

Effect of Time Interval from Diagnosis to Treatment for Diffuse Large B-Cell Lymphoma (DLBCL) on Survival: A Retrospective Single-Centre Cohort Study

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INTRODUCTION

Diffuse large B-cell lymphoma (DLBCL) accounts for 30-40% of newly diagnosed non-Hodgkin’s lymphoma (NHL) cases. While prompt therapy is crucial, the impact of delayed treatment on prognosis remains uncertain.

This study aim to examine the effect of diagnosis-to-treatment interval (DTI) on clinical outcomes in newly diagnosed DLBCL patients.

METHOD

- A retrospective cohort study
- 150 patients diagnosed with DLBCL between January 2018 and December 2022

Primary outcome: The association between DTI and overall survival (OS)

Statistical analysis: The Kaplan–Meier method, log-rank test and Cox proportional hazards models

Patient Characteristics by Diagnosis-to-Treatment Interval			
Variable	Initiated therapy 0-39 days from diagnosis (n=102)	Initiated therapy ≥40 days from diagnosis (n=48)	p
	N (%)	N (%)	
Age > 60 years	64 (62.7)	18 (37.5)	0.004
Male	54 (52.9)	22 (45.8)	0.417
CCI ≥ 4	68 (66.7)	26 (54.2)	0.14
ECOG PS ≥ 2	40 (39.3)	18 (37.6)	0.989
Stage III/IV	69 (67.6)	24 (50.0)	0.038
Extranodal sites ≥ 2	30 (29.4)	10 (20.8)	0.169
LDH > ULN	90 (88.2)	33 (68.8)	0.004
IPI			
0-2	37 (36.3)	34 (70.8)	<0.001
3-5	65 (63.7)	14 (29.2)	
Bulky disease (≥7.5 cm)	23 (22.5)	14 (29.2)	0.38
Bone marrow involvement	31 (30.4)	4 (8.3)	0.003
Non-GCB (by Hans algorithm)	71 (69.6)	32 (66.7)	0.798
Rituximab	99 (97.1)	44 (91.7)	0.144
Regimen			
CHOP	77 (75.5)	39 (81.3)	0.015
mini-CHOP	24 (23.5)	5 (10.4)	
Other	1 (1.0)	4 (8.3)	

REFERENCES

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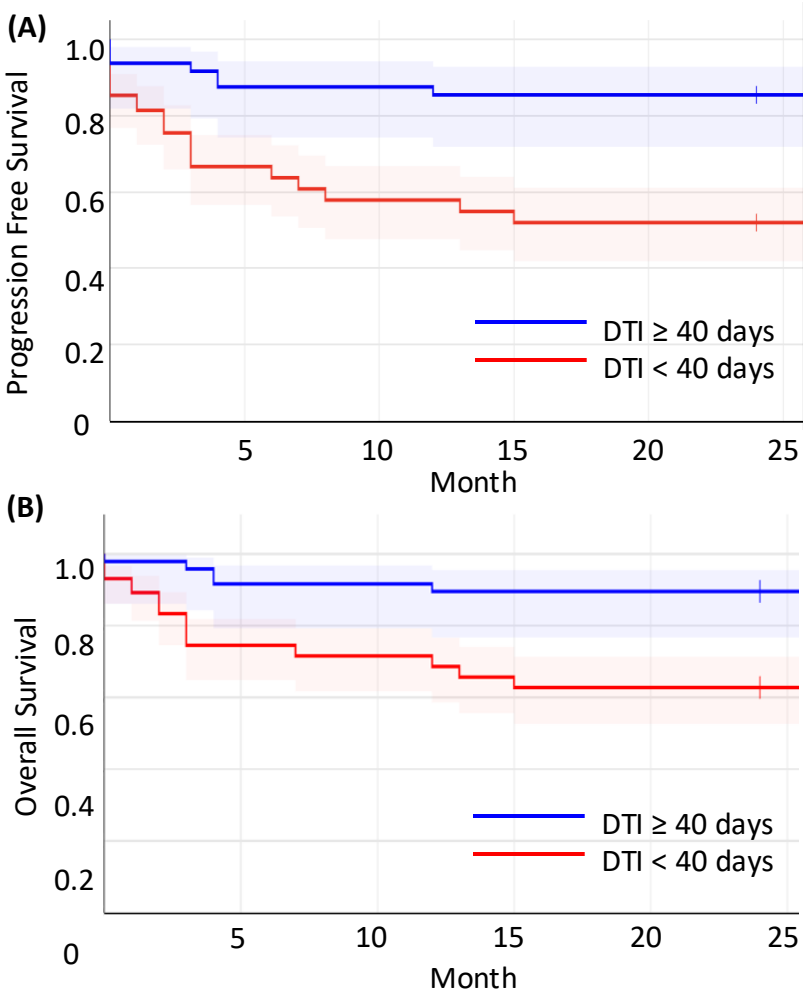
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RESULTS

The median DTI was 26 days (0–187 days). During the follow-up period, 43 patients died, while 56 experienced disease progression, with a median follow-up time of 32 months.

The 2-year OS rate was 71.3%, and the 2-year PFS rate was 62.7%. Patients exhibiting a longer DTI (≥40 days) demonstrated superior 2-year PFS (85.4% vs. 52%, p<0.05) and OS (89.6% vs. 62.7%, p<0.05).

Univariate analysis identified B symptoms, high International Prognostic Index (IPI) scores, and bone marrow involvement as predictors of poorer OS, whereas a longer DTI was associated with improved PFS. However, multivariate analysis showed DTI was not independently predictive of either OS or PFS.



Kaplan-Meier Curves Comparing 2-year Progression-Free Survival (PFS) and Overall Survival (OS) Between Shorter DTI (<40 days) and Longer DTI (≥40 days).

Panel (A) shows the PFS for shorter DTI versus longer DTI (52% vs 85.4%); Panel (B) shows the OS for shorter DTI versus longer DTI (62.7% vs 89.6%)

CONCLUSION

Treatment initiation delays extending beyond 40 days, do not significantly compromise clinical outcomes in patients with DLBCL.

Further large-scale studies are needed to confirm these findings and optimize treatment timelines.