Supplementary Material

Supplementary Table 1: Search strategy

Search Steps		Search Fields		
		MEDLINE	**EMBASE**	**Cochrane registry**
1	"dose intensity" OR "dose reduction" OR "reduced dose" OR "miniCHOP"	text words (including MeSH)	title, abstract, keywords	title, abstract, keywords
2	"DLBCL" OR "diffuse large B cell lymphoma" OR "diffuse large B-cell lymphoma"	text words (including MeSH)	title, keywords	title, abstract, keywords
3	1 AND 2			

Abbreviations: miniCHOP: dose attenuated CHOP (cyclophosphamide, doxorubicin, vincristine, prednisolone); DLBCL: diffuse large B-cell lymphoma; MeSH: medical subject headings

Supplementary Table 2: CASP analysis of studies included in the analysis

Reference	**Did the study address a clearly focused issue?**	**Was the cohort recruited in an acceptable way?**	**Was the exposure accurately measured to minimize bias?**	**Was the outcome accurately measured to minimize bias?**	**Have the authors identified all important confounding factors?**	**Have they taken account of the confounding factors in the design and/or analysis?**	**Was the follow-up of subjects complete enough?**	**Was the follow-up of subjects long enough?**	**How precise are the results?**	**Do you believe in the results?**	**Can the results be applied to the local population?**	**Do the results of this study fit with other available evidence?**	**What are the implications of this study for practice**	**Total score (/5)**
Terada *et al*	Yes	Yes	Unsure	Unsure	Yes	Yes	Yes	Yes	Low	Unclear	Unclear	Yes	Unclear	3
Hirakawa *et al*	Yes	Yes	Unsure	Unsure	Unclear	Yes	Yes	Yes	High	Yes	Yes	Yes	Unclear	4
Carson *et al*	Yes	No	Unsure	Unsure	No	No	No	No	Unclear	No	No	No	Unclear	1
Ha *et al*	Yes	Yes	Unsure	Unsure	Yes	Yes	No	No	Low	Yes	Yes	Unclear	Unclear	3
Vidal *et al*	Yes	Yes	Unsure	Unsure	Unclear	Yes	Yes	Yes	High	Yes	Unclear	Yes	Unclear	4
Juul *et al*	No	Yes	Unsure	Unsure	No	No	Yes	Yes	Unclear	Yes	Yes	Yes	Unclear	3
Morth *et al*	No	No	Unsure	Unsure	Yes	Yes	Yes	Yes	High	Yes	Yes	Yes	Unclear	3
Eyre *et al*	Yes	Yes	Unsure	Unsure	Yes	Yes	Yes	Yes	High	Yes	Yes	Yes	Unclear	4
Długosz-Danecka *et al*	Yes	No	Unclear	Unclear	No	No	Yes	Yes	High	No	Unclear	Yes	Unclear	3
Nagata *et al*	Yes	Yes	Unsure	Unsure	No	No	Yes	Yes	High	Unclear	Yes	Yes	Unclear	3
Hwang *et al*	Yes	Yes	Unsure	Unsure	Unclear	Yes	Yes	Yes	Low	Unclear	Unclear	No	Unclear	3
Lee *et al*	Yes	No	Unsure	Unsure	Unclear	Yes	Yes	Yes	High	Unclear	No	Unclear	Unclear	3

Yamamoto *et al*	Yes	Yes	Unsure	Unsure	Yes	Yes	Yes	Yes	High	Yes	Yes	Yes	Unclear	4

Supplementary Table 3: Overview of the studies in the elderly population age > 70, based on dose intensity and outcomes analysis

Age group (years)	**Papers**	**RDI cut off**	**Univariable OS impact**	**Univariable PFS impact**	**Multivariable OS impact**	**Multivariable PFS impact**	**Adjustment performed for ECOG and comorbidity**	**Cause-specific survival used for OS estimation**
≥70	Ha et al.	60%	Pts ≥70 years only RDI <60%: HR 0.45, 95% CI (0.21-0.97) , p =0.04	Not done	Pts ≥70 years only RDI ≥60%: HR 1.597, 95% CI (0.607-4.202) , p=0.343	Not done	B symptoms, Stage ≥3, ECOG PS ≥2, LDH>ULN, EN sites ≥2, IPI ≥3, BM involvement, Bulky tumor	No
	Vidal et al.	90%	Dose (cycle 1 [H], continuous variable), for every 10% increase: HR 0.80, p <0.0001, 95% CI (0.72-0.88)	Not done	Calculated individually for Cycle 1 of [C], [H], and for cycles 1+2 for [C], [H] $Dose[C]_{cycle\ 1}$ (for every 10% dose increase): HR 0.77, 95% CI (0.64-0.92) , p<0.005 -$Dose[C]_{cycle\ 1+2}$ (for every 10% dose increase): HR 0.76, 95% CI (0.60-0.96) , p<0.019 -$Dose[H]_{cycle\ 1}$ (for every 10% dose increase): HR 0.81, 95% CI (0.70-0.94) , p<0.005 -$Dose[H]_{cycle\ 1+2}$ (for every 10% dose	Not done	ECOG 0-1 vs. ≥2; age ≥80 years; gender; IPI, Hb, and albumin	No

					increase): HR 0.82, 95% CI (0.69-0.97) , p<0.019			
	Eyre et al.	80%	IDI ≥80% OS: SHR 0.35, p<0.001, 95% CI (0.35-0.58)	IDI ≥80% PFS: SHR 0.50, p<0.001, 95% CI (0.39-0.64) CIR: Age: 70-79 years IDI<80% SHR 1.80, p =0.004, 95% CI (1.21-2.67)		CIR: Age: 70-79 years IDI<80% SHR 1.61, p=0.04, 95% CI (1.02-2.53)	Age, stage, ECOG PS ≥2, LDH, albumin, gender, B-symptoms, EN>1,	Yes
≥75	Juul et al.	80%	Full dose ≥80%, KM analysis for OS 75-79 years: p = 0.068 80-84 years: p = 0.414 ≥ 85 years: p = 0.962	Not done	MVA for R ± CHOP/CHOEP (ref) vs. less intensive t/t 75-79 years: OS, HR 1.54, 95% CI (1.04-2.30)	Not done	age, sex, IPI, CCI score	No
≥80	Eyre et al. (subgroup analysis)	80%	Not done	CIR: Age ≥80 years IDI <80% SHR: 1.40 95% CI (0.95-2.07), p=0.09	Not done	CIR: Age ≥80 years IDI <80% SHR: 1.48 95% CI (0.96-2.29), p=0.078	Age, stage, ECOG PS ≥2, LDH, albumin, gender, B-symptoms, EN >1,	Yes
	Juul et al. (subgroup analysis)	80%	Full dose ≥80%, KM analysis for OS 80-84 years: p = 0.414 ≥ 85 years: p = 0.962	Not done	MVA for R ± CHOP/CHOEP (ref) vs. less intensive t/t 80-84 years: OS, HR 1.39, 95% CI (1.01-1.91) ≥ 85 years: OS, HR 1.04, 95% CI (0.69-1.58)	Not done	age, sex, IPI, CCI score	No
	Vidal et al. (subgroup analysis)	90%	Not done for the subgroup of ≥ 80 years	Not done	Delivered dose of [H] <90%: OS, HR 0.88, 95% CI (0.74-1.06), p = 0.16 Delivered dose of [C] <90%: OS, HR	Not done	Age, gender, IPI, Hb, albumin	No

					0.87, 95% CI (0.72-1.06), p = 0.16			
	Carson et al.	85%	KM, and log-rank for OS comparison 1-yr OS rate: RDI ≥85% - 59% RDI <85% - 70%; (Log-rank p=0.029), HR not provided	Not done	Not done	Not done	Not done	No
	Lee et al.	50%	KM analysis: tARDI >50% vs. ≤50% 2yr OS = 61.8% vs. 50.8%, p=0.030	Not done	tARDI (/10%): HR 0.889, 95% CI (0.809-0.975), p=0.013	Not done	albumin, CCI score, IPI score	No

Abbreviations:
OS: Overall survival; PFS: Progression-free survival; MVA: multivariable analysis; UVA: univariable analysis
C: Cyclophosphamide; H: Doxorubicin; O: Vincristine; P: Prednisone; R: Rituximab; THP-ADM: tetrahydropyranyladriamycin;
IPI – International prognostic index; CCI: Charlson Comorbidity Index; LDH: Lactate dehydrogenase; ULN: Upper limit of normal; EN: extranodal disease; PS: performance status
SHR: sub-hazard ratio
IDI – Intended dose intensity = Average delivered dose [C+H] in cycle 1, expressed as a % relative to the standard dose.
RDI - Relative Dose Intensity (varies by study design). See table 2 for details on the derivation of RDI.
tARDI: total average RDI used in Lee et al. Haematologica 2020
CIR: Cumulative Incidence of Relapse