

**Supplementary Table 3. Clinical characteristics of patients included in the discovery cohort..**

UPN	Age (yrs)	Sex	Hans's classification	KPS	Involvement of deep brain	Deep brain lesions	Number of lesions	Altered mentation	Hemiparesis	Frontline treatment	Maximum tumor diameter	Relapse/refractory	Group	OS	PFS
1	32	male	GCB	80	Yes	(+)	multiple	(+)	(-)	HDMTX-based	25	(-)	NRG	1269+	1269
2	65	male	non-GCB	90	Yes	(+)	single	(-)	(-)	HDMTX-based	41	(-)	NRG	2933+	2933
3	83	female	non-GCB	50	Yes	(+)	multiple	(-)	(+)	HDMTX-based	60	(-)	NRG	74	74
4	74	female	non-GCB	80	Yes	(+)	single	(-)	(-)	HDMTX-based	30	(-)	NRG	1166	1166
5	78	male	non-GCB	50	Yes	(+)	single	(-)	(-)	HDMTX-based	42	(-)	NRG	3304+	3304
6	74	male	non-GCB	50	No	(-)	single	(-)	(+)	HDMTX-based	30	(-)	NRG	2316+	2316
7	68	male	non-GCB	50	Yes	(+)	multiple	(+)	(+)	HDMTX-based	39	(-)	NRG	208	208
8	65	male	non-GCB	50	No	(-)	single	(-)	(-)	HDMTX-based	20	(-)	NRG	958	958
9	73	male	non-GCB	60	Yes	(+)	multiple	(+)	(+)	HDMTX-based	35	(-)	NRG	1913+	1913
10	68	female	non-GCB	50	Yes	(+)	multiple	(-)	(-)	HDMTX-based	18	(-)	NRG	492	492
11	78	male	GCB	70	Yes	(+)	multiple	(-)	(-)	HDMTX-based	23	(-)	NRG	2026+	2026
12	71	male	non-GCB	70	Yes	(+)	multiple	(-)	(+)	HDMTX-based	30	(-)	NRG	1326	1326
13	62	female	non-GCB	70	No	(-)	single	(+)	(+)	HDMTX-based	36	(+)	RG	1986+	1082
14	76	male	non-GCB	40	Yes	(+)	single	(+)	(-)	HDMTX-based	40	(+)	RG	78	65
15	82	female	GCB	50	No	(-)	single	(+)	(+)	HDMTX-based	45	(+)	RG	170	73
16	67	male	non-GCB	40	Yes	(+)	multiple	(+)	(-)	HDMTX-based	40	(+)	RG	95	65
17	79	male	non-GCB	40	No	(-)	single	(+)	(+)	Other	39	(+)	RG	35	0
18	62	female	non-GCB	70	No	(-)	multiple	(+)	(+)	HDMTX-based	48	(+)	RG	868	609
19	72	female	non-GCB	30	Yes	(+)	single	(+)	(+)	HDMTX-based	61	(+)	RG	1093	728
20	78	female	GCB	50	Yes	(+)	single	(-)	(+)	HDMTX-based	38	(+)	RG	632	522
21	67	female	non-GCB	30	Yes	(+)	multiple	(+)	(-)	HDMTX-based	39	(+)	RG	81	43
22	62	female	non-GCB	40	No	(-)	multiple	(+)	(+)	HDMTX-based	48	(+)	RG	417	338
23	69	male	non-GCB	30	Yes	(+)	multiple	(+)	(+)	HDMTX-based	40	(+)	RG	339	62
24	69	male	non-GCB	60	Yes	(+)	multiple	(-)	(-)	HDMTX-based	20	(+)	RG	1108	386
25	62	female	GCB	60	Yes	(+)	multiple	(+)	(-)	HDMTX-based	25	(+)	RG	1655+	132
26	76	male	GCB	50	Yes	(+)	single	(+)	(+)	Other	38	(+)	RG	160	160
27	68	male	non-GCB	50	No	(-)	multiple	(+)	(-)	HDMTX-based	50	(+)	RG	1433	466
28	63	male	non-GCB	40	Yes	(+)	single	(+)	(+)	HDMTX-based	83	(+)	RG	266	266
29	66	male	non-GCB	50	Yes	(+)	multiple	(+)	(+)	HDMTX-based	20	(+)	RG	428	207
30	74	male	non-GCB	20	Yes	(+)	multiple	(+)	(+)	HDMTX-based	51	(+)	RG	311	297

GCB; germinal center B-cell-like, HDMTX; high-dose methotrexate, NRG; non-recurrence group, RG; recurrence group, "+" alive at the cutoff point