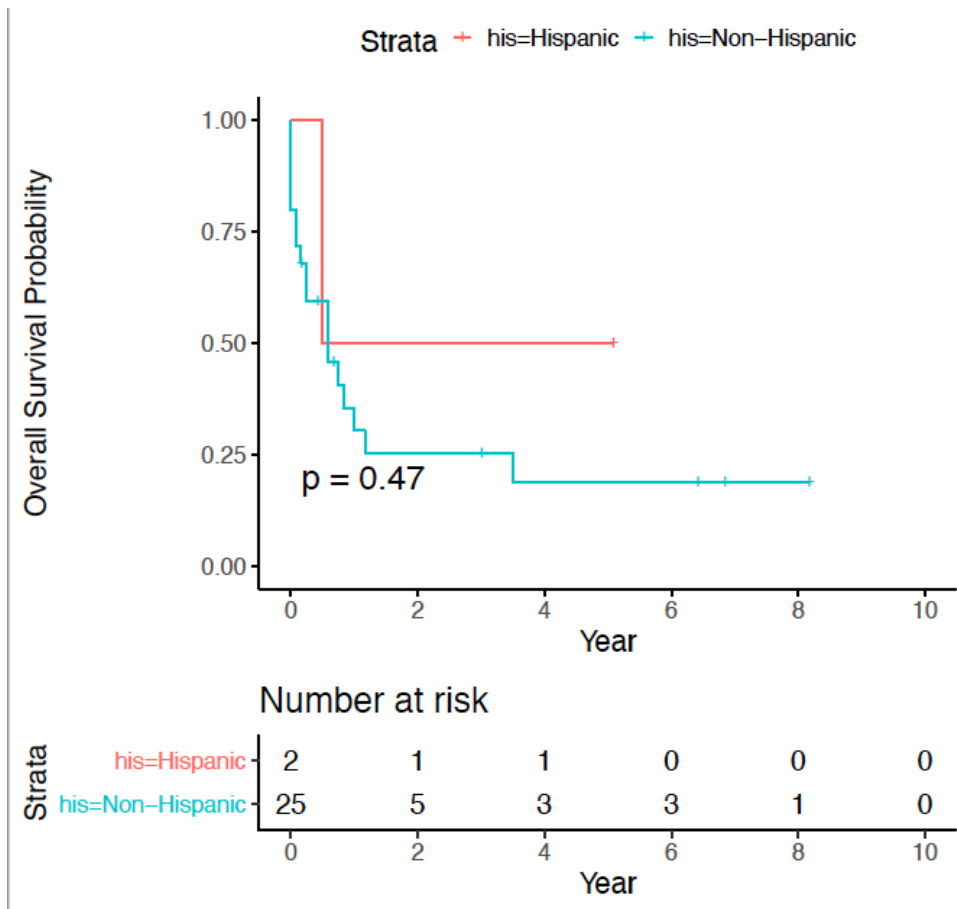


Figure 1: Kaplan-Meier Curve Hepatosplenic T-Cell Lymphoma in TX

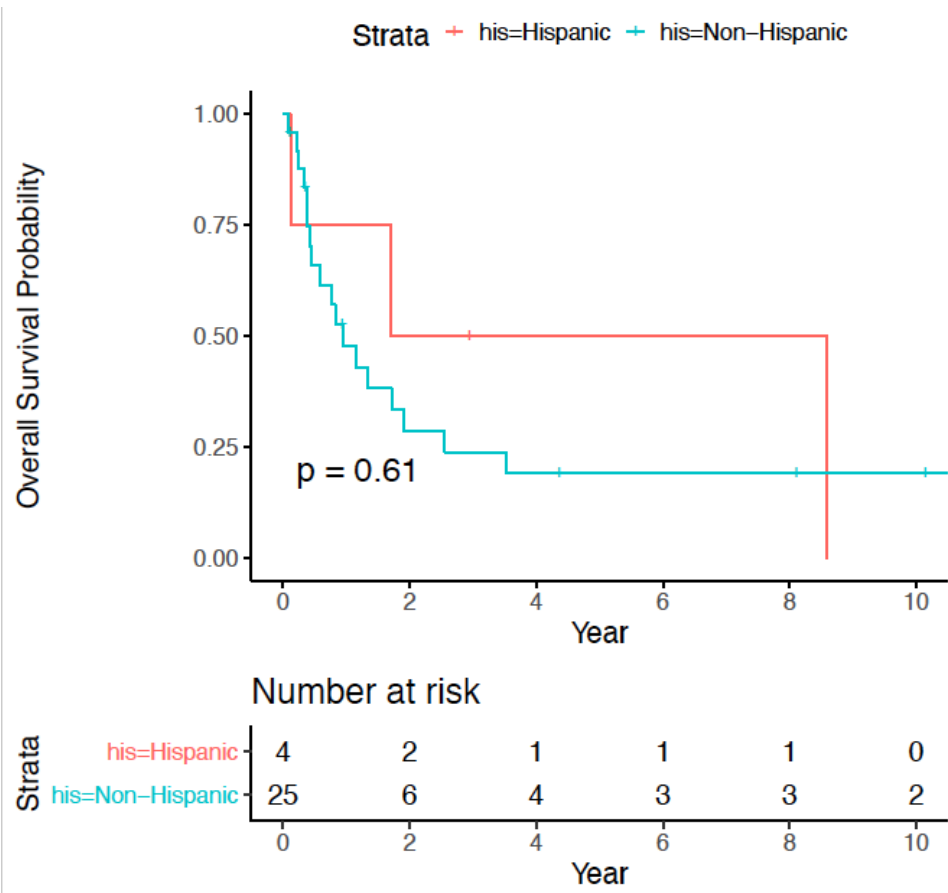


Figure 2: Kaplan-Meier Curve Hepatosplenic T-Cell Lymphoma in FL