

Utility of the Central Nervous System International Prognostic Index in patients with primary mediastinal large B-cell lymphoma treated with rituximab-containing chemoimmunotherapy

Authors

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Patient	Age	Stage	Anterior mediastinal mass size (cm)	Extranodal Sites	PS	LDH (upper limit of normal)	CNS-IPI Risk	Primary therapy	Response at end of treatment
1	67	IIB	5	None	4	281 (210)	Intermediate	R-CHOP	CR
2	20	IVB	13	Adrenal, kidney, soft tissue, lung, pericardium, pancreas	1	586 (230)	High	R-CHOP	CR
3	84	IVA	10	Pleura, lung, pericardium	2	245 (240)	High	R-CHOP	CR
4	21	IVA	16	Adrenal, kidney, lung, bowels	1	539 (220)	High	R-CHOP	PD (CNS→ systemic)
5	36	IVA	10	Adrenal	2	713 (240)	High	DA-EPOCHR + HD-MTX + IT MTX	PR → RT → PD (CNS)
6	28	IVA	12	Adrenal, stomach, pancreas, bowels	2	1109 (220)	High	DA-EPOCHR	PD (CNS)

Table S1. Clinical features at diagnosis and primary therapy received for PMBCL patients with CNS relapse.

PS: performance status; LDH: lactate dehydrogenase; IPI: International Prognostic Index; R-CHOP: rituximab, cyclophosphamide, doxorubicin, vincristine, prednisone; DA-EPOCHR: dose adjusted etoposide, prednisone, vincristine, cyclophosphamide, doxorubicin, rituximab; HD-MTX: high-dose methotrexate; IT MTX: intrathecal methotrexate; CNS central nervous system; PD progressive disease; CR complete remission; PR partial remission

Patient	Time to CNS relapse (years)	Site of relapse	Treatment for CNS Relapse	Outcome	Follow up from time of CNS relapse in alive patients (years)
1	4.74	Parenchymal	Dexamethasone only	Death (lymphoma)	N/A
2	0.70	Parenchymal	HD-MTX x 3; WBRT	CR	13.6
3	0.96	Leptomeningeal + paravertebral mass	Dexamethasone only	Death (lymphoma)	N/A
4	0.67	Parenchymal → mediastinum, lung	HD-MTX x 3; WBRT; GDP x 5, BuMelThiot ASCT	CR	8.2
5	1.29	Parenchymal, leptomeningeal	MTR x 4; WBRT, pembrolizumab; R-ICE x 3, BuMelThiot ASCT	CR	4.1
6	0.43	Parenchymal	MTR x 2; cytarabine x 1, WBRT, pembrolizumab	CR	2.1

Table S2. Characteristics, therapy and outcome of patients with CNS relapse

HD-MTX: high-dose methotrexate; WBRT: whole brain radiation therapy; GDP: gemcitabine, dexamethasone, cisplatin; BuMelThiot: busulfan, melphalan, thiotepa; ASCT: autologous stem cell transplant; MTR: high-dose methotrexate, temozolomide, rituximab; R-ICE: rituximab, ifosfamide, carboplatin, etoposide; N/A: not applicable; CR complete remission

CNS-IPI risk factor	5 year risk of CNS relapse with risk factor (95% CI)	5 year risk of CNS relapse without risk factor (95% CI)	P-value
Renal and/or adrenal involvement	30.8% (8.7%, 56.6%)	1.1% (0.2%, 3.8%)	<0.00001
Age >60	11.3% (1.7%, 31.3%)	1.8% (0.6%, 4.3%)	0.033
Stage III or IV	5.2% (1.9%, 11.0%)	1.0% (0.1%, 5.1%)	0.026
Elevated LDH	3.8% (1.5%, 7.7%)	0	0.139
PS \geq 2	5.1% (1.6%, 11.7%)	1.4% (0.3%, 4.4%)	0.142
Extranodal sites > 1	4.8% (1.5%, 10.9%)	1.7% (0.3, 5.5%)	0.098

Table S3. Cumulative risk of CNS relapse in PMBCL by the CNS-IPI risk factors (estimated using a competing risk approach)

CNS central nervous system; CI confidence interval

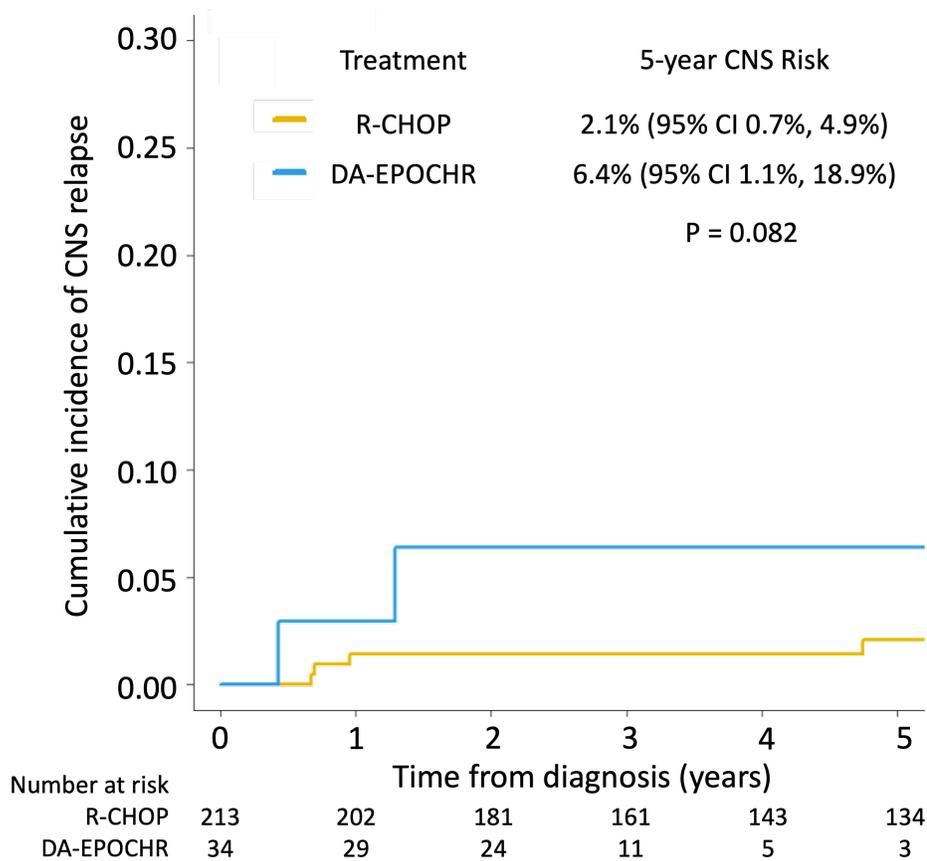


Figure S1. Cumulative incidence of CNS relapse in PMBCL by treatment with R-CHOP or DA-EPOCHR (estimated using a competing risk approach)

CNS: central nervous system; CI: confidence interval; R-CHOP: rituximab, cyclophosphamide, doxorubicin, vincristine, prednisone; DA-EPOCHR: dose adjusted etoposide, prednisone, vincristine, cyclophosphamide, doxorubicin, rituximab