

Supplementary Table. Individual patient characteristics

Patient ID	Age at 1st MSC (year)	Year of 1st MSC	Sex	Disease	HSCT			GVHD prophylaxis	GVHD			
					Source	Donor	Conditioning		Skin stage	Gut stage	Liver stage	Grade
Pt. 1	14.1	2016	Male	BCP-ALL, 1st CR	BM	MUD	MAC	Tac + sMTX	1 (Overlap chronic)	0	0	I
Pt. 2	17.8	2016	Male	BCP-ALL, 1st CR	BM	MMUD	MAC	Tac + sMTX	2	3	0	III
Pt. 3	15.6	2016	Male	AML, non-CR	PBSC	MMRD	MAC	Tac + sMTX	0	0	4	IV
Pt. 4	13.5	2018	Male	BCP-ALL, 1st CR	BM	MMRD	MAC	PT-Cy	1	3	0	III
Pt. 5	8.8	2019	Male	Adrenoleukodystrophy	CB	MMUD	RIC	Tac + sMTX	1	4	0	IV
Pt. 6	1.7	2019	Female	Hypomorphic RAG deficiency	CB	MUD	RIC	Tac + sMTX	3	3	0	III
Pt. 7	6.7	2019	Male	T-LBL relapsed with AML, non-CR	PBSC	MMRD	RIC	Tac + sMTX	3	0	0	II
Pt. 8	3.7	2020	Male	XIAP deficiency	BM	MUD	RIC	Tac + sMTX	2	0	3	III
Pt. 9	8.9	2020	Male	ALCL, 3rd CR	BM	MMUD	RIC	Tac + sMTX	1	4	0	IV
Pt. 10	11.3	2021	Male	MDS-EB, GF after 1st HSCT	PBSC	MMRD	RIC	Tac + sMTX	2	4	4	IV
Pt. 11	16	2021	Male	Aplastic anemia	BM	MMUD	RIC	Tac + sMTX	3	0	0	II
Pt. 12	9.3	2021	Male	SCN, MDS-EB, GF after 1st HSCT	PBSC	MMRD	RIC	Tac + sMTX	3	4	0	IV

MSC, mesenchymal stem cell; HSCT, hematopoietic stem cell transplantation; GVHD, graft-versus-host disease; BCP-ALL, B-cell precursor acute lymphoblastic leukemia; CR, complete response; AML, acute myeloid leukemia; T-LBL, T-cell lymphoblastic lymphoma; ALCL, anaplastic large cell lymphoma; MDS-EB, myelodysplastic syndrome with excess blasts; GF, graft failure; SCN, Severe congenital neutropenia; BM, bone marrow; PBSC, peripheral blood stem cell; CB, cord blood; MUD, matched unrelated donor; MMUD, mismatched unrelated donor; MMRD, mismatched related donor; MAC, myeloablative conditioning; RIC, reduced intensity conditioning; Tac, tacrolimus; sMTX, short-term methotrexate; PT-Cy, posttransplant cyclophosphamide;

1st line therapy	No of failed therapy	Days of 1st MSC infusion after HSCT	No. of MSC infusions in 1st cycle	Days of 1st MSC to initial response	Overall response	Failure free survival after 1st MSC (Days)	Re-administration of MSC	Follow up time after 1st MSC (Days)	Survival	Cause of death
PSL	3	276	12	3	CR	160	No	160	Dead	Primary disease
PSL	1	101	12	2	CR	95	No	2177	Alive	NA
PSL	4	110	4	10	PR	21	No	21	Dead	TMA
PSL	1	70	12	4	CR	131	No	1453	Alive	NA
PSL	2	48	12	NA	SD	NA	Yes	1113	Alive	NA
PSL	2	57	12	2	CR	190	Yes	1047	Alive	NA
PSL	2	42	12	3	PR	623	No	623	Dead	Primary disease
PSL	2	95	8	NA	SD	NA	Yes	775	Alive	NA
PSL	5	204	8	3	CR	84	Yes	612	Alive	NA
PSL	2	36	12	15	PR	29	No	370	Alive	NA
PSL	2	42	12	8	PR	32	No	223	Alive	NA
PSL	2	34	12	11	CR	193	No	193	Alive	NA

PSL, prednisolone; NA, not applicable; PR, partial response; SD, stable disease; TMA, thrombotic microangiopathy