

SUPPLEMENTARY MATERIAL

Table S1. Characteristics of first-line treatment for PTCL

		n	%	% ¹
First line treatment*	CHOP or CHOP-like	122	69.7	77.2
	Others (not CHOP)	36	20.6	22.8
	<i>Total patients</i>	158	90.3	100.0
Best response to chemotherapy	Complete Response	61	34.9	40.4
	Partial Response	40	22.9	26.5
	Stable Disease	9	5.1	6.0
	Progression of Disease	41	23.4	27.2
	Not available/Unknown	11	6.3	-
	<i>Total patients</i>	151	86.3	100.0
CHOP and CHOP-like	CHOP	112	64.0	91.8**
	R-CHOP	3	1.7	2.5**
	CHOP + Auto HSCT	2	1.1	1.6**
	R-CHOP 14	2	1.1	1.6**
	Dose-adjusted EPOCH (+/- RT)	2	1.1	1.6**
	CNOP (Mitoxantrone)	1	0.6	0.8**
Others (Not CHOP)	Cyclophosphamide + corticoids	7	4.0	19.4***
	Gemcitabine, oxaliplatin and dexamethasone (GemOX)	5	2.9	13.9***
	Cyclophosphamide, vincristine and prednisone (COP)	4	2.3	11.1***
	Corticoids	4	2.3	11.1***
	Radiotherapy	3	1.7	8.3***
	CHOP/CHOEP	3	1.7	8.3***
	SMILE	3	1.7	8.3***
	Psoralen + UVA (Chemo Phototherapy)	2	1.1	5.6***
	Bortezomib, melphalan and prednisone (VMP)	1	0.6	2.8***
	Etoposide, ifosfophamide, cisplatin and dexamethasone (EPID)	1	0.6	2.8***
	MTX-1 + Asparaginase + Dexamethasone	1	0.6	2.8***
	DHAP + RT	1	0.6	2.8***
	Palliative	1	0.6	2.8***

*4 patients without information available and 13 patients without first-line treatment: 3 patients with palliative treatment and 1 who died before onset of treatment.

%; percentage calculated overall sample (n=175); %¹: percentage based on patients with from each category: i.e. based on the total number of patients with first line treatment; **based on patients treated with CHOP/CHOP-like regimens and ***based on patients treated with other (Not CHOP) regimens.

CHOP: Cyclophosphamide, hydroxy-daunorubicin, vincristine and prednisone. This group includes 99 patients treated with CHOP, 7 with CHOP + radiotherapy (RT), 3 with mega-CHOP, 2 patients with dose-attenuated CHOP (reported as mini-CHOP or CHOP 50% by the sites), and 1 patient treated with CHOP + Denileukin Diftitox + Alemtuzumab.

CHOEP: Cyclophosphamide, etoposide and prednisone. **CHOP/CHOEP:** Including 1 patient treated with CHOEP, 1 with CHOP + IVE/Methotrexate and 1 with CHOP + ESHAP.

R-CHOP: Rituximab + CHOP; **ESHAP:** Etoposide, cisplatin, methylprednisolone and cytarabine; **EPOCH:** Etoposide, vincristine, doxorubicin, prednisone and cyclophosphamide; **GemOX:** Gemcitabine and oxaliplatin; **HSCT:** Hematopoietic stem cell transplant; **SMILE:** Dexamethasone, methotrexate, ifosfamide, L-asparaginase and etoposide; **VPD:** Etoposide, ifosfamide, cisplatin and dexamethasone.

Table S2. Cross-reference table comparing local diagnosis and central review diagnosis

		Central review n (%)							Total
		PTCL Extranodal NK/T	PTCL NOS	Intestinal PTCL	AITL + TFH	ALK+ ALCL	ALK- ALCL	Other/ Unknown	
<i>Local diagnosis</i>	PTCL Extranodal NK/T	17 (9.7)	0 (0.0)	1 (0.6)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	18 (10.3)
	PTCL NOS	3 (1.7)	17 (9.7)	0 (0.0)	26 (14.9)	0 (0.0)	4 (2.3)	4 (2.3)	54 (30.9)
	Intestinal PTCL	0 (0.0)	0 (0.0)	8 (4.6)	0 (0.0)	0 (0.0)	0 (0.0)	3 (1.7)	11 (6.3)
	AITL + TFH	0 (0.0)	1 (0.6)	0 (0.0)	49 (28.0)	0 (0.0)	0 (0.0)	4 (2.3)	54 (30.9)
	ALK+ ALCL	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	13 (7.4)	1 (0.6)	2 (1.1)	16 (9.1)
	ALK- ALCL	0 (0.0)	2 (1.1)	1 (0.6)	2 (1.1)	0 (0.0)	13 (7.4)	1 (0.6)	19 (10.9)
	PTCL, follicular variant (f-PTCL)	0 (0.0)	0 (0.0)	0 (0.0)	1 (0.6)	0 (0.0)	0 (0.0)	0 (0.0)	1 (0.6)
	Enteropathy-type T/NK TCL	0 (0.0)	0 (0.0)	1 (0.6)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (0.6)
	Unknown	0 (0.0)	1 (0.6)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (0.6)
	<i>Total</i>	20 (11.4)	21 (12.0)	11 (6.3)	78 (44.6)	13 (7.4)	18 (10.3)	14 (8.0)	175 (100.0)

PTCL: Peripheral T-cell lymphoma; *NK*: Natural killer cells; *PTCL-NOS*: PTCL not-otherwise-specified; *AITL*: angioimmunoblastic TCL; *ALK+ ALCL*: anaplastic lymphoma kinase (ALK)-positive anaplastic large cell lymphoma; *ALK- ALCL*: anaplastic lymphoma kinase (ALK)-negative anaplastic large cell lymphoma.

Table S3. Treatment characteristics for salvage therapy

		n	%	%¹
Second line treatment	ESHAP-DHAP-like	34	19.4	37.8
	Others	56	32.0	62.2
	<i>Total patients</i>	90	51.4	100
Best response to chemotherapy	Complete Response	21	12.0	23.3
	Partial Response	20	11.4	22.2
	Stable Disease	15	8.6	16.7
	Progression of Disease	30	17.1	33.3
	Not available/Unknown	4	2.3	4.4
ESHAP-DHAP-like	ESHAP	24	13.7	70.6*
	DHAP	6	3.4	17.6*
	R-ESHAP	1	0.6	2.9*
	EDHAP	1	0.6	2.9*
	DHAP-R	1	0.6	2.9*
	CHOEP x4 + DHAP x2	1	0.6	2.9*
Other regimens	GemOX (alone or combinations)	8	4.6	14.3**
	Cyclophosphamide and prednisone	6	3.4	10.7**
	MINE	4	2.3	7.1**
	Methotrexate or pralatrexate (alone or combinations)	4	2.3	7.1**
	SMILE	3	1.7	5.4**
	Radiotherapy	3	1.7	5.4**
	CHOP + Autologous stem-cell transplantation	3	1.7	5.4**
	ICE	2	1.1	3.6**
	Gemcitabine	2	1.1	3.6**
	Brentuximab	2	1.1	3.6**
	Etoposide (alone or combined with cisplatin, ifosfamide, MPx3)	2	1.1	3.6**
	VNCOP	1	0.6	1.8
	Metronomic chemotherapy	1	0.6	1.8
	Romidepsin	1	0.6	1.8
	ProMACE-CytaBOM	1	0.6	1.8
	Palliative prednisone	1	0.6	1.8
	Chlorambucil	1	0.6	1.8
	L-asparaginase	1	0.6	1.8
	FMD	1	0.6	1.79
	VIA + Radiotherapy	1	0.6	1.79
	Alisertib	1	0.6	1.8
	DEVIC and filgrastim	1	0.6	1.8
	Cytarabine IT + MTX + ARA-c	1	0.6	1.8
	CUP	1	0.6	1.8
	CHOEP	1	0.6	1.8
	Bendamustine	1	0.6	1.8
Autologous stem-cell transplantation	1	0.6	1.8	
Alemtuzumab	1	0.6	1.8	

%; percentage calculated overall sample (n=175); %¹: percentage based on patients with from each category: i.e. based on the total number of patients with second line treatment; *based on patients treated with ESHAP/DHAP-like regimens and **based on patients treated with other regimens.

CHOEP: Cyclophosphamide, etoposide and prednisone; **CHOP:** Cyclophosphamide, hydroxydaunorubicin, vincristine and prednisone; **DEVIC:** Dexamethasone, etoposide, ifosfamide and carboplatin; **DHAP:** Cisplatin, cytosine arabinoside and dexamethasone; **ESHAP:** Etoposide, cisplatin, methylprednisolone and cytarabine; **FMD:** Fludarabine, mitoxantrone and dexamethasone; **GemOX:** Gemcitabine and

oxaliplatin; **ICE**: Ifosfamide, carboplatin and etoposide; **MINE**: IFO, mitoxantrone and VP-16. **MTX**: Methotrexate; **ProMACE-CytaBOM**: Prednisone, cyclophosphamide, adriamycin, etoposide, cytarabine, bleomycin, vincristine and methotrexate; **R-GEMOX**: Gemcitabine, oxaliplatin and rituximab; **SMILE**: dexamethasone, methotrexate, ifosfamide, L-asparaginase, etoposide; **VNCOP**: Cyclophosphamide, mitoxantrone, vincristine, etoposide and prednisone.

Table S3. Prognostic factors and CD30

	CD30 Expression				CD30 Intensity			
	N	Mean (STD)	Median (Range)	p-value	Weak N (%)	Moderate N (%)	Intense N (%)	p-value
IPI								
Low-intermediate risk (0-2 points)	44	36.4 (38.6)	17.5 (0 - 100)	<i>0.004</i>	11 (45.8)	18 (47.4)	12 (85.7)	<i>0.03</i>
High-intermediate risk (3-5 points)	41	18.3 (26.6)	5.0 (0 - 100)		13 (54.2)	20 (52.6)	2 (14.3)	
PIT								
0-1 adverse factors	44	35.0 (38.3)	12.5 (0.0-100.0)	<i>0.082</i>	10 (45.5)	19 (54.3)	11 (68.8)	<i>0.361</i>
2-4 adverse factors	37	23.5 (31.4)	5.0 (0.0-100.0)		12 (54.5)	16 (45.7)	5 (31.3)	

STD: standard deviation; **IPI:** International prognostic index; **PIT:** Prognostic Index for T cell Lymphoma.