

1 **SUPPLEMENTARY APPENDIX**

2 **Brentuximab Vedotin with Chemotherapy for CD30-Positive Peripheral T-cell Lymphoma**  
3 **(ECHELON-2): a global, double-blind, randomised, phase 3 trial.**

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14 and maintaining the quality of study conduct.

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18 This appendix has been provided by the authors to give readers additional information about their work.

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73 **Part II - Methods text not included in full paper**

74 **Text S1. Study design**

75 **Biomarker Measurements**

76 Histologically confirmed CD30-positive disease and histologic subtype were determined by local pathology  
77 assessment in a CD30-qualified laboratory to enable enrolment.

78 By local assessment, tissue from the diagnostic biopsy was confirmed for CD30 positivity by  
79 immunohistochemistry (anti-CD30 BerH2 antibody). The 3 following criteria must have been met to declare  
80 CD30 positivity:

- 81 1. CD30 detected in 10% or greater of neoplastic cells (in cases where enumeration of neoplastic cells  
82 was not possible, total lymphocytes may have been used).
- 83 2. CD30 staining at any intensity above background.
- 84 3. Membranous, cytoplasmic, and/or golgi pattern of expression of the CD30 antigen.

85 ALK status was also assessed by local pathology for subjects with a diagnosis of sALCL.

86 Submission of the tumour block or unstained slides from a diagnostic biopsy was also required prior to  
87 randomisation for subsequent central confirmation of CD30 expression, disease histologic subtype, and ALK  
88 status for subjects with a diagnosis of sALCL. The diagnostic specimen was to be from a malignant lymph node  
89 or extranodal tissue obtained by core or excisional/incisional biopsy.

90 **Full Eligibility Criteria**

91 **Inclusion Criteria**

- 92 1. Subjects with newly diagnosed, CD30-positive peripheral T-cell lymphoma per the Revised European-  
93 American Lymphoma World Health Organization 2008 classification by local assessment. Eligible  
94 histologies were limited to the following:
- 95 • ALK-positive sALCL with an IPI score greater than or equal to 2

- 96       • ALK-negative sALCL  
97       • PTCL-NOS  
98       • AITL  
99       • Adult T-cell leukaemia/lymphoma (ATLL; acute and lymphoma types only, must have been positive  
100       for human T-cell leukaemia virus 1)  
101       • Enteropathy-associated T-cell lymphoma (EATL)  
102       • Hepatosplenic T-cell lymphoma  
103 2. Fluorodeoxyglucose (FDG)-avid disease by PET and measurable disease of at least 1.5 cm by CT, as  
104       assessed by the site radiologist.

105 3. Age greater than or equal to 18 years.

106 4. An Eastern Cooperative Oncology Group (ECOG) performance status less than or equal to 2.

107 5. The following required baseline laboratory data:

- 108       • bilirubin  $\leq 1.5X$  upper limit of normal (ULN) or  $\leq 3X$  ULN for subjects with Gilbert's disease or  
109       documented hepatic involvement with lymphoma  
110       • alanine aminotransferase (ALT) and aspartate aminotransferase (AST)  $\leq 3X$  ULN or  $\leq 5X$  ULN for  
111       subjects with document hepatic involvement with lymphoma  
112       • serum creatinine  $\leq 2X$  ULN  
113       • absolute neutrophil count (ANC)  $\geq 1000/\mu\text{L}$  (unless documented bone marrow involvement with  
114       lymphoma)  
115       • platelet count  $\geq 50,000/\mu\text{L}$  (unless documented bone marrow involvement with lymphoma)

116 6. Females of childbearing potential must have had a negative serum or urine beta human chorionic  
117       gonadotrophin ( $\beta$ -hCG) pregnancy test result within 7 days prior to the first dose of study treatment and  
118       must have agreed to use an effective contraception method during the study and for at least six months  
119       following the last dose of study drug. Females of non-childbearing potential were those who are  
120       postmenopausal greater than one year or who have had a bilateral tubal ligation or hysterectomy.

121 7. Males who had partners of childbearing potential must have agreed to use an effective contraceptive  
122       method during the study and for six months following the last dose of study drug.

123 8. Subjects or their legally authorized representative must have provided written informed consent.

#### 124 Exclusion Criteria

125 1. History of another primary invasive cancer, hematologic malignancy, or myelodysplastic syndrome that has  
126       not been in remission for at least three years.

127 2. Current diagnosis of any of the following:

- 128       • Primary cutaneous CD30-positive T-cell lymphoproliferative disorders and lymphomas. Cutaneous  
129       ALCL with extracutaneous tumour spread beyond locoregional lymph nodes were eligible (previous  
130       single-agent treatment to address cutaneous and locoregional disease was permissible)  
131       • Mycosis fungoides (MF), including transformed MF

132 3. History of progressive multifocal leukoencephalopathy (PML).

133 4. Cerebral/meningeal disease related to the underlying malignancy.

134 5. Prior treatment with brentuximab vedotin.

135 6. Baseline peripheral neuropathy  $\geq$  Grade 2 (per the National Cancer Institute-Common Terminology Criteria  
136       for Adverse Events, Version 4.03) or subjects with the demyelinating form of Charcot-Marie-Tooth  
137       syndrome.

138 7. Left ventricular ejection fraction less than 45% or symptomatic cardiac disease (including symptomatic  
139       ventricular dysfunction, symptomatic coronary artery disease, and symptomatic arrhythmias), or myocardial  
140       infarction within the past six months, or previous treatment with complete cumulative doses of doxorubicin  
141       or other anthracyclines.

142 8. Any active Grade 3 (per the NCI CTCAE, Version 4.03) or higher viral, bacterial, or fungal infection  
143       within two weeks prior to the first dose of study treatment; any known human immunodeficiency virus

144 (HIV) infection, hepatitis B surface antigen-positive status, or known or suspected active hepatitis C  
145 infection.

146 9. Current therapy with other systemic anti-neoplastic or investigational agents.

147 10. Females who were pregnant or breastfeeding.

148 11. Subjects with a known hypersensitivity to any excipient contained in any of the drug formulations of study  
149 treatments.

150 12. Subjects with known urinary outflow obstruction.

### 151 **Concomitant Therapy and Dose Modifications**

152 The use of G-CSF was permitted at the discretion of the treating physician based upon institutional standards. In  
153 May 2015, the Independent Data Monitoring Committee recommended that Seattle Genetics remind  
154 investigators to administer G-CSF in accordance with American Society of Clinical Oncology or European  
155 Society of Medical Oncology guidelines. Dose modifications of blinded study treatment (brentuximab vedotin  
156 or vincristine), cyclophosphamide, doxorubicin, or prednisone due to hematologic and non-hematologic toxicity  
157 were allowed per institutional standards at the discretion of the investigator and included discontinuation of a  
158 treatment component. Recommended dose modifications for study treatment-associated neuropathy are  
159 described in appendix Table S1.

### 160 **Text S2. Statistical Analysis**

161 Missing data was not imputed, with the exception of adverse event dates, subsequent anti-cancer therapy start  
162 date, and death date. Subjects with missing values of a variable other than the time-to-event endpoints (PFS and  
163 OS) were excluded from the analysis of that endpoint. Censoring rules were applied to the estimation of the  
164 distribution of the time-to-event endpoints.

165 Randomisation of approximately 450 subjects (225 subjects per treatment arm) over 42 months was planned to  
166 achieve (with 95% probability) 238 events in approximately 60 months assuming 42 months of subject accrual,  
167 given an anticipated dropout rate of 5%, and 18 months of PFS follow-up after randomisation of the last subject.  
168 The study was powered on the assumption that 238 PFS events would provide approximately 80% power to  
169 detect a hazard ratio of 0.6895 using the log-rank test and an overall one-sided alpha level of 0.025 (i.e., two-  
170 sided alpha level of 0.05). The study was initially designed to randomise 300 subjects, but in March 2015, the  
171 sample size was recalculated to increase the likelihood of observing the specified number of PFS events for  
172 appropriate power of the final analysis. The protocol was amended again in May 2018 to allow for earlier  
173 analysis of the primary endpoint in August 2018 if the protocol-specified 238 events had not been reached. This  
174 amendment was based on the sponsor's analysis of blinded pooled data from the study, the final PFS data from  
175 the preceding phase 1 study to ECHELON-2,<sup>1</sup> and was conducted in collaboration with regulatory authorities.

176 The scheduled Independent Data Monitoring Committee data reviews included a futility analysis, safety  
177 reviews, and a review for serious adverse events and overall survival. For the futility analysis, an Independent  
178 Data Monitoring Committee was to determine whether the CR rate per IRF was lower in the A+CHP arm  
179 compared to the CHOP arm with non-overlapping exact 95% CIs, and whether the observed hazard ratio for  
180 PFS was in the direction of superior efficacy in the CHOP arm. A pre-specified formal interim analysis for  
181 futility focused on CR rate per BICR was performed after 50% of subjects had completed end-of-treatment  
182 assessments; treatment assignment remained blinded to the sponsor. Following the analysis, an independent data  
183 monitoring committee Independent Data Monitoring Committee recommended that the trial continue per  
184 protocol. Seven safety review meetings were planned to occur approximately every six months after the  
185 initiation of enrolment through the date the last subject completed treatment. Approximately one year after the  
186 last subject completed treatment, the Independent Data Monitoring Committee was to conduct a serious adverse  
187 events and overall survival review. The Independent Data Monitoring Committee was to review a report of the  
188 available SAE and OS data and notify the Independent Data Monitoring Committee chair if they felt an  
189 Independent Data Monitoring Committee meeting was warranted.

190 The estimated duration of the study through final analysis of the primary objective was approximately four to  
191 seven years from randomisation of the first subject. The estimated duration to a final descriptive analysis of OS  
192 is approximately two years from the completion of primary analysis.

193 **Text S3. Data Sharing Statement**

194 Seattle Genetics policy on data sharing can be found here: [http://www.seattlegenetics.com/patients-healthcare-](http://www.seattlegenetics.com/patients-healthcare-professionals/clinical-data-requests)  
195 [professionals/clinical-data-requests](http://www.seattlegenetics.com/patients-healthcare-professionals/clinical-data-requests)

196

197 **Part III - Supplementary Tables S1-S10**

198 **Table S1: Recommended dose modifications for study treatment-associated neuropathy**

<b>Grade of Treatment-Associated Neuropathy</b>	<b>Recommended Dose Modification</b>	
	<b>Sensory Neuropathy</b>	<b>Motor Neuropathy</b>
1	Continue study treatment at same dose level.	Continue study treatment at same dose level.
2	Continue study treatment at the same dose level.	Reduce dose levels of brentuximab vedotin/vincristine*.
3	Reduce dose levels of brentuximab vedotin/vincristine*.	Discontinue treatment with brentuximab vedotin/vincristine.
4	Discontinue treatment with brentuximab vedotin/vincristine.	Discontinue treatment with brentuximab vedotin/vincristine.

199 \*To maintain the study blind, dose levels of both blinded study treatments must have been reduced as follows:  
 200 1·2 mg/kg brentuximab vedotin and 1 mg vincristine. No further dose reductions were permitted.  
 201

202 **Table S2: Baseline characteristics (not shown in body)**

<b>Characteristic</b>	<b>A+CHP (N=226)</b>	<b>CHOP (N=226)</b>
Time from diagnosis to first dose of study treatment (months)		
n	222	224
Mean (standard deviation)	1.1 (1.5)	1.1 (0.9)
Median	0.8	0.9
Min, Max	0, 19	0, 10
Initial diagnosis of cutaneous ALCL (for subjects with sALCL)		
	13 (6%)	4 (2%)
Time from cutaneous ALCL diagnosis to sALCL diagnosis (months)		
n	11	4
Mean (standard deviation)	16.0 (20.6)	9.8 (12.8)
Median	4.8	4.7
Min, Max	1, 69	1, 29
Serum LDH per local laboratory,		
≤1 × upper limit of normal	113 (50%)	97 (43%)
>1 × upper limit of normal	113 (50%)	129 (57%)
Extranodal disease involvement		
≤1 site	142 (63%)	146 (65%)
>1 site	84 (37%)	80 (35%)
HTLV-1 status		
Positive	5 (2%)	4 (2%)
Negative	216 (96%)	219 (97%)
Intended number of cycles		
6	185 (82%)	182 (81%)
8	41 (18%)	44 (19%)
Intention of stem cell transplant following completion of study regimen		
Yes	89 (39%)	81 (36%)
No	136 (60%)	144 (64%)
Baseline bone marrow biopsy-lymphoma involvement		
Yes	30 (13%)	34 (15%)
No	196 (87%)	192 (85%)
Percent CD30 positive cells, per local assessment		
n	224	226
Mean (standard deviation)	76.5 (32.7)	77.0 (30.7)
Median	90.5	90.0
Min, Max	10, 100	10, 100
Percent CD30 positive cells, per central review		
n	222	220
Mean (standard deviation)	81.1 (28.4)	77.6 (30.6)
Median	95.0	90.0
Min, Max	0, 100	0, 100

203 Data are n (%), unless stated otherwise. Data shown are for the intention-to-treat population. Percentages may  
 204 not total 100 because of rounding. A+CHP=brentuximab vedotin, cyclophosphamide, doxorubicin, and  
 205 prednisone; ALCL=anaplastic large cell lymphoma; CHOP=cyclophosphamide, doxorubicin, vincristine, and  
 206 prednisone; sALCL=systemic anaplastic large cell lymphoma.

207

208



209 **Table S3: Consolidative therapies**

	<b>A+CHP (N=226)</b>	<b>CHOP (N=226)</b>
Subjects who received consolidative treatment*	61 (27%)	44 (19%)
Consolidative radiotherapy	14 (6%)	6 (3%)
Consolidative stem cell transplant	50 (22%)	39 (17%)
Autologous	49 (22%)	39 (17%)
Allogeneic	1 (0%)	0

210 Data are n (%). Data shown are for the intention-to-treat population.\*Subjects may have received more than one  
 211 type of therapy. A+CHP=brentuximab vedotin, cyclophosphamide, doxorubicin, and prednisone;  
 212 CHOP=cyclophosphamide, doxorubicin, vincristine, and prednisone.  
 213

214 **Table S4: Summary of progression-free survival per Blinded Independent Central Review**

	<b>A+CHP (N=226)</b>	<b>CHOP (N=226)</b>
Number of subjects with a PFS event, n (%)	95 (42%)	124 (55%)
Disease progression per Cheson	71 (31%)	86 (38%)
Death	13 (6%)	17 (8%)
New therapy*	11 (5%)	21 (9%)
Stratified hazard ratio (95% CI) (A+CHP to CHOP)		0.71 (0.54, 0.93)
Stratified log-rank p-value†		0.0110
Median PFS (months) (95% CI) ‡	48.2 (35.2, -)	20.8 (12.7, 47.6)
75th, 25th percentile	8.87, -	4.70, -
Estimated progression-free rate (95% CI) ‡ at:		
6 months	82.1% (76.4%, 86.6%)	70.8% (64.3%, 76.3%)
12 months	71.7% (65.1%, 77.2%)	58.2% (51.4%, 64.3%)
24 months	61.4% (54.4%, 67.6%)	47.4% (40.6%, 53.8%)
36 months	57.1% (49.9%, 63.7%)	44.4% (37.6%, 50.9%)

215 Data shown are for the intention-to-treat population. A+CHP=brentuximab vedotin, cyclophosphamide,  
 216 doxorubicin, and prednisone; ALK=anaplastic lymphoma kinase; CHOP=cyclophosphamide, doxorubicin,  
 217 vincristine, and prednisone; CI=confidence interval; PFS=progression-free survival; sALCL=systemic  
 218 anaplastic large cell lymphoma. \*New systemic chemotherapy to treat residual or progressive disease initiated  
 219 prior to Blinded Independent Central Review-documented progression per Cheson,<sup>2</sup> including palliative  
 220 radiotherapy. †From stratified log-rank test with stratification factors (ALK-positive sALCL: Yes/No and  
 221 International Prognostic Index score: 0-1/2-3/4-5) at randomisation. ‡PFS rate is estimated using Kaplan-Meier  
 222 methods and 95% CI is calculated using the complementary log-log transformation method.<sup>3</sup>

223 **Table S5: Summary of overall survival**

	<b>A+CHP (N=226)</b>		<b>CHOP (N=226)</b>
Number of deaths, n (%)	51 (23%)		73 (32%)
Stratified hazard ratio (95% CI) (A+CHP to CHOP)		0.66 (0.46, 0.95)	
Stratified log-rank P value*		0.0244	
Median overall survival (months) (95% CI) †	- (-, -)		- (54.2, -)
75th, 25th percentile	-, -		17.5, -
Estimated survival rate (95% CI)† at:			
6 months	93.7% (89.6%, 96.2%)		89.2% (84.4%, 92.7%)
12 months	87.8% (82.8%, 91.5%)		82.4% (76.7%, 86.8%)
24 months	80.8% (75.0%, 85.5%)		72.6% (66.2%, 78.0%)
36 months	76.8% (70.4%, 82.0%)		69.1% (62.3%, 74.9%)

224 Data shown are for the intention-to-treat population. A+CHP=brentuximab vedotin, cyclophosphamide,  
 225 doxorubicin, and prednisone; ALK=anaplastic lymphoma kinase; CHOP=cyclophosphamide, doxorubicin,  
 226 vincristine, and prednisone; CI=confidence interval; PFS=progression-free survival; sALCL=systemic  
 227 anaplastic large cell lymphoma. \*From stratified log-rank test with stratification factors (ALK-positive sALCL:  
 228 Yes/No and IPI score: 0-1/2-3/4-5) at randomisation. †Overall survival rate is estimated using Kaplan-Meier  
 229 methods and 95% CI is calculated using the complementary log-log transformation method.  
 230

231 **Table S6: Subsequent anti-cancer therapies**

	<b>A+CHP (N=226)</b>	<b>CHOP (N=226)</b>
Subjects who received subsequent anti-cancer therapy*	65 (29%)	96 (42%)
Systemic therapy for residual or progressive disease	59 (25%)	94 (40%)
Brentuximab vedotin-containing	23 (10%)	49 (22%)
Palliative radiation	10 (4%)	8 (3%)
Systemic therapy for other malignancies	7 (3%)	3 (1%)

232 Data are n (%). Data shown are for the intention-to-treat population. A+CHP=brentuximab vedotin,  
 233 cyclophosphamide, doxorubicin, and prednisone; CHOP=cyclophosphamide, doxorubicin, vincristine, and  
 234 prednisone. \*Subjects may have received more than one type of therapy.  
 235

236 **Table S7: Summary of exposure: duration of treatment**

	<b>A+CHP (N=223)</b>	<b>CHOP (N=226)</b>
Duration of treatment (weeks)		
n	223	226
Median	18.1	18.0
Min, Max	3, 34	3, 31
Number of treatment cycles intended per subject at baseline		
6 cycles	182 (82%)	182 (81%)
8 cycles	41 (18%)	44 (19%)
Number of treatment cycles received per subject		
n	223	226
Median	6.0	6.0
Min, Max	1, 8	1, 8
Number of subjects treated by cycle		
1	6 (3%)	6 (3%)
2	6 (3%)	10 (4%)
3	5 (2%)	8 (4%)
4	7 (3%)	13 (6%)
5	1 (0%)	5 (2%)
6	156 (70%)	140 (62%)
7	2 (1%)	0
8	40 (18%)	44 (19%)

237 Data are n (%), unless stated otherwise. Data shown are for the safety population. A+CHP=brentuximab  
 238 vedotin, cyclophosphamide, doxorubicin, and prednisone; CHOP=cyclophosphamide, doxorubicin, vincristine,  
 239 and prednisone; Max=maximum; Min=minimum.

240 **Table S8: Summary of cause of death due to adverse events**

<b>Subjects</b>	<b>A+CHP (N=223)</b>	<b>CHOP (N=226)</b>
Overall Grade 5 adverse events	7 (3%)	9 (4%)
Acute kidney injury	1 (0%)	0
Arrhythmia	0	1 (0%)
Cardiac arrest	1 (0%)	1 (0%)
Death†	0	1 (0%)
Febrile neutropenia	0	1 (0%)
Hydrocephalus	0	1 (0%)
Multiple organ dysfunction syndrome*	0	2 (1%)
Pneumonia	1 (0%)	0
Pneumonia aspiration	1 (0%)	0
Pulmonary cavitation	1 (0%)	0
Sepsis*	1 (0%)	2 (1%)
Septic shock	0	1 (0%)
Ventricular fibrillation	1 (0%)	0

241 Data are n (%). Data shown are for the safety population. A+CHP=brentuximab vedotin, cyclophosphamide,  
 242 doxorubicin, and prednisone; CHOP=cyclophosphamide, doxorubicin, vincristine, and prednisone. \*Two fatal  
 243 adverse events were reported for one subject on the CHOP arm. †The cause of death was unknown.

**Table S9: Summary of neutropenia by primary prophylaxis with G-CSF**

Subjects	A+CHP (N=223)		CHOP (N=226)	
	No G-CSF Primary Prophylaxis (N=148)	G-CSF Primary Prophylaxis* (N=75)	No G-CSF Primary Prophylaxis (N=165)	G-CSF Primary Prophylaxis* (N=61)
	n (%)	n (%)	n (%)	n (%)
Febrile neutropenia in Cycle 1	17 (11%)	9 (12%)	16 (10%)	4 (7%)
Febrile neutropenia on study	29 (20%)	12 (16%)	26 (16%)	7 (11%)
Incidence of Grade 3 or higher neutropenia†	67 (45%)	10 (13%)	69 (42%)	8 (13%)
Incidence of Grade 4 or higher neutropenia†,	39 (26%)	7 (9%)	43 (26%)	6 (10%)
Incidence of Grade 3 or higher infections and infestations	30 (20%)	12 (16%)	23 (14%)	8 (13%)
Incidence of serious adverse events of febrile neutropenia, neutropenia, sepsis, neutropenic sepsis, pyrexia, or infections and infestations	41 (28%)	23 (31%)	37 (22%)	15 (25%)

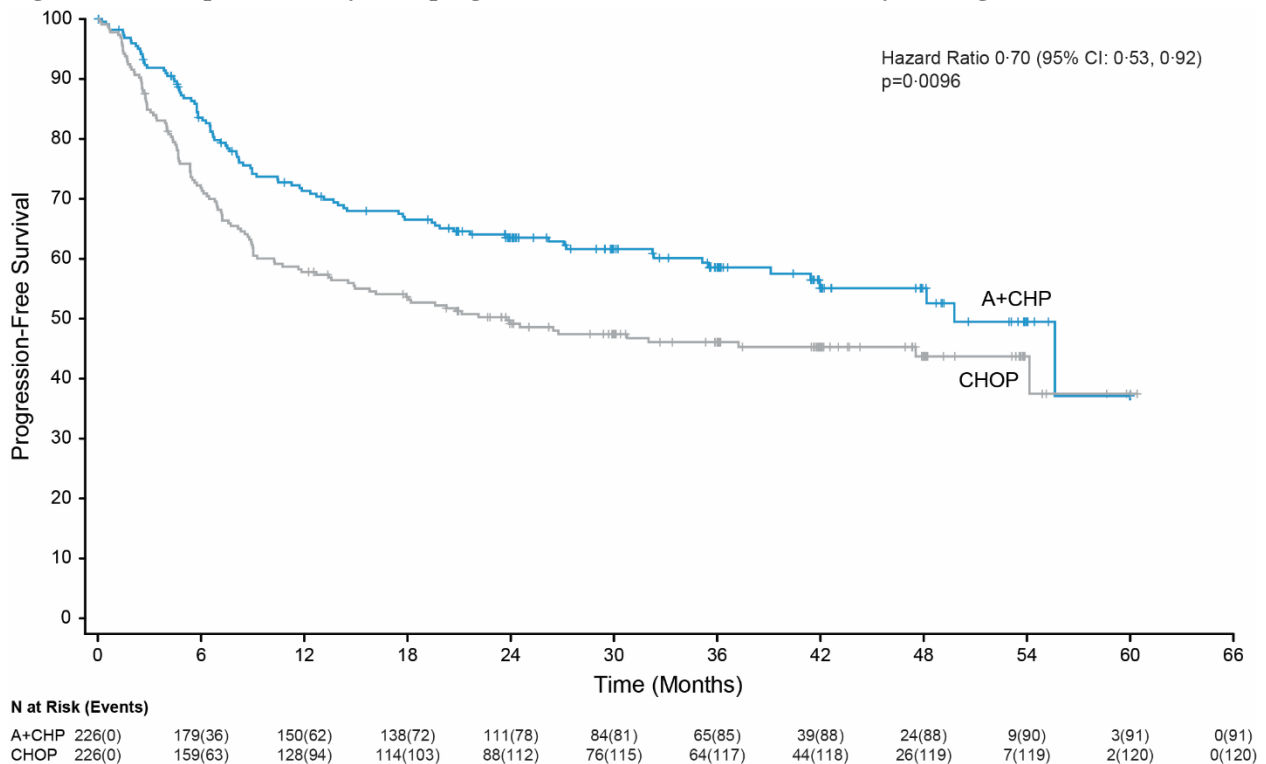
245 Data are n (%). Data shown are for the safety population. Treatment-emergent adverse events are presented and  
 246 defined as newly occurring (not present at baseline) or worsening after first dose of brentuximab vedotin or any  
 247 component of multiagent chemotherapy. A+CHP=brentuximab vedotin, cyclophosphamide, doxorubicin, and  
 248 prednisone; CHOP=cyclophosphamide, doxorubicin, vincristine, and prednisone; G-CSF=granulocyte-colony  
 249 stimulating factor. \*Receipt of primary prophylaxis with G-CSF is defined as use by Day 8 of Cycle 1 of  
 250 treatment. †Neutropenia includes preferred terms of 'Neutropenia' and 'Neutrophil count decreased'.  
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Subjects	A+CHP (N=223)	CHOP (N=226)
<b>Peripheral neuropathy (SMQ*)</b>		
Pre-existing peripheral neuropathy	24 (11%)	25 (11%)
Any treatment-emergent peripheral neuropathy (SMQ*) event	117 (52%)	124 (55%)
Worst severity Grade 2	33 (15%)	26 (12%)
Worst severity Grade 3	8 (4%)	10 (4%)
Worst severity Grade 4	1 (0%)	0
Dose modification due to peripheral neuropathy†	16 (7%)	16 (7%)
Resolution of all treatment-emergent peripheral neuropathy events‡	58 (50%)	79 (64%)
Improvement of treatment-emergent peripheral neuropathy adverse events§	14 (12%)	15 (12%)
No improvement or resolution of treatment-emergent peripheral neuropathy events	45 (38%)	30 (24%)
<b>Peripheral neuropathy (SMQ*) events</b>		
Peripheral sensory neuropathy	100 (45%)	92 (41%)
Paraesthesia	10 (4%)	18 (8%)
Peripheral motor neuropathy	8 (4%)	17 (8%)
Muscular weakness	6 (3%)	8 (4%)
Peripheral sensorimotor neuropathy	6 (3%)	2 (1%)
Hypoaesthesia	3 (1%)	3 (1%)
Dysaesthesia	2 (1%)	1 (0%)
Areflexia	1 (0%)	0
Burning sensation	1 (0%)	1 (0%)
Peroneal nerve palsy	1 (0%)	0
Polyneuropathy	1 (0%)	1 (0%)
Autonomic neuropathy	0	2 (1%)
Gait disturbance	0	1 (0%)
Muscle atrophy	0	1 (0%)
Neuralgia	0	2 (1%)

253 Data are n (%). Data shown are for the safety population. A+CHP=brentuximab vedotin,  
254 cyclophosphamide, doxorubicin, and prednisone; CHOP=cyclophosphamide, doxorubicin, vincristine, and  
255 prednisone; SMQ=standardized MedDRA query. \*The SMQ includes the preferred terms of peripheral  
256 sensory neuropathy, paraesthesia, peripheral motor neuropathy, muscular weakness, peripheral  
257 sensorimotor neuropathy, hypoaesthesia, dysaesthesia, areflexia, burning sensation, peroneal nerve palsy,  
258 polyneuropathy, autonomic neuropathy, gait disturbance, muscle atrophy, and neuralgia. †Dose reduction or  
259 dose delay attributed to an adverse event of peripheral neuropathy. ‡Resolution is defined as event status of  
260 resolved/recovered or resolved/recovered with sequelae; or return to baseline or lower severity as of the  
261 latest assessment for pre-existing events. §Resolution implies improvement. In addition, for events that are  
262 not resolved, improvement is defined as decrease by at least one grade from the worst grade without any  
263 subsequent grades(s) equal to the worst grade. Subjects with improvement in any event at last follow up are  
264 those with at least one improved event and date of improvement is before last follow up date. Subjects with  
265 all events resolved will be excluded.  
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268 **Part IV - Supplementary Figure S1**

269 **Figure S1A: Prespecified analyses of progression-free survival - as assessed by investigators**

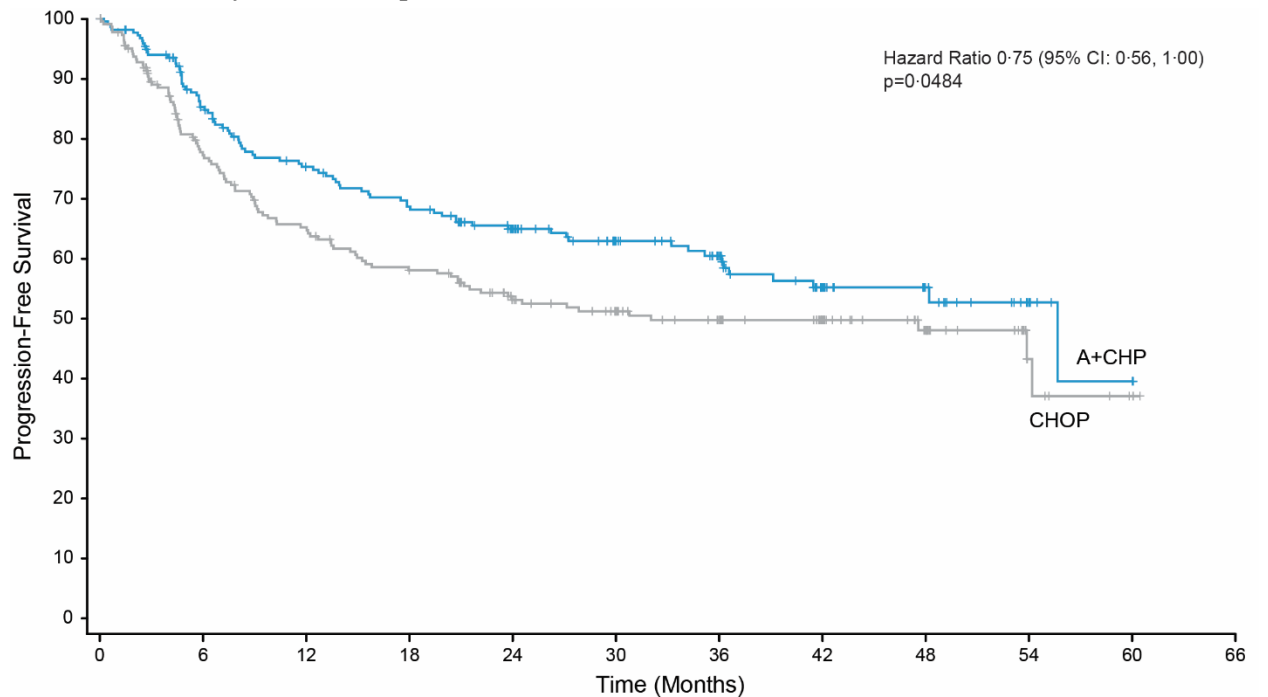


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Figure S1A: Kaplan–Meier estimates of progression-free survival, by treatment arm, according to study investigators. The hazard ratio for treatment with A+CHP versus CHOP and the 95% confidence intervals (CIs) were computed from log-rank test using stratification factors (ALK-positive sALCL: yes/no and IPI score: 0-1/2-3/4-5) at randomisation. Hash marks indicate censored data. A+CHP=brentuximab vedotin, cyclophosphamide, doxorubicin, and prednisone; ALK=anaplastic lymphoma kinase; CHOP=cyclophosphamide, doxorubicin, vincristine, and prednisone; CI=confidence interval; IPI=international prognostic index; sALCL=systemic anaplastic large cell lymphoma.

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**Figure S1B: Prespecified analyses of progression-free survival - events limited to progression and death as assessed by Blinded Independent Central Review**



**N at Risk (Events)**

A+CHP	226(0)	174(31)	148(51)	134(64)	108(71)	81(74)	64(77)	38(82)	24(82)	9(83)	3(84)	0(84)
CHOP	226(0)	155(48)	129(72)	112(86)	87(95)	75(98)	63(100)	44(100)	26(101)	7(102)	2(103)	0(103)

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Figure S1B: Kaplan–Meier estimates of progression-free survival with events limited to progression and death, by treatment arm, according to the BICR for the ITT population. Subjects with new anticancer therapy prior to progression or death are censored at their last adequate tumour assessment before the therapy. The hazard ratio for treatment with A+CHP versus CHOP and the 95% confidence intervals (CIs) were computed from log-rank test using stratification factors (ALK-positive sALCL: yes/no and IPI score: 0-1/2-3/4-5) at randomisation. Hash marks indicate censored data. A+CHP=brentuximab vedotin, cyclophosphamide, doxorubicin, and prednisone; ALK=anaplastic lymphoma kinase; CHOP=cyclophosphamide, doxorubicin, vincristine, and prednisone; CI=confidence interval; IPI=international prognostic index; sALCL=systemic anaplastic large cell lymphoma.

**References**

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1. Fanale MA, Horwitz SM, Forero-Torres A, et al. Five-year outcomes for frontline brentuximab vedotin with CHP for CD30-expressing peripheral T-cell lymphomas. *Blood* 2018; **131**(19): 2120-4.
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3. Collett D. Interval-censored survival data. In: Collett D, ed. *Modelling survival data in medical research*. 1 ed. London: Chapman & Hall; 1994: 237-51.