

SURVIVAL DISPARITIES IN PLASMABLASTIC LYMPHOMA: INDEPENDENT ASSOCIATION OF HISPANIC ETHNICITY WITH INFERIOR OUTCOMES

Hien Lau¹, Kirsten Nguyen¹, Shirley Ye¹, Zaw Win Myint^{1,2}

¹University of Southern California Keck School of Medicine, Los Angeles, CA

²Division of Hematology, Norris Comprehensive Cancer Center, University of Southern California, Los Angeles, CA

Los Angeles General
Medical Center

USC
NORRIS

INTRODUCTION

- Plasmablastic lymphoma (PBL) is a rare, aggressive non-Hodgkin lymphoma with a median overall survival (OS) of 9-15 months.

- While prior SEER/NCDB analyses show a higher incidence in Hispanic patients, survival disparities are poorly defined.

AIM

- We compared outcomes between Hispanic and non-Hispanic patients with PBL and evaluated predictors of response and survival among Hispanic patients.

METHOD

- A retrospective analysis of 35 patients with pathologically confirmed PBL (26 Hispanic, 74.3%; 9 non-Hispanic, 25.7%) from December 2012 to June 2025.

- Response was analyzed using chi-square and multivariable logistic regression.

- Progression-free survival (PFS) and OS were estimated using Kaplan Meier method with log-rank testing.

- Independent prognostic factors were identified using multivariable Cox models.

CONCLUSIONS

- In this single-center cohort, Hispanic ethnicity was associated with inferior survival in multivariable analysis despite similar initial response rates, although unadjusted survival differences were not statistically significant.

- Achieving complete response was the strongest predictor of favorable outcomes.

- These findings highlight the need to optimize frontline therapeutic strategies and better understand potential biologic and sociodemographic contributors to survival disparities in Hispanic patients with PBL.

RESULTS

Variables	Hispanic (n, %)	Non-Hispanic (n, %)	P-value
Age			
Age < 60 y	23 (88.5)	7 (77.8)	0.43
Age ≥ 60 y	3 (11.5)	2 (22.2)	
Sex			
Male	23 (88.5)	7 (77.8)	0.43
Female	3 (11.5)	2 (22.2)	
ECOG			
0-1	16 (61.5)	6 (66.7)	0.78
≥2	10 (38.5)	3 (33.)	
V-EPOCH			
0	10 (38.5)	6 (66.7)	0.14
1	16 (61.5)	3 (33.3)	
CR			
Yes	14 (53.8)	5 (55.6)	0.93
No	12 (46.2)	4 (44.4)	
HIV			
Yes	14 (53.8)	2 (22.2)	0.10
No	12 (46.2)	7 (77.8)	
Stage			
1-2	7 (26.9)	4 (44.4)	0.33
3-4	19 (73.1)	5 (55.6)	
IPI score			
0-2	11 (42.3)	4 (44.4)	0.91
≥3	15 (57.7)	5 (55.6)	

Table 1. Clinical characteristics

Variables	CR - Yes	CR - No	P-value
LDH			
<220 U/L	8 (57.1)	1 (8.3)	0.009
≥220 U/L	6 (42.9)	11 (91.7)	
Interim response			
OR (CR & PR)	13 (92.9)	4 (33.3)	0.001
NR/SD/PD	1 (7.1)	8 (66.7)	

Table 2. Univariate analysis of association of clinical variables with complete response in Hispanic patients

Variables	Multivariate regression results	
	OR (95% CI)	P-value
LDH		
<220 U/L		
≥220 U/L	0.036 (0.001-0.92)	0.044
ECOG		
0-1		
≥2	5.29 (0.26-108.2)	0.28
V-EPOCH		
No		
Yes	0.25 (0.009-6.81)	0.41
Immunocompromise		
No		
Yes	0.98 (0.01-82.9)	0.99
Stage		
1-2		
3-4	1.96 (0.02-197.3)	0.78
IPI score		
0-2		
≥3	0.57 (0.027-12.03)	0.72
Albumin		
<3.5 g/L		
≥3.5 g/L	0.08 (0.003-2.38)	0.14
HIV		
No		
Yes	9.19 (0.076-1107.8)	0.36

Table 3. Multivariate analysis of association of clinical variables with complete response in Hispanic patients

Survival outcomes	n (%), range
Median follow-up (mo)	17 (1-135.5)
Median PFS (mo)	
Hispanic	15.5
Non-Hispanic	Not reached
P-value	0.17
Median OS (mo)	
Hispanic	32
Non-Hispanic	Not reached
P-value	0.21

Table 4. Survival outcomes

Variables	Multivariate regression results		Multivariate regression results	
	PFS - HR (95% CI)	P-value	OS - HR (95% CI)	P-value
Ethnicity				
Non-Hispanic				
Hispanic	5.2 (1.3-19.9)	0.02	7.0 (1.5-32.3)	0.01
ECOG				
0-1				
≥2	4.7 (1.2-18.2)	0.02	4.5 (1.2-17.7)	0.03
Immunocompromise				
Yes				
No	5.0 (0.9-28.5)	0.07	5.6 (0.8-38.1)	0.08
Stage				
1-2				
3-4	5.8 (0.5-62.3)	0.2	42.0 (1.1-1625.7)	0.04
IPI score				
0-2				
≥3	2.1 (0.3-17.3)	0.5	13.7 (0.5-414.9)	0.1
LDH				
<220 U/L				
≥220 U/L	5.3 (1.4-20.5)	0.02	13.2 (2.1-82.9)	0.006
Age				
<75				
≥75	0.4 (0.01-15.9)	0.6	0.04 (0.0-7.7)	0.2
HIV				
Yes				
No	0.2 (0.06-1.1)	0.06	0.3 (0.05-1.3)	0.1
Ki67				
<80%				
≥80%	0.9 (0.1-5.6)	0.9	0.3 (0.04-2.1)	0.2
EBER				
Yes				
No	0.2 (0.05-1.3)	0.1	0.3 (0.04-2.4)	0.3

Table 5. Multivariate Cox regression analysis of ethnicity and other clinical variables with PFS and OS

Variables	Multivariate regression results		Multivariate regression results	
	PFS - HR (95% CI)	P-value	OS - HR (95% CI)	P-value
ECOG				
0-1				
≥2	4.1 (1.1-16.3)	0.04	4.6 (0.9-21.9)	0.05
Immunocompromise				
Yes				
No	12.8 (1.8-93.7)	0.01	12.0 (1.2-120.7)	0.03
Stage				
1-2				
3-4	0.2 (0.01-3.4)	0.3	0.02 (0.0-2.0)	0.09
IPI score				
0-2				
≥3	11.7 (1.1-121.8)	0.04	195.2 (1.5-25681.0)	0.03
LDH				
<220 U/L				
≥220 U/L	0.03 (0.001-0.6)	0.02	0.05 (0.002-1.08)	0.06
Age				
<75				
≥75	43.2 (0.4-4704.1)	0.1	2.2 (0.003-1694.3)	0.8
HIV				
Yes				
No	0.1 (0.02-0.5)	0.007	0.06 (0.007-0.6)	0.01
Ki67				
<80%				
≥80%	0.8 (0.1-4.7)	0.8	0.2 (0.03-1.6)	0.1
EBER				
Yes				
No	2.3 (0.4-11.4)	0.3	6.2 (0.4-99.4)	0.2
V-EPOCH				
Yes				
No	2.3 (0.5-10.6)	0.3	1.7 (0.3-8.9)	0.5
CR				
No				
Yes	0.004 (0.0002-0.1)	0.001	0.003 (0.00001-0.1)	0.001

Table 6. Multivariate Cox regression analysis of complete response and other clinical variables with PFS and OS

Variables	Multivariate regression results		Multivariate regression results	
	PFS - HR (95% CI)	P-value	OS - HR (95% CI)	P-value
Age				
<75				
≥75	79.1 (0.3-18827.8)	0.1	0.9 (0.0002-4661.8)	0.9
ECOG				
0-1				
≥2	0.05 (0.002-1.2)	0.07	0.07 (0.002-2.5)	0.1
Immunocompromise				
Yes				
No	48.1 (1.3-1746.4)	0.04	9.0 (0.2-406.5)	0.3
Stage				
1-2				
3-4	8.1 (0.5-123.3)	0.1	70.0 (0.8-6053.2)	0.06
IPI score				
0-2				
≥3	3.9 (0.3-58.0)	0.3	38.6 (0.28-5417.9)	0.1
LDH				
<220 U/L				
≥220 U/L	12.4 (0.2-980.5)	0.3	2.4 (0.03-208.9)	0.7
Interim OR				
Yes				
No	2.9 (0.1-65.8)	0.5	1.8 (0.06-55.1)	0.7
HIV				
Yes				
No	0.5 (0.04-5.7)	0.6	0.5 (0.04-6.5)	0.6
EBER				
Yes				
No	0.5 (0.04-7.8)	0.6	1.1 (0.05-23.9)	0.9
V-EPOCH				
Yes				
No	0.1 (0.002-5.0)	0.3	0.4 (0.01-30.2)	0.7
RT				
Yes				
No	16.8 (0.5-550.1)	0.1	5.6 (0.06-484.1)	0.5
CNS PPx				
Yes				
No	4.5 (0.3-63.0)	0.3	1.1 (0.04-34.6)	0.9
CR				
No				
Yes	0.005 (0.0001-0.4)	0.02	0.01 (0.0002-0.7)	0.03

Table 7. Multivariate Cox regression analysis of complete response and other clinical variables with PFS and OS in Hispanic patients