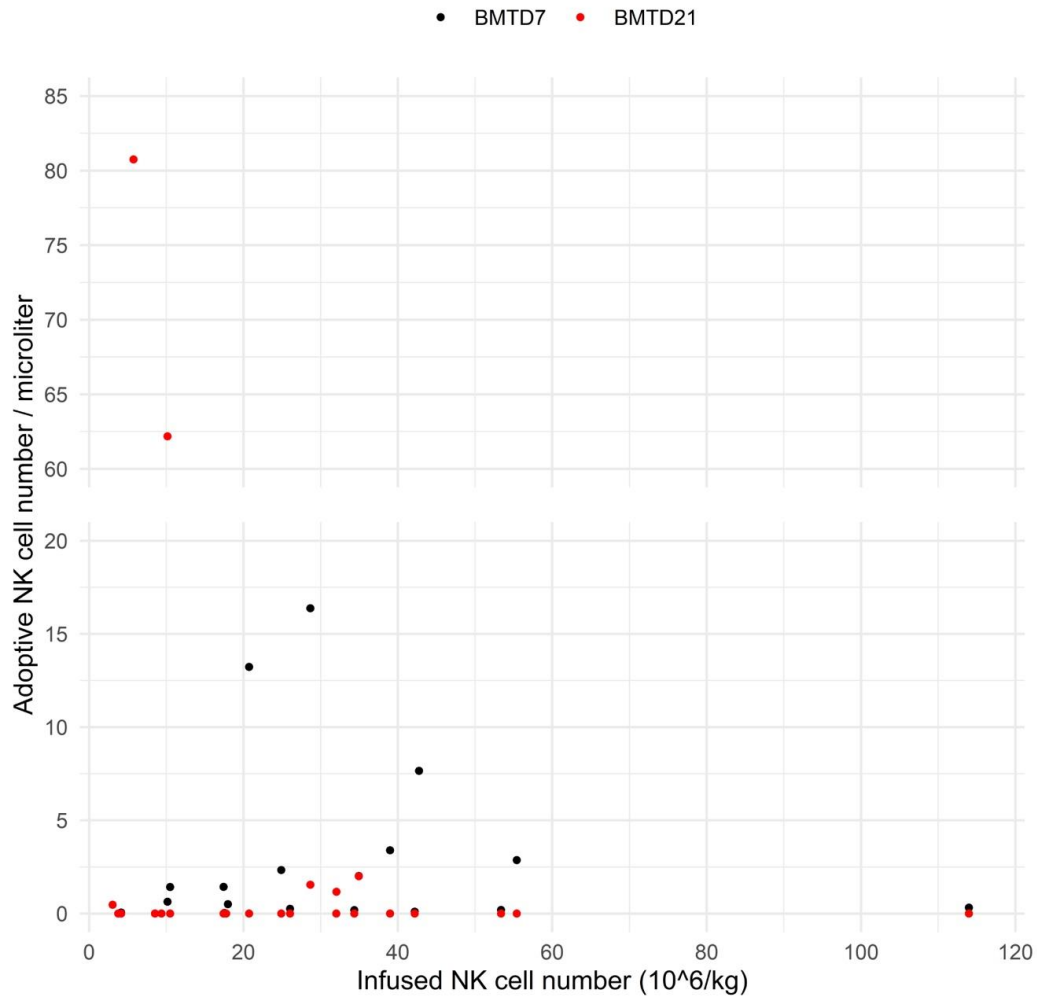
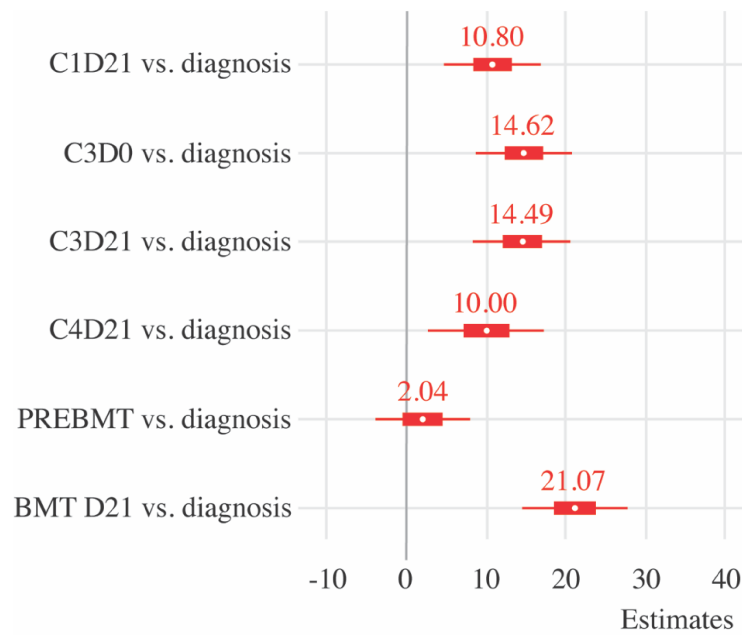


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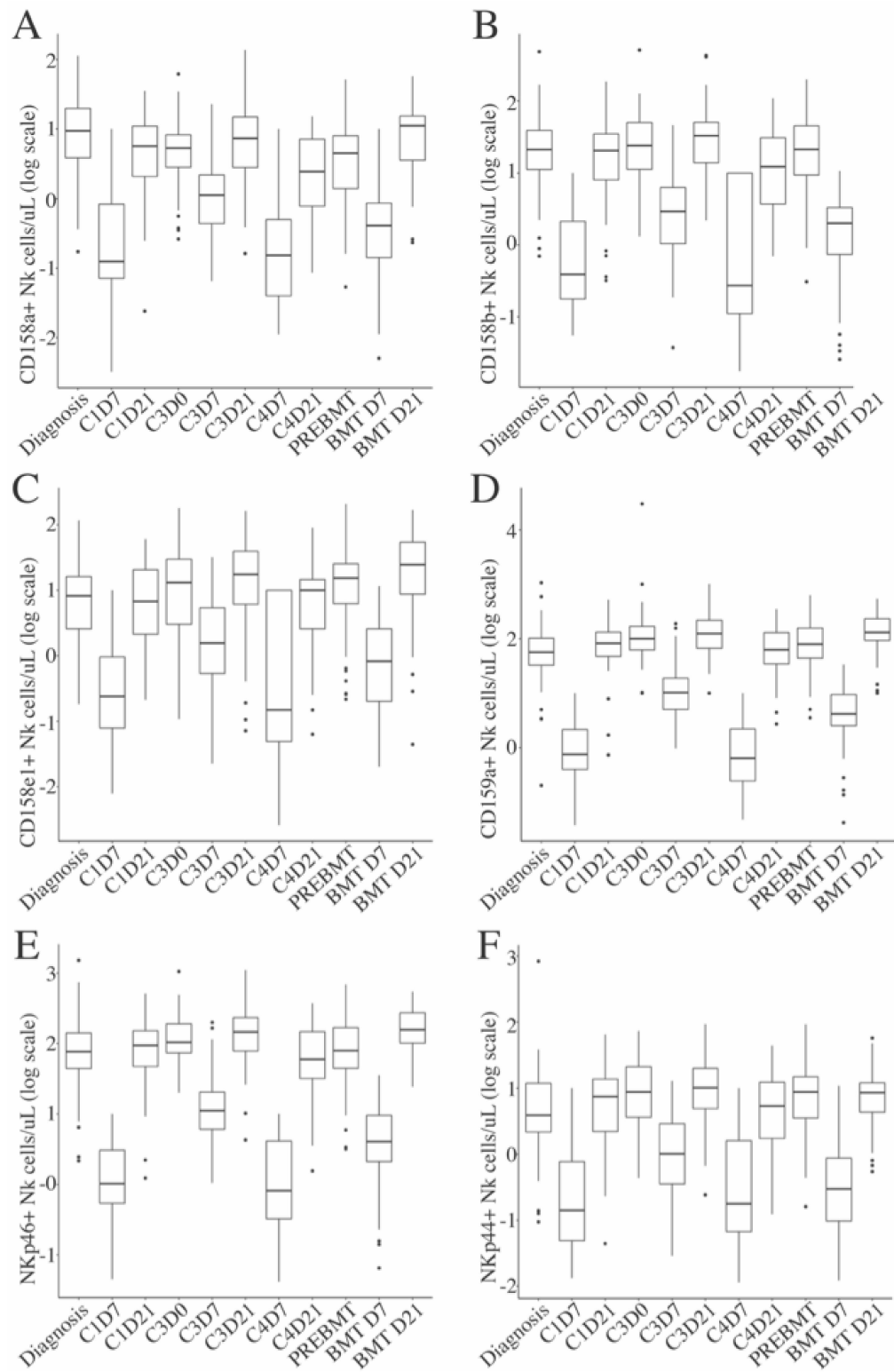


Supplementary Figure 1. Correlation of infused adoptive NK cell number in millions per kilogram body weight and number of adoptive NK cells per microliter of blood at one (black dots) and three weeks (red dots) after transfer.

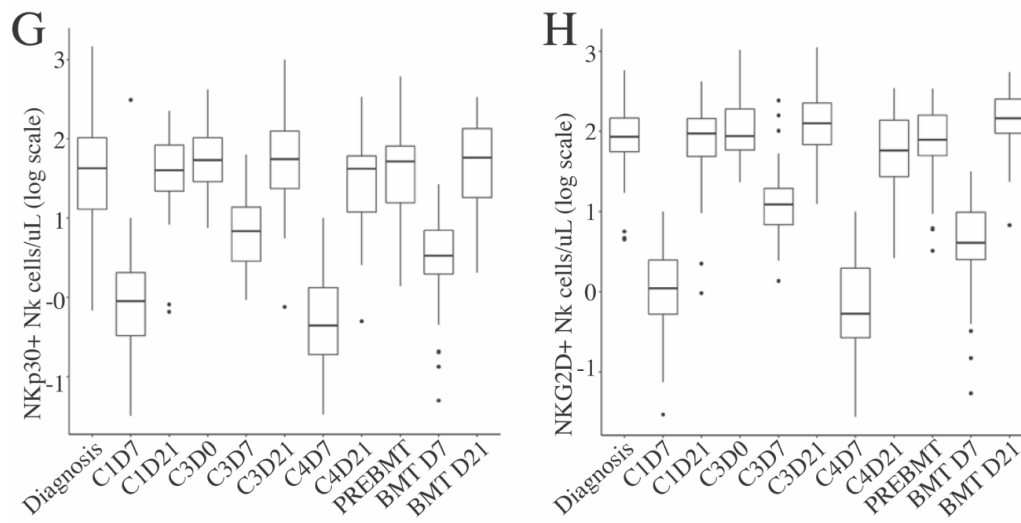
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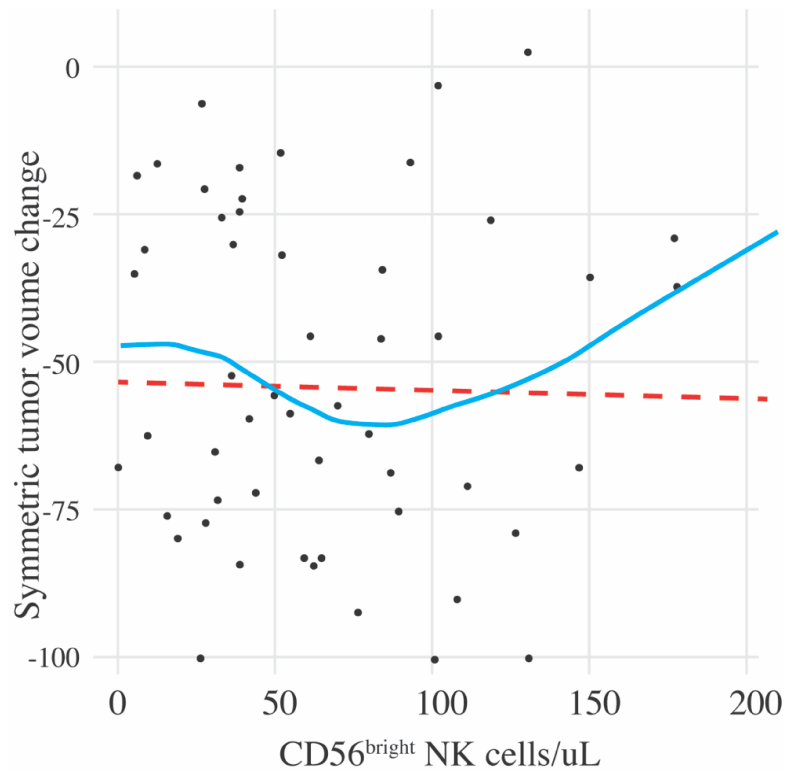
Supplementary Figure 2. Bayesian generalized linear regression model for validation of primary results displayed in Fig. 3A.



Supplementary Material



Supplementary Figure 3 Frequencies of individual NK cell receptors (logarithmic scale) for 46 patients by time point. Time points are abbreviated to reflect course and day (C#D#). Plots are shown for CD158a (A), CD158b (B), CD158e1 (C), NKG2A (D), NKp46 (E), NKp44 (F), NKp30 (G), and NKG2D (H).



Supplementary Figure 4 Evaluation of CD56^{bright} NK cell count per uL (restricted range, 0-200 cells/uL) by symmetric percent change in tumor volume after two courses of chemo-immunotherapy compared to baseline. Interpolation was performed using spline functions.

UPN	Demographics at diagnosis		Patient HLA status		KIR-HLA mismatch		Peak NK cell chimerism		Adoptive NK cell transfer (10 ⁶ /kg)			Survival status
	Age, yrs.	Sex	Bw	C	Autologous mismatch	Donor KIR-recipient HLA mismatch	%	Day	NK	NKT	T	
1	5.6	Male	Bw4, Bw6	C06:02, C07:02	Absent	-	68.0	7	55.40	0.0230	0.000	Alive
2	5.5	Male	Bw4, Bw6	C07:01, C16:01	Absent	CD158a	0.5 ^a	21	32.05	0.0074	0.000	Alive
3	1.8	Female	Bw4, Bw6	C05:01, C01:02	Absent	-	41.0	7	38.99	0.0240	0.000	Alive
4	2.7	Male	Bw4, Bw6	C03:03, C04:01	Absent	-	36.0	7	20.72	0.0110	0.002	Alive
5	7.1	Male	Bw4, Bw6	C17:01, C03:04	Absent	-	3.0	7	34.36	0.0280	0.000	Alive
6	15.2	Male	Bw4, Bw6	C05:01, C07:02	Absent	-	0.0	7	8.54	0.0040	0.001	Deceased
7	2.5	Female	Bw6, Bw6	C02:02, C18:01	Present	CD158b, CD158e1	0.5 ^a	7	17.54	0.0090	0.000	Alive
8	1.7	Male	Bw6, Bw6	C06:02, C07:02	Absent	-	51.0	7	42.74	0.0170	0.000	Deceased
9	0.5	Male	Bw6, Bw6	C03:03, C07:01	Present	CD158a	0.5 ^a	7	53.36	0.0270	0.000	Deceased
10	2.8	Female	Bw4, Bw6	C07:01, C07:02	Present	CD158a	-	-	24.43	0.0130	0.000	Deceased
11	2.3	Male	Bw4, Bw4	C05:01, C14:02	Absent	-	6.0	7	34.93	0.0210	0.009	Alive
12	1.8	Male	Bw6, Bw6	C04:01, C07:01	Present	CD158e1	0.0	7	9.21	0.0090	0.000	Alive
13	5.2	Male	Bw4, Bw6	C05:01, C07:04	Absent	-	0.0	21	9.38	0.0060	0.000	Alive
14	1.9	Male	Bw4, Bw6	C16:01, C08:02	Present	CD158a	4.0	7	42.18	0.0440	0.000	Alive
15	7.9	Male	Bw6, Bw6	C07:02, C12:03	Present	CD158a, CD158e1	35.0	21	10.16	0.0900	0.000	Alive
16	6.3	Female	Bw6, Bw6	C08:01, C12:03	Present	CD158a	1.0	21	3.04	0.0040	0.000	Alive
17	0.6	Male	Bw4, Bw6	C12:03, C07:02	Present	CD158a	4.0	7	113.97	0.1040	0.000	Alive
18	5.6	Male	Bw4, Bw4	C02:02, C12:02	Absent	-	1.0	21	27.60	0.0200	0.000	Alive
19	1.5	Male	Bw4, Bw6	C04:01, C12:02	Absent	-	81.0	7	28.67	0.0120	0.000	Alive
20	4.4	Male	Bw4, Bw6	C04:01, C08:02	Absent	-	1.0	7	4.14	0.0030	0.000	Alive
21	3.3	Male	Bw4, Bw6	C07:01, C08:02	Present	CD158a	3.0	7	17.99	0.0050	0.000	Alive
22	2.8	Female	Bw4, Bw6	C05:01, C07:02	Absent	-	-	-	14.04	0.0060	0.000	Alive
23	14.4	Female	Bw6, Bw6	C04:01, C08:02	Present	CD158e1	0.0	21	5.34	0.0020	0.000	Alive

UPN	Demographics at diagnosis		Patient HLA status		KIR-HLA mismatch		Peak NK cell chimerism		Adoptive NK cell transfer (10 ⁶ /kg)			Survival status
	Age, yrs.	Sex	Bw	C	Autologous mismatch	Donor KIR–recipient HLA mismatch	%	Day	NK	NKT	T	
24	2.0	Female	Bw4, Bw6	C06:02, C12:02	Absent	-	27.0	7	24.89	0.0080	0.000	Alive
25	4.1	Male	Bw6, Bw6	C03:04, C07:04	Present	CD158a, CD158e1	22.0	7	17.42	0.0050	0.000	Alive
26	2.1	Male	Bw6, Bw6	C07:02, C07:72	Present	CD158a, CD158e1	0.0	21	17.76	0.0110	0.000	Alive
27	3.8	Male	Bw4, Bw6	C01:02, C04:01	Absent	-	5.9	7	26.02	0.0100	0.000	Alive
28	3.3	Female	Bw4, Bw6	C03:04, C07:18	Present	CD158a	2.0 ^b	7	32.02	0.0190	0.003	Alive
29	4.0	Female	Bw6, Bw6	C04:01, C03:03	Present	CD158e1	29.0	21	5.75	0.0020	0.000	Alive
30	2.7	Male	Bw6, Bw6	C03:04, C07:02	Present	CD158a	39.0	7	10.50	0.0190	0.013	Deceased
31	14.5	Male	Bw6, Bw6	C07:01, C07:02	Present	CD158a, CD158e1	0.0	7	3.77	0.0020	0.000	Alive

Abbreviation: UPN, unique patient number; yrs, years.

Supplementary Table 1. Clinical characteristics of patients who received adoptive transfer of haploidentical NK cells. KIR–HLA receptor–ligand mismatch where at least one KIR does not recognize any of the patient’s HLA molecules.

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	Days from C1D1				Weeks from C1D1			
	N	Median	Min	Max	N	Median	Min	Max
Course 02 Induction	63	22	19	26	63	3.1	2.7	3.7
Course 03 Induction	63	45	37	63	63	6.4	5.3	9.0
Course 04 Induction	62	75	62	93	62	10.7	8.9	13.3
Course 05 Induction	61	102	85	122	61	14.6	12.1	17.4
Course 06 Induction	61	127	111	161	61	18.1	15.9	23.0
Intensification Phase	58	167.5	138	207	58	23.9	19.7	29.6
Autologous transplant	55*	174	145	214	55*	24.9	20.7	30.6
Additional MRD Treatment	42	176	147	214	42	25.1	21.0	30.6

*Should be a total of 57, but dates were not entered in the database for 2 patients.

Supplementary Table 2. Median time of treatment cycles from therapy start (C1D1).