

Article title: *C-reactive protein levels, the prognostic nutritional index, and the lactate dehydrogenase-to-lymphocyte ratio are important prognostic factors in primary central nervous system lymphoma: A single-center study of 223 patients*

Journal name: Journal of Neuro-Oncology

Author names: Jinyi Zuo¹, Ting Lei¹, Shuai Zhong¹, Jiajun Zhou¹, Rui Liu¹, Chenxing Wu¹, Shouwei Li^{1*}

Affiliation: ¹ Department of Neuro-oncology, Capital Medical University Sanbo Brain Hospital, Beijing, People's Republic of China

* Corresponding author: Shouwei Li

Email: lishouwei@ccmu.edu.cn

Online Resource 1 Univariate analysis of continuous and categorical variables associated with PFS and OS

Continuous variable	Data available(%)	Median	PFS			OS		
			HR	95%CI	<i>p</i>	HR	95%CI	<i>p</i>
Operation time(min)	94	103.65	0.999	0.998-1.001	0.56	0.999	0.998-1.001	0.2
Hemoglobin(g/L)	94	135.17	0.995	0.983-1.006	0.363	0.995	0.983-1.009	0.496
WBC(x10 ⁹ /L)	94	7.1	0.991	0.914-1.074	0.83	1.005	0.918-1.101	0.908
PLT(x10 ⁹)	94	208.04	0.996	0.993-0.999	0.022*	0.995	0.991-0.998	0.005*
ALB(g/L)	88	40.22	0.951	0.911-0.992	0.021*	0.944	0.900-0.990	0.018*
Cr(umol/L)	89	63.68	1.007	0.995-1.019	0.279	1.005	0.992-1.019	0.429
NEU(x10 ⁹ /L)	94	5.11	1.012	0.989-1.035	0.308	1.018	0.996-1.041	0.109

LYM(x10^9/L)	94	1.77	0.899	0.710-1.137	0.374	0.881	0.666-1.164	0.372
MONO(x10^9/L)	94	0.5	0.641	0.323-1.276	0.2	0.442	0.157-1.241	0.121
LDH(U/L)	65	196.81	1	0.997-1.003	0.778	1.001	0.997-1.004	0.714
Categorical variable	N	%	HR	PFS 95%CI	<i>p</i>	HR	OS 95%CI	<i>p</i>
Treatment								
biopsy	145	65	0.988	0.680-1.436	0.951	0.901	0.590-1.376	0.629
resection	78	35						
age≥60								
Yes	101	45						
No	122	55	0.0425	0.294-0.615	<0.001**	0.308	0.201-0.472	<0.001**
Pathology								
GCB	45	20						
non-GCB	164	74	1.667	0.994-2.796	0.053	2.06	1.095-3.873	0.025*
Other	14	6	2.149	0.957-4.827	0.064	2.519	0.975-6.511	0.056
KPS≥70								
Yes	179	80						

No	44	20	1.507	0.980-2.318	0.062	1.824	1.145-2.907	0.011*
IELSG								
Low	105	47						
Intermediate	113	51	1.507	1.040-2.183	0.03*	1.82	1.196-2.769	0.005*
High	3	2	3.266	0.786-13.565	0.013	4.791	1.136-20.211	0.033*
MSKCC								
Low	60	27						
Intermediate	130	58	2.218	1.352-3.636	0.002*	2.561	1.428-4.590	0.002*
High	32	15	2.972	1.584-5.575	0.001*	4.668	2.302-9.465	<0.001**
CRP$\geq$3.14								
Yes	34	15	-	-	-			
No	75	37	-	-	-	0.454	0.252-0.819	0.009*
NLR$\geq$2.34								
Yes	121	54				-	-	-
No	114	51	0.667	0.456-0.977	0.037*	-	-	-
NLR$\geq$2.58								
Yes	107	48	-	-	-			

Yes		41	-	-	-			
No	105	47	-	-	-	2.673	1.676-4.264	<0.001**

WBC: white blood cells; PLT: platelets; ALB: albumin; Cr: creatinine; NEU: peripheral blood neutrophil count; LYM: lymphocyte count; MONO: mononuclear cell count; LDH: lactate dehydrogenase; GCB: germinal center B cell-like; non-GCB: nongerminal center B cell-like; KPS: Karnofsky performance score; IELSG: International Extranodal Lymphoma Study Group; MSKCC: Memorial Sloan Kettering Cancer Center model; CRP: C-reactive protein; NLR: neutrophil-to-lymphocyte ratio; LLR: lactate dehydrogenase-to-lymphocyte ratio; dNLR: derived neutrophil-to-lymphocyte ratio; SII: systemic immune inflammation index; SII: systemic immune inflammation index; PNI: prognostic nutritional index; PFS: progression-free survival; OS: overall survival; HR: hazard ratio; CI: confidence interval; *: p value<0.05; **: p value<0.001.