

Intensive chemotherapy with thiotepa, busulfan and cyclophosphamide and hematopoietic stem cell rescue in relapsed or refractory primary central nervous system lymphoma and intraocular lymphoma: a retrospective study of 79 cases

Carole Soussain,¹ Sylvain Choquet,² Emmanuelle Fourme,³ Daniel Delgadillo,⁴ Krime Bouabdallah,⁵ Hervé Ghesquières,⁶ Gandhi Damaj,⁷ Brigitte Dupriez,⁸ Jacques Vargaftig,¹ Alberto Gonzalez,⁹ Caroline Houillier,⁹ Luc Taillandier,¹⁰ Khê Hoang-Xuan,⁹ and Véronique Leblond²

¹Department of Hematology, Hôpital René Huguenin, Institut Curie, Saint-Cloud; ²Department of Hematology, Centre Hospitalier Universitaire Pitié-Salpêtrière, Paris; ³Hôpital René Huguenin – Institut Curie, Saint-Cloud, Biostatistics Unit, France; ⁴Department of Neurology, Centre Hospitalier Universitaire Pitié-Salpêtrière; ⁵Department of Hematology, Centre Hospitalier Universitaire Pessac, Bordeaux; ⁶Department of Hematology, Centre Léon Berard, Lyon; ⁷Department of Hematology, Centre Hospitalier Universitaire, Amiens; ⁸Department of Hematology, Centre Hospitalier de Lens; ⁹Department of Neurology, Centre Hospitalier Universitaire Pitié-Salpêtrière, Paris; and ¹⁰Department of Neurology, Centre Hospitalier Universitaire, Nancy, France

Citation: Soussain C, Choquet S, Fourme E, Delgadillo D, Bouabdallah K, Ghesquières H, Damaj G, Dupriez B, Vargaftig J, Gonzalez A, Houillier C, Taillandier L, Hoang-Xuan K, and Leblond V. Intensive chemotherapy with thiotepa, busulfan and cyclophosphamide and hematopoietic stem cell rescue in relapsed or refractory primary central nervous system lymphoma and intraocular lymphoma: a retrospective study of 79 cases. *Haematologica* 2012;97(11):1751-1756. doi:10.3324/haematol.2011.060434

Online Supplementary Table S1. Multivariate regression analysis of overall survival (Cox's model).

Variable	RR	95% CI	P
Age at time of intensification			
≥ 60	5.5	2.2-14.1	0.0004
≤ 60	1		
Disease site			
Isolated IOL	0.57*	0.24-1.35	0.20
Non-isolated IOL	1		
Status before IC+HCR/status after IC+HCR			
CR + PR/CR	1	1.3-5.9	0.008
SD+PD/CR or other	2.8		

* Adjustment for the interaction between age and disease site.

Online Supplementary Table S2. Outcome of chemoresistant patients at the time of intensification.

Patient	Status after first-line treatment	Duration of CR1 (months)	Status before IC + HCR	Status after IC + HCR	Relapse	Duration of CR2 (months)	OS from IC + HCR. Outcome	Cause of death
PCNSL								
1	CR	120	PD	CR	No	5	5 months. Died	Neurotoxicity
2	CR	20	PD	CR	Yes	6	24 months. Died	PCNSL
3	CR	11	PD	CR	no	50	50 months. Died	Pulmonary infection
4	CR	6	PD	CR	yes	11	13 months. Died	PCNSL
5	CR	22	PD	PR			2 months. Died	IC+HCR-related infection
6	CR	3	PD	NE			3 days. Died	PCNSL + treatment-related
7	CR	23	PD	CR	Yes	5	7 months. Died	PCNSL
8	CR	7	PD	CR	No	56	56 months. Alive in CR	
9	Primary refractory	0	PD	CR	No	45	45 m. Alive in CR	
10	Primary refractory	0	PD	CR *	Yes	7	7 months. Alive	PCNSL
11**	Primary refractory	0	PD	PD	Unknown		9 months. Died	Non-PCNSL related
12	Primary refractory	0	PD	CR*	Yes	52	96 months. Died	PCNSL
13	Primary refractory	0	PD	CR	Yes	3	3 months. Died	PCNSL

IOL

14	Primary refractory	0	PD	CR	Yes	36	36 months. Alive on therapy	
15†	Primary refractory	0	PD	PD***			71 months. Died	Unknown
16	Primary refractory	0	PD	CR	yes	3	33 months. Died	Embryonic carcinoma
17	Primary refractory	0	PD	CR	Yes	145	149 months. Died	CNS and systemic NHL
18*	Primary refractory	0	PD	CR	Unknown		22 months. Died	Unknown

* received WBRT in CR after IC + HCR; ** patient received WBRT in PD after IC+HCR. Death not related to PCNSL was reported with no other information. *** The patient received ocular radiotherapy after IC+ HCR, †These 2 patients had concomitant cerebrospinal fluid infiltration. CR: complete remission; PR: partial remission; PD: progressive disease; NE: not evaluable; NHL: non-Hodgkin's lymphoma.