

SUPPLEMENTARY MATERIAL

Supplementary Table 1. Characteristics of patients and alloH SCT procedure according to the type of donor.

Columns by: Type of donor	Total	MRD	MUD	MMUD/MMRD	Haplo
n (%)	1544 (100.0)	508 (32.9)	457 (29.6)	152 (9.8)	427 (27.7)
Age_SCT, median (iqi)	54 (42.5; 62.2)	54.7 (43.5; 61.2)	52.9 (42.8; 61.3)	54.1 (43.5; 61.3)	55.1 (41; 64.3)
Receptor gender, n (%)					
Female	677 (44.0)	236 (46.5)	187 (41.0)	74 (49.0)	180 (42.3)
Male	863 (56.0)	271 (53.5)	269 (59.0)	77 (51.0)	246 (57.7)
Primary disease for transplant, n (%)					
Acute myeloid leukemia	552 (35.8)	188 (37.0)	166 (36.3)	48 (31.6)	150 (35.1)
Myelodysplastic syndrome	232 (15.0)	79 (15.6)	73 (16.0)	21 (13.8)	59 (13.8)
Acute lymphoblastic leukemia	184 (11.9)	56 (11.0)	65 (14.2)	20 (13.2)	43 (10.1)
Non-Hodgkin lymphoma	203 (13.1)	66 (13.0)	44 (9.6)	25 (16.4)	68 (15.9)
Hodgkin lymphoma	95 (6.2)	23 (4.5)	11 (2.4)	5 (3.3)	56 (13.1)
Myeloproliferative disorders other than CML	82 (5.3)	26 (5.1)	37 (8.1)	11 (7.2)	8 (1.9)
Multiple myeloma	44 (2.8)	17 (3.3)	14 (3.1)	3 (2.0)	10 (2.3)
Aplastic anemia	30 (1.9)	14 (2.8)	9 (2.0)	3 (2.0)	4 (0.9)
Chronic myeloid leukemia	29 (1.9)	7 (1.4)	12 (2.6)	2 (1.3)	8 (1.9)
Other chronic lymphoproliferative disorders	28 (1.8)	5 (1.0)	11 (2.4)	7 (4.6)	5 (1.2)
Other	65 (4.2)	27 (5.3)	15 (3.3)	7 (4.6)	16 (3.7)
Disease Risk Index, n (%)					
Low-Intermediate	756 (49.0)	256 (50.4)	236 (51.6)	68 (44.7)	196 (45.9)
High-Very high	437 (28.3)	131 (25.8)	122 (26.7)	34 (22.4)	150 (35.1)
Missing/Not classifiable	351 (22.7)	121 (23.8)	99 (21.7)	50 (32.9)	81 (19.0)
Disease status at transplant, n (%)					
Complete remission	998 (64.6)	338 (66.5)	289 (63.2)	98 (64.5)	273 (63.9)

Partial remission	202 (13.1)	61 (12.0)	55 (12.0)	20 (13.2)	66 (15.5)
Stable disease	192 (12.4)	61 (12.0)	61 (13.3)	22 (14.5)	48 (11.2)
Progressive disease	125 (8.1)	38 (7.5)	41 (9.0)	10 (6.6)	36 (8.4)
Not assessed	27 (1.7)	10 (2.0)	11 (2.4)	2 (1.3)	4 (0.9)
Karnofsky score, n (%)					
<80	66 (4.3)	21 (4.1)	17 (3.7)	9 (5.9)	19 (4.4)
>=80	1364 (88.3)	454 (89.4)	407 (89.1)	127 (83.6)	376 (88.1)
Missing/Unavailable	114 (7.4)	33 (6.5)	33 (7.2)	16 (10.5)	32 (7.5)
HCT-CI, n (%)					
<3	845 (54.7)	275 (54.1)	254 (55.6)	83 (54.6)	233 (54.6)
>=3	581 (37.6)	191 (37.6)	177 (38.7)	58 (38.2)	155 (36.3)
Missing/Unavailable	118 (7.6)	42 (8.3)	26 (5.7)	11 (7.2)	39 (9.1)
Number of alloHSCT, n (%)					
First allo	1515 (98.1)	504 (99.2)	450 (98.5)	148 (97.4)	413 (96.7)
Second allo	28 (1.8)	4 (0.8)	7 (1.5)	4 (2.6)	13 (3.0)
Third allo	1 (0.1)	0 (0.0)	0 (0.0)	0 (0.0)	1 (0.2)
Donor gender, n (%)					
Female	546 (35.8)	220 (43.6)	103 (22.9)	56 (37.6)	167 (39.7)
Male	979 (64.2)	285 (56.4)	347 (77.1)	93 (62.4)	254 (60.3)
Female donor-male receptor, n (%)					
Other	1236 (81.3)	388 (77.0)	398 (88.6)	116 (78.4)	334 (79.5)
Yes	285 (18.7)	116 (23.0)	51 (11.4)	32 (21.6)	86 (20.5)
CMV serology donor/receptor, n (%)					
-/-	139 (9.1)	45 (8.9)	50 (11.0)	7 (4.7)	37 (8.8)
-/+	331 (21.6)	65 (12.8)	133 (29.2)	61 (40.9)	72 (17.1)
+/-	132 (8.6)	42 (8.3)	50 (11.0)	11 (7.4)	29 (6.9)

+/+	930 (60.7)	355 (70.0)	222 (48.8)	70 (47.0)	283 (67.2)
Stem cell source, n (%)					
Bone marrow	166 (10.8)	52 (10.3)	41 (9.0)	12 (7.9)	61 (14.4)
Peripheral blood	1370 (89.1)	454 (89.7)	414 (91.0)	139 (92.1)	363 (85.4)
SP	1 (0.1)	0 (0.0)	0 (0.0)	0 (0.0)	1 (0.2)
Conditioning regimen, n (%)					
Myeloablative	631 (41.2)	211 (41.7)	228 (50.4)	49 (33.1)	143 (33.5)
Reduced intensity/Non-myeloablative	902 (58.8)	295 (58.3)	224 (49.6)	99 (66.9)	284 (66.5)
GVHD prophylaxis, n (%)					
CNI-MTX	203 (13.1)	148 (29.1)	50 (10.9)	4 (2.6)	1 (0.2)
CNI-Sirolimus	117 (7.6)	70 (13.8)	42 (9.2)	5 (3.3)	0 (0.0)
ATG-based	118 (7.6)	17 (3.3)	70 (15.3)	30 (19.7)	1 (0.2)
PCTy-based	1013 (65.6)	221 (43.5)	268 (58.6)	110 (72.4)	414 (97.0)
Other	93 (6.0)	52 (10.2)	27 (5.9)	3 (2.0)	11 (2.6)

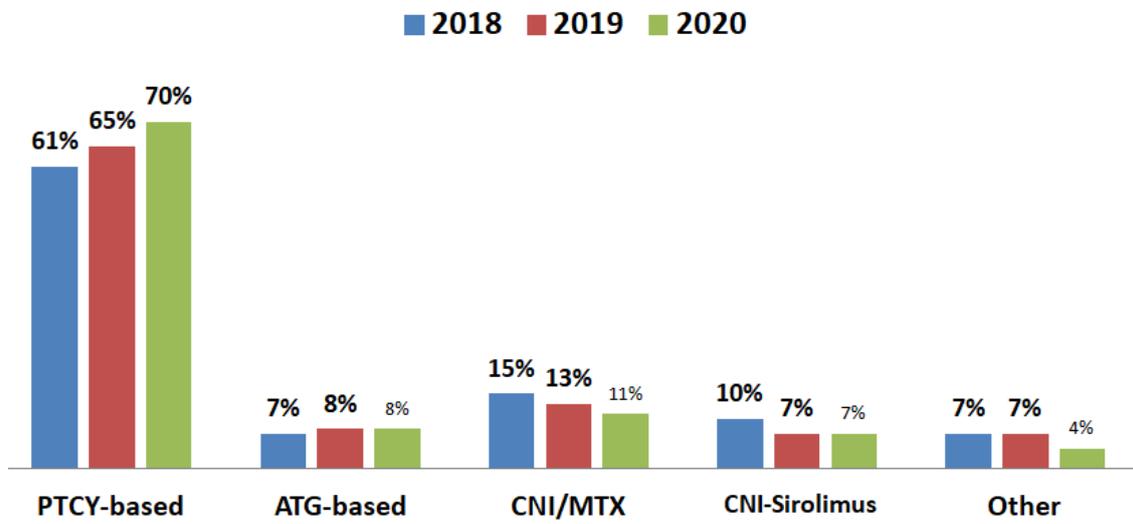
MRD, matched related donor; MUD, matched unrelated donor; MMUD, mismatched unrelated donor; MMRD, mismatched related donor; Haplo, haploidentical donor; HCT-CI, Hematopoietic Cell Transplant Comorbidity Index; alloHSCT, allogeneic hematopoietic stem cell transplantation; CMV, cytomegalovirus; PCTy, post-transplant cyclophosphamide; ATG, antithymocyte globulin; CNI, calcineurin inhibitors; MTX, methotrexate.

Supplementary Table 2. Survival outcomes after transplant and cumulative incidences of relapse and non-relapse mortality according to type of prophylaxis.

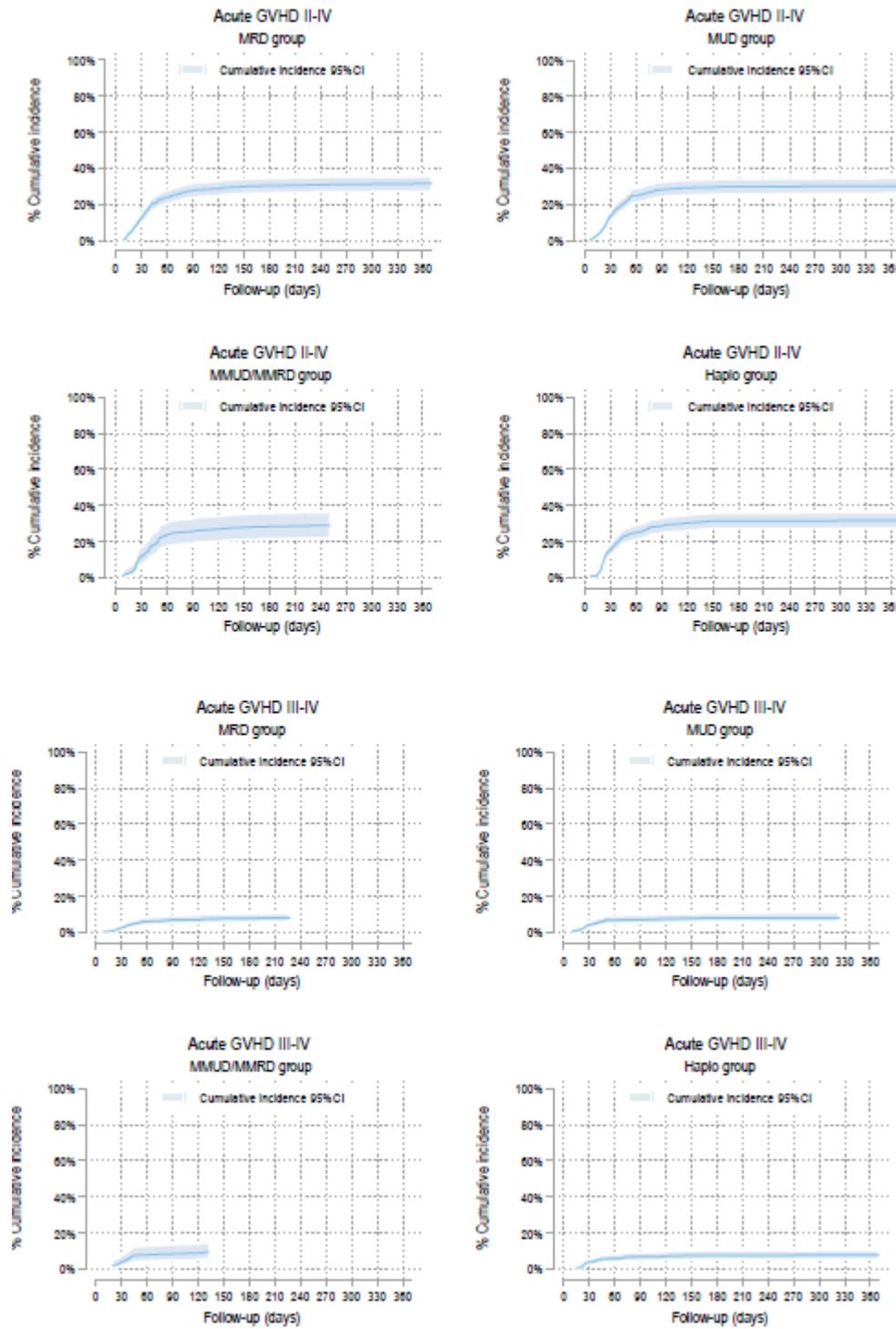
	Estimated probability at 2 years	Hazard Ratio	95% Confidence Interval	P
Overall Survival				
PTCy-based	66.8%	1		
CNI-MTX	66.4%	0.96	0.75-1.22	0.75
CNI-Sirolimus	68.3%	0.91	0.67-1.24	0.55
ATG-based	62.1%	1.12	0.81-1.51	0.52
Disease-free Survival				
PTCy-based	59.7%	1		
CNI-MTX	59.3%	0.99	0.79-1.23	0.9
CNI-Sirolimus	57.2%	1.03	0.78-1.35	0.85
ATG-based	56.3%	1.12	0.84-1.48	0.44
GVHD-Relapse-Free survival				
PTCy-based	42.8%	1		
CNI-MTX	28.3%	1.35	1.14-1.60	<0.001
CNI-Sirolimus	32.8%	1.20	0.97-1.49	0.1
ATG-based	37.4%	1.20	0.93-1.54	0.17
	Cumulative incidence at 2- years	Hazard Ratio	95% Confidence Interval	P
Relapse				
PTCy-based	19.8%	1		
CNI-MTX	22.4%	1.16	0.87-1.56	0.31
CNI-Sirolimus	32.6%	1.62	1.15-2.30	0.006
ATG-based	15.5%	0.82	0.54-1.26	0.37
Non-relapse mortality				
PTCy-based	20.5%	1		
CNI-MTX	18.4%	0.83	0.60-1.16	0.28
CNI-Sirolimus	10.3%	0.53	0.32-0.88	0.015
ATG-based	28.2%	1.36	0.95-1.96	0.09

PTCy, Post-transplant cyclophosphamide; CNI, Calcineurin inhibitors; MTX, Methotrexate; ATG, Antithymocyte globulin.

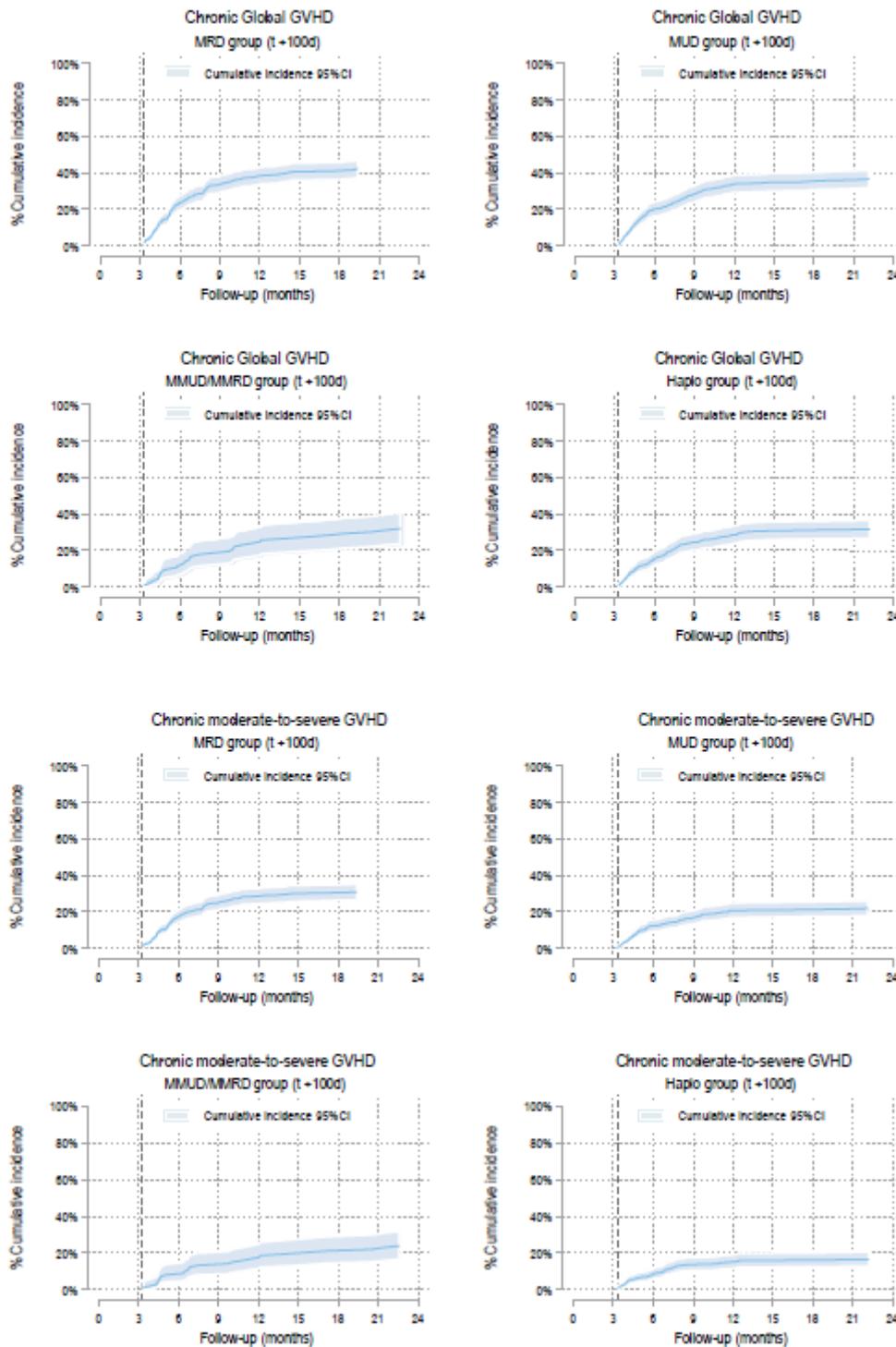
Supplementary Figure 1. Changes in the type of GVHD prophylaxis throughout the study period 2018-2020.



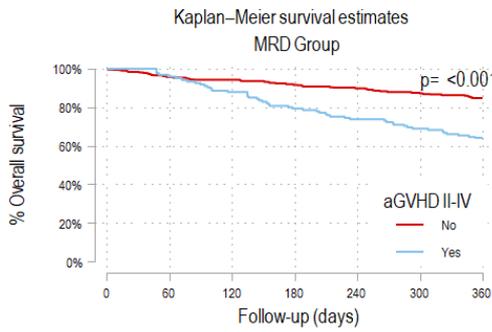
Supplementary Figure 2. Cumulative incidence of grade II-IV (A-D) and grade III-IV (E-H) acute GVHD according to the type of donor.



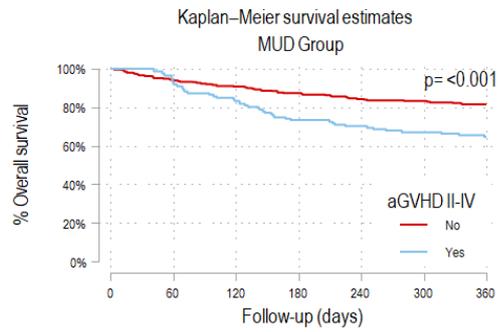
Supplementary Figure 3. Cumulative incidence of global (A-D) and moderate-severe (E-H) chronic GVHD according to the type of donor.



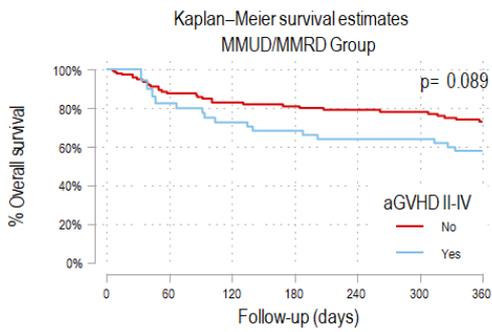
Supplementary Figure 4. Impact of acute GVHD on overall survival according to the type of donor.



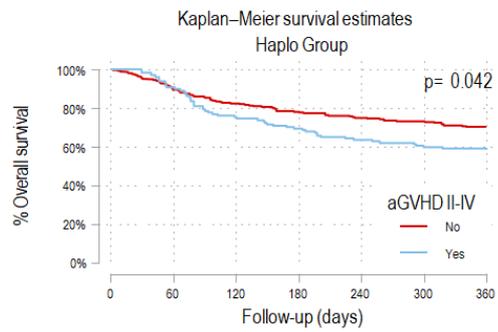
aGVHD II-IV							
No	455	330	304	286	275	267	257
Yes	0	104	115	112	106	98	91



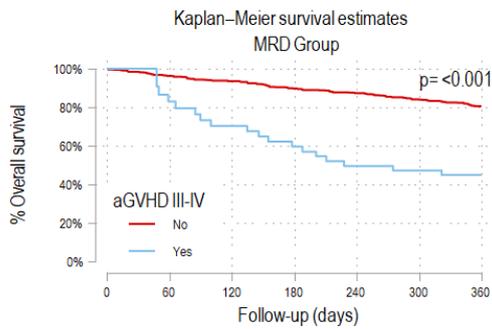
aGVHD II-IV							
No	428	299	270	254	242	239	232
Yes	0	101	106	96	90	86	83



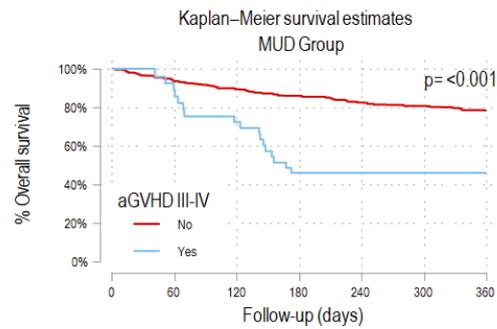
aGVHD II-IV							
No	149	99	87	82	80	77	72
Yes	0	30	31	32	30	31	28



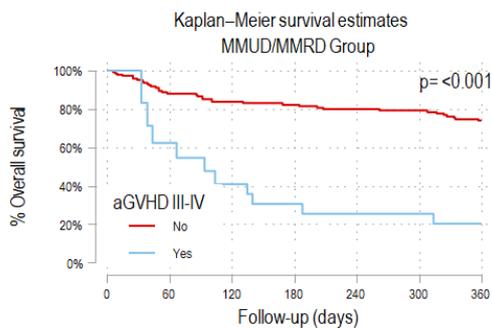
aGVHD II-IV							
No	416	278	228	211	203	198	190
Yes	0	93	98	95	87	83	81



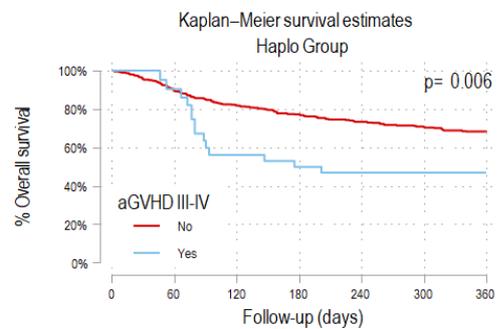
aGVHD III-IV							
No	456	412	397	376	361	346	330
Yes	0	23	23	23	21	20	19



aGVHD III-IV							
No	430	375	355	335	317	310	298
Yes	0	27	23	17	17	17	18



aGVHD III-IV							
No	149	121	112	108	105	103	96
Yes	0	8	6	6	5	5	4



aGVHD III-IV							
No	416	351	309	290	275	266	256
Yes	0	20	17	16	15	15	15

Supplementary Figure 5. Impact of chronic GVHD on overall survival according to the type of donor.

