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POSTER ABSTRACTS

905.OUTCOMES RESEARCH-LYMPHOID MALIGNANCIES

Clinical Outcomes of Patients with Newly Diagnosed Diffuse Large B-Cell Lymphoma in a County Hospital System

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Introduction: Advances in the treatment of diffuse large B-cell lymphoma (DLBCL) have improved survival, with Surveillance, Epidemiology, and End Results (SEER) Program data showing 5-year overall survival (OS) of 64.7% (SEER*Explorer, 2023). However, insurance status in the US is related to DLBCL survival (Han *et al.*, *Cancer* 2014), and real-world data for patients who are uninsured or who may have socioeconomic barriers to care remain limited. We performed a retrospective cohort study to examine outcomes for patients with newly diagnosed DLBCL treated in a large safety-net hospital system in the third most populous county in the US.

Methods: Patients aged 18 years and older diagnosed with DLBCL between January 2011 and June 2022 and treated at Harris Health System, Houston, TX, were included in the analysis. Demographic, disease, treatment, response, and follow-up data were abstracted from the electronic medical record. US Census Block Group FIPS codes derived from geocoded home address at the time of initial diagnosis were used to compute the Area Deprivation Index (ADI). Eligibility for cellular therapies including hematopoietic stem cell transplantation (HSCT) and chimeric antigen receptor T-cell therapy (CAR-T) was determined by the abstractors. Time-to-event analysis was performed using the Kaplan-Meier method, and Cox proportional hazards regression was used to examine factors associated with event-free survival (EFS) and OS.

Results: Among 461 patients with newly diagnosed DLBCL **(Table 1)**, the median age was 53 years (range, 18-93), 75% were uninsured, and 80% were in the most disadvantaged ADI national quartiles, defined as at or above the fiftieth percentile. Most patients had stage III or IV disease and an Eastern Cooperative Oncology Group Performance Status (ECOG) of 0 to 1 at the time of diagnosis. One hundred ninety-eight patients (44%) had poor-risk disease by the Revised International Prognostic Index (R-IPI). Seventy-five (16%) had a history of HIV infection. Common first-line treatments included R-CHOP ($n = 210$, 46%) and R-EPOCH ($n = 183$, 40%); 18 received no therapy (3.9%). The median time from diagnosis to treatment initiation (DTI) was 18 days (range, 0-246); 76% completed therapy. Of 425 evaluable patients, 288 (68%) achieved a complete response (CR) and 44 (10%) had a partial response (PR); of these, 74 (22%) relapsed. Twenty-five (58%) of 43 patients eligible for cellular therapies at relapse received them: 14 (56%) underwent autologous HSCT, 8 (32%) received CAR-T, and 3 (12%) had both.

Median follow-up time for the cohort was 48.8 months (range, 0.2-147). By the time of analysis, 167 patients (36%) had developed refractory/relapsed disease, and 148 (32%) had died. At 1, 2, and 5 years, EFS was 72%, 64%, and 58%, and OS was 82%, 76%, and 69% **(Figure 1)**. At 1, 2 and 5 years, EFS was 77%, 69%, and 64% and OS was 85%, 79%, and 75% for patients with germinal center B-cell-like (GCB) DLBCL, whereas EFS was 68%, 56%, and 50% and OS was 80%, 73%, and 62% for those with non-GCB DLBCL. In multivariable Cox regression models, predictors of OS were poor-risk disease by R-IPI (HR 6.08 compared to very-good-risk disease, 95% CI 1.02-36.09), ECOG (HR 2.10 for ECOG ≥ 2 compared to 0-1, 95% CI 1.12-3.95), and normalized LDH (HR 1.07 per fold increase, 95% CI 1.03-1.11). Race/ethnicity, insurance status, and DTI were not associated with significant differences in OS. However, receiving fewer than planned cycles of first-line therapy was associated with higher mortality (HR 2.00, 95% CI 1.12-3.56), as was not attaining CR by the end of first-line therapy (HR 7.90, 95% CI 3.65-17.12).

Conclusion: This is one of the largest real-world studies to date examining outcomes of patients with newly diagnosed DLBCL at a safety-net hospital system. Overall, patients had shorter EFS and OS compared to historical clinical trials but had similar

OS to SEER estimates. In this health system with robust financial assistance programs and access to cellular therapies for some patients, uninsured status was not associated with inferior outcomes. Addressing barriers to care may improve outcomes for uninsured patients in other settings.

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Characteristic					N = 461
Histology, n (%)		**Age, median (IQR)**	53 (43, 62)	**ADI National Quartile, n (%)**	
DLBCL, NOS, germinal center	173 (38%)	**Male Sex, n (%)**	267 (58%)	*1*	30 (6.6%)
DLBCL, NOS, non-germinal center	165 (36%)	**Race/Ethnicity, n (%)**		*2*	57 (13%)
DLBCL, NOS, unclassifiable	47 (10%)	*Non-Hispanic White*	60 (13%)	*3*	167 (37%)
Plasmablastic lymphoma	24 (5.2%)	*Black*	85 (18%)	*4*	202 (44%)
DLBCL with MYC & BCL2 rearrangements	14 (3.0%)	*Hispanic*	284 (62%)	**Stage, n (%)**	
Primary mediastinal B-cell lymphoma	14 (3.0%)	*Asian/API*	31 (6.7%)	*Early stage (I-II)*	145 (31%)
T-cell/histiocyte-rich large B-cell lymphoma	10 (2.2%)	*Other/Unknown*	1 (0.2%)	*Advanced stage (III-IV)*	316 (69%)
Primary effusion lymphoma	6 (1.3%)	**Preferred Language, n (%)**		**ECOG Performance Status, n (%)**	
Mediastinal gray zone lymphoma	5 (1.1%)	*English*	230 (50%)	*0-1*	220 (66%)
Intravascular large B-cell lymphoma	3 (0.7%)	*Spanish*	214 (46%)	*2-4*	111 (34%)
		Other/Unknown	17 (3.7%)	**R-IPI Risk Group, n (%)**	
		Insurance Status, n (%)		*Very good*	63 (14%)
		Private	25 (5.4%)	*Good*	194 (43%)
		Medicare	22 (4.8%)	*Poor*	198 (44%)
		Medicaid	65 (14%)	**NCI Comorbidity Index, median (IQR)**	0.00 (0.00, 0.58)
		Uninsured	348 (75%)	**HIV Infection, n (%)**	75 (16%)
		Unknown	1 (0.2%)	**LDH (Normalized), median (IQR)**	1.20 (0.81, 2.09)

Table 1: Demographics and Baseline Characteristics. ADI: Area Deprivation Index. API: Asian and Pacific Islanders. DLBCL: Diffuse large B-cell lymphoma. ECOG: Eastern Cooperative Oncology Group. HIV: Human immunodeficiency virus. IQR: Interquartile range. LDH: Lactate dehydrogenase. NCI: National Cancer Institute. NOS: Not otherwise specified. R-IPI: Revised International Prognostic Index.

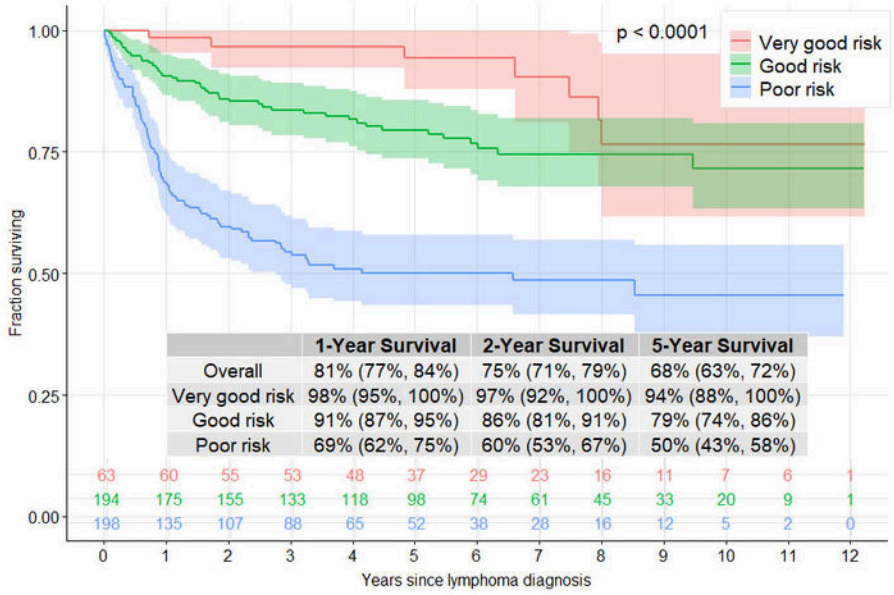

Figure 1: Kaplan-Meier Estimates of Overall Survival by Revised International Prognostic Index

Figure 1

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