

Table SI. Literature search strategy.

Database	Search terms
Pubmed	(((((("toxicity"[MeSH Subheading]) OR (ADR)) OR (adverse effect)) OR (adverse reaction)) OR (adverse event)) OR (AE)) AND (((((OS) OR (PFS)) OR (CR)) OR (progression-free survival)) OR (complete response)) AND (((("Rituximab"[MeSH Terms])) OR (CD20 monoclonal antibody)) AND (((("Nervous System"[MeSH Terms])) AND ("Lymphoma"[MeSH Terms])) OR (Primary central nervous system lymphoma) OR (PCNSL))))
Web of Science	#6: #3 AND #4 AND #5 #5:((((TS=(toxic)) OR TS=(toxicity)) OR TS=(ADR)) OR TS= (adverse effect)) OR TS= (adverse reaction)) OR TS= (adverse event)) OR TS=(AE) #4:(((TS=(OS)) OR TS=(PFS)) OR TS=(CR) OR TS= (progression-free survival) OR TS= (complete response) #3: #1 AND #2 #2: (TS=(Rituximab)) OR TS=(rituximab)) OR TS= (CD20 monoclonal antibody) #1:((TS=(PCNSL)) OR

Embase	#14 #13 OR #1
	#13 #10AND#11AND#12
	#12 #8 OR #9
	#11 #5 OR #6 OR #7
	#10 #3 OR #4
	#9 (toxicity): ti,ab,kw (Word variations have been searched)
	#8 (complete response): ti,ab,kw (Word variations have been searched)
	#7 (progression-free survival*): ti,ab,kw (Word variations have been searched)
	#6 (cancer): ti,ab,kw (Word variations have been searched)
	#5 (overall survival*): ti,ab,kw (Word variations have been searched)
	#4 ("nervous system"): ti,ab,kw (Word variations have been searched)
	#3 (lymphoma): ti,ab,kw (Word variations have been searched)
	#2 MeSH descriptor: [Rituximab] explode

Table SII. Newcastle-Ottawa scale quality evaluation for retrospective studies.

Study	Selection				Comparability	Outcome			Total Scores	(Ref.)
	Representativeness of the exposed cohort	Selection of the non-exposed cohort	Ascertainment of exposure	Demonstration that outcome of interest was not present at start of study	Comparability of cohorts based on design or analysis	Assessment of outcome	Was follow-up long enough for outcomes to occur	Adequacy of follow up of cohorts		
Birnbaum, 2012	1	1	1	0	2	1	0	1	7	(35)
Chen, 2019	1	1	1	0						

Table SIII. Publication bias assessment: Egger's linear regression and Begg's rank correlation test results.

Outcome	Egger's intercept	Egger's P	Begg's Z	Begg's P	Interpretation
3-year OS	-0.42	0.32	0.72	0.47	No significant bias
3-year PFS	-0.28	0.41	0.53	0.59	No significant bias
OS-HR	-1.12	0.18	-1.04	0.30	No significant bias
PFS-HR	-0.86	0.22	-0.73	0.46	No significant bias
CR	0.15	0.78	0.36	0.72	No significant bias

OS, overall survival; HR,

Table SIV. Study-level availability of grade ≥ 3 SAE data.

Study	Neutropenia	Leukopenia	Thrombocytopenia	Infection	Hepatic	Renal	Neurotoxicity	Anemia
ALLGNHL24	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
IELSG32	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Luo, 2016	Yes	Yes	Yes	-	Yes	-	-	Yes
Di, 2019	Yes	Yes	Yes	Yes	Yes	-	Yes	-
Birnbaum, 2012	Yes	-	Yes	Yes				

Table SV. Subgroup sample size summary by ethnicity and outcome.

Subgroup	Studies included	N (Rtx)	N (no-Rtx)	Total N	OR	95% CI
Asian (3-year OS)	Chen, 2019; Di, 2019; Mou, 2017; Patekar, 2019	145	150	295	2.62	1.16-5.91
Caucasian (3-year OS)	ALLGNHL24; IELSG32; Birnbaum, 2012; Holdhoff, 2014; Kansara, 2015; Mocikova, 2016	286	412	698	1.69	1.23-2.32
Asian (3-year PFS)	Chen, 2019; Mou, 2017; Patekar, 2019	109	126	235	2.98	1.17-7.60
C						

Table SVI. Sensitivity analysis results.

Studies included/excluded	Pooled effect	95% CI	P-value	I ² , %
3-year OS: All studies	OR = 2.01	1.42-2.84	<0.00001	33
3-year OS: Exclude NOS <7	OR = 2.36	1.42-3.93	0.0008	53
3-year OS: Exclude Mou, 2017 (NOS=5)	OR = 2.51	1.60-3.95	<0.0001	58
3-year PFS: All studies	OR = 2.30	1.47-3.58	0.0002	58
3-year PFS: Exclude NOS <7	OR = 2.14	1.54-2.97	<0.0001	51

Table SVII. Comprehensive heterogeneity statistics for all pooled analyses.

Outcome	Pooled effect	95% CI	P-value	I ² , %	Model
3-year OS	OR = 2.01	1.42-2.84	<0.00001	33	Random-effects
OS-HR	HR = 0.57	0.36-0.91	0.02	57	Random-effects
3-year PFS	OR = 2.30	1.47-3.58	0.0002	58	Random-effects
PFS-HR	HR = 0.54	0.37-0.79	0.002	53	Random-effects
CR	OR = 2.04	1.5-2.77	<0.00001	13	Random-effects
Ne					