Immunophenotypic changes in leukemic blasts in children with relapsed/refractory B-cell precursor acute lymphoblastic leukemia after treatment with CD19-directed chimeric antigen receptor (CAR)-expressing T cells

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doi:10.3324/haematol.2021.279677

Table S1. Characteristics of patients

n	39
Sex, m/f	25/14
Age	9,0 years (range 0,6 - 20,0 years)
Diagnosis	
BI-ALL	5
BII-ALL	32
BIII-ALL	1
BIV-ALL	1
Chromosomal aberration	34/37 (91,9%)
KMT2A rearranged	7
TCF3 rearranged	4
t(12;21)(p13;q22)/*ETV6-RUNX1*	5
IgH rearranged	3
CRLF2 rearranged	3
Complex kariotype	2
Hyperdiploid	6
Hypodiploid	2
Other aberrations (Intrachromosomal amplification of *RUNX1*, del9p)	2
No well-established chromosomal aberrations	3
No data	2
Previous therapy	
no HSCT/blinatumomab	15
blinatumomab only	4
HSCT only	5
blinatumomab + HSCT	15
Blasts in bone marrow before CD19 CAR-T infusion	
< 0,01%	0
≥ 0,01% and < 5%*	14
≥ 5%**	25

**** median 0.952%, range 0.057 – 3.235%;***
***** median 34.122%, range 6.414 – 99.112%.***

Table S2. List of antibodies used in the study

Antibody name	Clone	Fluorochrome	Manufacturer
CD19	SJ25C1	APC	BD
		PE-Cy7	
	J3-119	PE-Cy7	BC
CD10	HI10a	PE	BD
		BB515	
		BV421	
	ALB1	PE-Cy5.5	BC
CD34	581	ECD	BC
	8G12	PE-Cy7	BD
		APC	
		PE-CF594	
CD20	L27	PerCP	BD
		APC-H7	
	B9.E9	APC-Alexa750	BC
CD45	2D1	APC-Cy7	BD
		PerCP	
	J.33	Krome Orange	BC
		APC-Alexa750	
CD38	HIT2	APC-R700	BD
		BV510	
	LS198-4-3	APC-Alexa700	BC
CD58	AICD58	FITC	BC
	3C1	FITC	BD
CD22	S-HCL-1	PE	BD
		PerCP-Cy5.5	
	HIB22	BV650	
CD24	ML5	BV786	BD
	ALB9	APC	BC
CD79a	HM47	APC	BD

BD – Becton Dickinson, SJ, US;
BC – Beckman Coulter, FL, US.

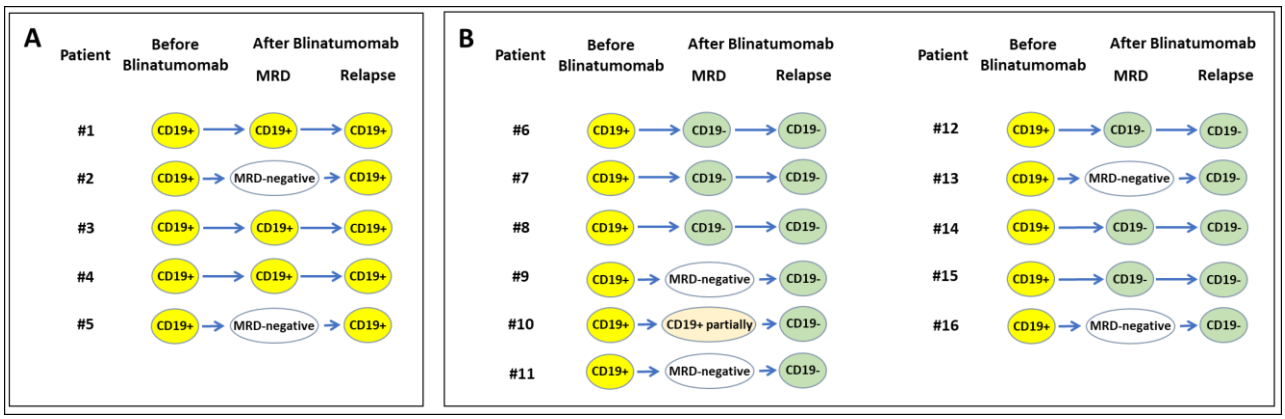

Figure S1. Changes in CD19-status of residual leukemic cells at MRD-level and at subsequent relapse in 16 patients with bone marrow relapse occurred. Panel A shows CD19-positive relapses (n=5), panel B – CD19-negative relapses (n= 11). CD19-negativity was defined as less than 20% of tumor cells found to be CD19-positive, CD19-positivity – as more than 75% of leukemic blasts are CD19-positive and CD19+ partially was dimed if number of CD19-positive leukemic blasts was between 20% and 75%.