

Supplementary Table S1a: Fate of Disease progression to 1st line treatment.

UP N	Pro CTPN	Pro hep dysf	Pro hmg	Pro smg	Type therpro	Respindsalv	CumDos	2cdaRM	Fail2cda	Organ	Treat Failure	Fate CTPN	Fate hep dys	Fate hmg	Fate smg	LFU	COD
1	+	+	-	-	No salvage	No salvage	No2-CdA	No2-CdA	No2-CdA	No2-CdA	No2-CdA	Worse	Worse	Nopro	Nopro	DIED	DP
2	-	+	+	+	No salvage	No salvage	No2-CdA	No2-CdA	No2-CdA	No2-CdA	No2-CdA	nopro	Worse	Worse	Worse	DIED	DP
3	+	+	+	+	HLH	ADW	No2-CdA	No2-CdA	No2-CdA	No2-CdA	No2-CdA	Worse	Worse	Worse	Worse	DIED	DP
4	-	-	+	-	COMPR.PNT	ADB	No2-CdA	No2-CdA	No2-CdA	No2-CdA	No2-CdA	nopro	nopro	Better	Nopro	ALIVE	NO
5	+	-	+	+	COMPR.	ADW	No2-CdA	No2-CdA	No2-CdA	No2-CdA	No2-CdA	Worse	Worse	Stationary	Worse	DIED	DP
6	+	+	+	+	HLH	ADW	No2-CdA	No2-CdA	No2-CdA	No2-CdA	No2-CdA	Worse	Worse	Worse	Worse	DIED	DP
7	+	+	-	+	FLU/ARAC	ADW	No2-CdA	No2-CdA	No2-CdA	No2-CdA	No2-CdA	Worse	Worse	Worse	Worse	DIED	DP
8	+	+	+	+/-	No salvage	No salvage	No2-CdA	No2-CdA	No2-CdA	No2-CdA	No2-CdA	Worse	Worse	Worse	Worse	DIED	DP
9	-	+	-	-	2cda/ARAC	ADB	150 mg/m2	NO	REARO+	SC	Palliative	Worse	Worse	Worse	Worse	DIED	Liver failure
10	-	+	-	-	No salvage	No salvage	No2-CdA	No2-CdA	No2-CdA	No2-CdA	No2-CdA	Worse	Worse	Worse	Worse	DIED	DP
11	+	+	+	-	2cda/ARAC	ADB	120 mg/m2	NO	NO	NO	NO	Better	Better	Better	Nopro	ALIVE	NO
12	-	+	-	-	2cda/ARAC	ADB	120 mg/m2	NO	NO	NO	NO	Nopro	Better	Nopro	Nopro	ALIVE	NO
13	+	+	+	+	2cda/ARAC	ADB	120 mg/m2	viral pneumonia	REARO-	Bone, Skin	VBL/Ste	Better	Better	Better	Better	DIED	Septic shock
14	-	+	+	+	2cda/ARAC	ADW	45 mg/m2	NO	PRORO+	SC	Palliative	nopro	Worse	Worse	Worse	DIED	liver failure
15	+	+	-	-	2cda/ARAC	ADB	90 mg/m2	pneumonia	NO	NO	NO	Better	Better	Nopro	Nopro	DIED	Pneumonia
16	+	+/-	+/-	+/-	No salvage	ADW	No2-CdA	No2-CdA	No2-CdA	No2-CdA	No2-CdA	Worse	Worse	Worse	Worse	DIED	DP
17	-	+	+	-	Palliative	ADW	No2-CdA	No2-CdA	No2-CdA	No2-CdA	No2-CdA	Worse	Worse	Worse	Nopro	DIED	DP
18	+	-	+	+	2cda/ARAC	NAD	120 mg/m2	pneumonia	NO	NO	NO	NAD	nopro	NAD	NAD	ALIVE	NO
19	+	+	-	+/-	No salvage	No salvage	No2-CdA	No2-CdA	No2-CdA	No2-CdA	No2-CdA	Worse	Worse	Nopro	Worse	DIED	DP
20	+	+	-	-	2cda/ARAC	ADB	120 mg/m2	NO	REARO-	Bone, Skin	VCR/ARAC/Ste	Better	Better	Nopro	Nopro	ALIVE	NO
21	-	+	+	+	Palliative	ADW	No2-CdA	No2-CdA	No2-CdA	No2-CdA	No2-CdA	Nopro	Worse	Worse	Worse	DIED	DP
22	-	+	+	-	2cda/ARAC	ADB	120 mg/m2	NO	REARO-	SC	VBL/Ste	Nopro	Better	Better	worse	ALIVE	For liver transplant

ADB: active disease better, ADW active disease worse, 2cdaRM: 2-CdA related mortality, COD cause of death, COMPR compressed cycle, CumDos; cumulative doses, fail 2cda: failure of 2cda, Fate CTPN: fate cytopenia, Fate hep dysf: fate hepatic dysfunction, Fate hmg fate hepatomegaly, Fate smg fate splenomegaly, FLU/ARAC fludarabine aracytine, HLH: hemophagocytosis lymphohistiocytosis, LFU: last follow-up status, NAD: no active disease, PNT purinethol, Pro CTPN: progressive cytopenia, Pro hep dysf: progressive hepatic dysfunction, Pro hmg: progressive hepatomegaly, Pro smg: progressive splenomegaly, Respindsalv; response to salvage induction, SC sclerosing cholangitis, type therpro: type therapy to disease, treatfail; treatment failure, UPN: unique patient number, VBL vinblastine.

Supplementary Table S1b: Fate of reactivation of 1st line treatment.

UPN	numr ea	RISK	Orgrea	REA CTPN	REA hepdysf	REA HMG	REA SMG	Salvrea	resp	CumDos	2cdaRM	Fail2cda	Fate CTPN	Fate hepdysf	Fate hmg	Fate smg	LFU	COD
1	1	RO-	Post Pituit, Skin	-	-	-	-	VBL/PRED/MTX	ADB	no2cda	No2cda	no2cda	NoREA	NoREA	NoREA	NoREA	Alive	NO
2	1	RO-	Orbit	-	-	-	-	VBL/PRED/MTX	ADB	no2cda	No2cda	no2cda	NoREA	NoREA	NoREA	NoREA	Alive	NO
3	1	HS	LN/Bone	-	-	-	-	AML protocol	ADW	no2cda	No2cda	no2cda	NoREA	NoREA	NoREA	NoREA	DIED	DP
4	1	RO-	Bones, Lung	-	-	-	-	VBL/PRED/MTX	ADB	no2cda	No2cda	no2cda	NoREA	NoREA	NoREA	NoREA	Alive	NO
5	1	RO+	Cytopenias, Hepatosplenic	+	+	+	+	VBL/PRED/MTX +HLH	ADW	no2cda	No2cda	no2cda	Worse	Worse	Worse	Worse	DIED	DP
6	2	RO-	Bones, orbit	-	-	-	-	VBL/PRED/MTX	ADB	no2cda	No2cda	no2cda	NoREA	NoREA	NoREA	NoREA	Alive	NO
7	1	RO+	HSM, Bones, LN,Lung	-	-	+	+	VBL/PRED/MTX	ADB	no2cda	No2cda	no2cda	NoREA	NoREA	Better	Better	Alive	NO
8	2	RO-	Bones	-	-	-	-	VBL/PRED x2	ADB	no2cda	No2cda	no2cda	NoREA	NoREA	NoREA	NoREA	Alive	NO
9	4	RO+	Hepatosplenic, Bone, Skin	-	+	+	+	VBL/PRED x2	ADB	no2cda	No2cda	no2cda	NoREA	Better	Better	Better	Alive	NO
10	2	RO+	Cytopenia, hepatosplenic	+	+	+	+	VBL/PRED/MTX +HLH	ADW	no2cda	No2cda	no2cda	Worse	Worse	Worse	Worse	DIED	DP
11	1	RO-	Bones	-	-	-	-	VBL/PRED/MTX	ADB	no2cda	No2cda	no2cda	NoREA	NoREA	NoREA	NoREA	Alive	NO
12	1	RO+	Cytopenia, Splenomegaly	+	-	-	+	2cda/ARAC	ADW	45 mg/m2	CTPN/ PNM/ sepsis/ICU	PRORO+	Worse	NoREA	NoREA	Worse	DIED	DP
13	1	RO+	BM, bone hepatosplenic	+	+	+	+	2cda/ARAC	ADW	150 mg/m2	Sepsis/ICU H1N1 PNM	PRORO+	Worse	Worse	Worse	Worse	DIED	DP
14	1	RO-	LN	-	-	-	-	VBL/PRED	ADB	no2cda	No2cda	no2cda	NoREA	NoREA	NoREA	NoREA	Alive	NO
15	1	RO+	Hepatosplenic, LN, Bones	-	+	+	+	2cda/ARAC	ADW	45 mg/m2	PNM ARDS ICU	PRORO+	Worse	Worse	Worse	Worse	DIED	DP
16	1	RO+	cytopenia, lung hepatosplenic, LN	+	-	+	+	2cda/ARAC	ADB	120 mg/m2	No	NO	Better	NoREA	Better	Better	Alive	NO
17	1	RO+	Liver/DI/Skin	-	+	+	+	2cda/ARAC	ADB	120 mg/m2	No	NO	Worse	Worse	Worse	Worse	ALIVE & worse	NO
18	1	RO+	Hepatosplenic, LN, Bones	-	+	+	+	2cda/ARAC	ADW	120 mg/m2	NO	PRORO+	NoREA	Worse	Worse	Worse	ALIVE & worse	NO
19	1	RO+	HMP/ hepatosplenic	+	+	+	+	2cda/ARAC	ADW	90 mg/m2	Sepsis, ICU Brady	PRORO+	Worse	Worse	Worse	Worse	DIED	DP
20	1	RO+	HMP/ hepatosplenic	+	+	+	Yes	2cda/ARAC	ADW	90 mg/m2	Pancreatitis, Proctitis,	DC	Worse	Worse	Worse	Worse	ALIVE & worse	NO

ADB: active disease better, ADW active disease worse, ARAC aracytine, ARDS acute respiratory distress syndrome, HLH: hemophagocytosis lymphohistiocytosis, numrea: number of reactivations, Organ organ reactivation, REA CTPN: reactivation cytopenia, REA Hep dysf: reactivation hepatic dysfunction, REA hmg: reactivation hepatomegaly, REA smg: reactivation splenomegaly, salvREA salvage to reactivation, CumDos; cumulative doses, Fail2cda, failure 2cda, 2cda related mortality, Fate CTPN: fate cytopenia, Fate hepdysf fate hepatic dysfunction, Fate hmg fate hepatomegaly, Fate smg fate splenomegaly, LFU last follow-up status, PNM pneumonia, ICU intensive care unit, COD cause of death, UPN: unique patient number, VBL vinblastine.