

Comparable long-term outcomes between upfront haploidentical and identical sibling donor transplant in aplastic anemia: a national registry-based study

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Supplemental Table 1. Univariate analysis of factors associated with survival outcomes

variable	No.	Probability of survival (SE)			
		9-year OS rate	<i>P</i>	9-year FFS rate	<i>P</i>
Total	342	87.9(2.4)		87.0(2.4)	
Donor type			0.173		0.257
HID	183	87.1(2.5)		86.5(2.6)	
ISD	159	89.3(3.7)		88.1(3.8)	
Sex			0.375		0.205
Male	204	88.2(2.3)		86.8(2.4)	
Female	138	85.9(6.0)		85.9(6.0)	
Age			0.699		0.593
≤20	100	89.2(3.3)		88.2(3.4)	
20-40	183	87.7(3.6)		87.2(3.6)	
>40	59	86.4(4.5)		84.7(4.7)	
Age			0.963		0.974
Children	88	88.8(3.6)		87.7(3.8)	
Adult	254	87.7(2.7)		87.0(2.8)	

Previous transfusion					
(RBC)			0.106		0.064
<10u	191	91.6(2.0)		91.1(2.1)	
≥ 10 u	118	80.3(6.3)		78.7(6.3)	
SAA course (m)			0.041		0.036
≤2	160	93.1(2.0)		92.5(2.1)	
>2	182	82.9(4.2)		81.9(4.2)	
ECOG			0.004		0.005
0-1	240	92.2(1.8)		91.4(1.9)	
2-3	102	77.4(6.7)		76.5(6.7)	
MNC (×10⁸/L)			0.890		0.970
≤10	157	87.2(3.9)		86.0(3.9)	
>10	182	89.2(2.4)		88.7(2.4)	
CD34 (×10⁶/L)			0.034		0.056
≤4	178	90.2(3.9)		89.1(4.0)	
>4	160	86.0(2.8)		85.3(2.8)	
Donor-recipient sex			0.946		0.801
M-M	116	87.9(3.0)		86.2(3.2)	
M-F	86	80.4(11.0)		80.4(11.0)	
F-F	50	89.0(4.7)		89.0(4.7)	
F-M	90	90.0(3.2)		88.9(3.3)	
Donor age (y)			0.394		0.274
<40	205	90.4(2.1)		89.9(2.2)	
≥40	136	85.3(3.9)		83.9(4.0)	
ABO match			0.924		0.949
Same	191	89.8(2.2)		88.2(2.4)	

Minor mismatch	61	83.7(7.1)	83.7(7.1)
Major mismatch	61	90.2(3.8)	90.2(3.8)
Different	29	86.2(6.4)	86.2(6.4)

Supplemental Table 2. Analysis of factors associated with PedsQL at 3-year post transplant, mean (SD)

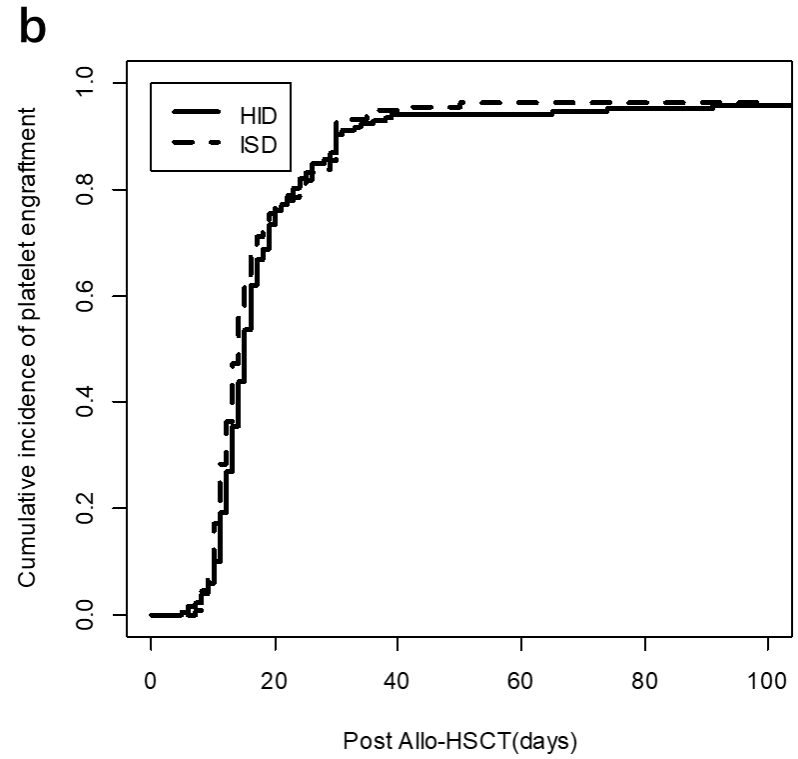
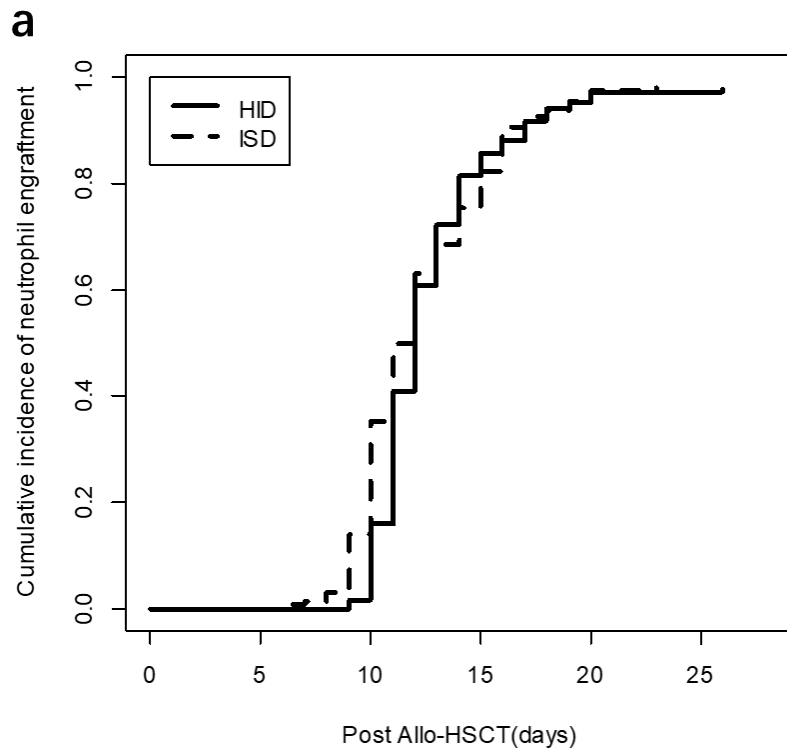
	N	Physical	Emotional	Social	Role
Age (P)		0.330	0.393	0.975	0.800
<10	35	79.1(12.2)	76.6(17.5)	82.5(10.5)	71.0(16.8)
≥10	42	81.9(10.5)	80.5(13.9)	83.4(12.3)	72.4(17.0)
Gender (P)		0.330	0.393	0.975	0.800
Male	43	80.2(10.6)	76.7(16.4)	81.0(10.9)	68.2(15.9)
Female	34	81.2(12.4)	81.2(14.6)	85.5(11.7)	76.2(17.1)
Cost Types (P)		0.425	0.287	0.147	0.241
Health insurance	24	78.8(10.8)	74.8(17.3)	80.7(11.5)	68.5(16.2)
Rural cooperative medical	30	80.8(11.1)	79.3(14.3)	82.1(11.8)	70.5(16.1)
Self-paying	23	82.5(12.4)	81.9(15.6)	86.6(10.5)	76.7(18.0)
SAA course (P)		0.005	0.052	0.014	0.007
≤2	22	86.1(9.3)	84.0(12.9)	87.6(10.6)	80.2(14.9)
>2	55	78.5(11.4)	76.6(16.3)	81.2(11.3)	68.4(16.4)
cGvHD (P)		0.002	0.001	0.002	0.012
No	59	83.0(10.9)	82.4(13.9)	85.3(11.2)	74.2(16.6)
Yes	18	72.9(9.2)	66.4(15.2)	75.6(9.0)	63.6(15.2)
Donor type (P)		0.190	0.094	0.245	0.242
HID	62	79.7(11.5)	77.4(16.3)	82.0(10.9)	70.6(16.4)
ISD	15	84.7(10.2)	84.3(11.7)	87.2(13.2)	76.5(18.3)

Supplemental Table 3. Analysis of clinical factors associated with SF-36 at 3-year post transplant, Mean (SD)

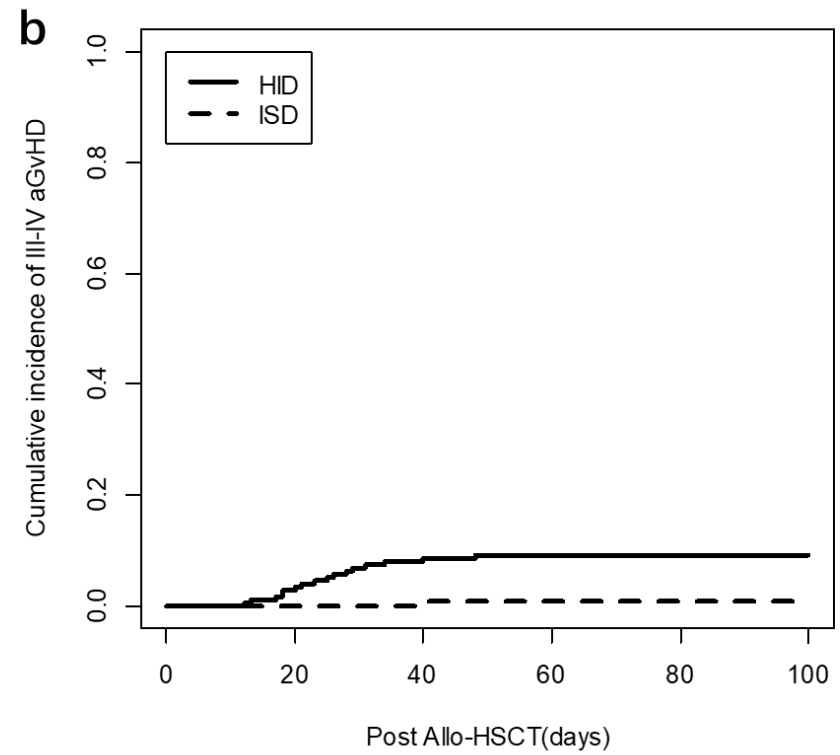
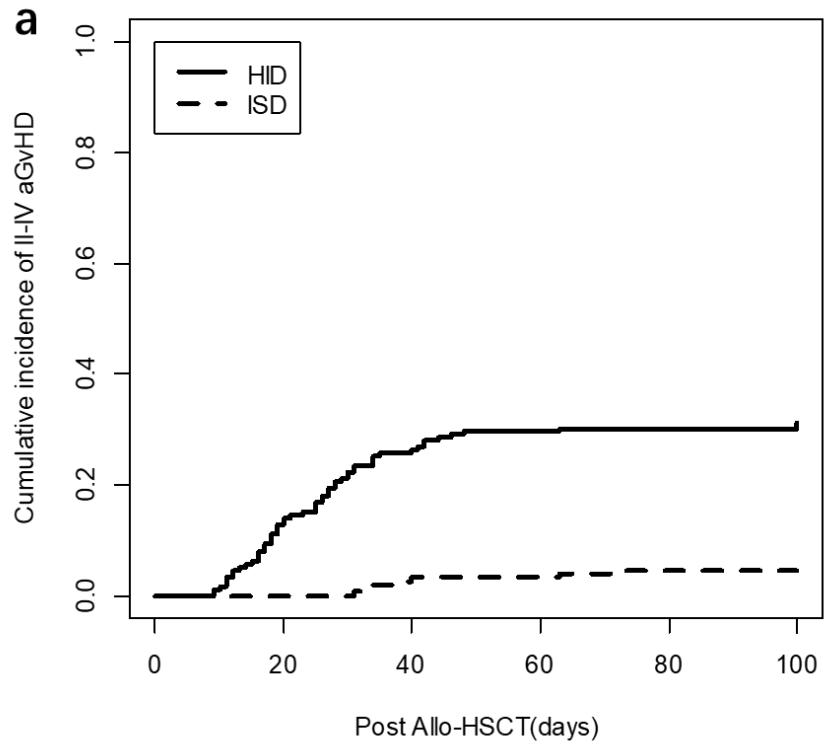
	N	GH	PF	RP	RE	SF	BP	VT	MH	PCS	MCS
Age (P)		0.005	0.041	0.632	0.684	0.001	0.051	0.007	0.001	0.393	0.001
<30	117	69.6(16.2)	91.0(15.9)	64.7(41.5)	71.5(39.9)	78.4(21.9)	96.0(9.9)	73.9(16.2)	73.1(15.0)	80.4(16.2)	74.2(16.6)
≥30	106	75.9(16.3)	88.4(14.3)	66.7(42.6)	71.7(42.1)	88.5(13.8)	94.3(12.3)	78.9(12.8)	81.3(13.5)	81.4(17.4)	80.1(16.9)
Gender (P)		0.692	0.389	0.311	0.196	0.406	0.380	0.492	0.465	0.430	0.661
Male	133	72.2(16.8)	90.7(15.0)	69.0(39.8)	75.4(38.2)	82.4(19.4)	95.7(10.6)	75.9(14.7)	76.5(14.5)	81.9(16.4)	77.6(16.6)
Female	90	73.2(16.1)	88.4(15.4)	60.8(44.8)	65.9(44.1)	84.3(18.7)	94.5(11.9)	76.9(15.1)	77.7(15.4)	79.3(17.1)	76.2(17.7)
Marriage (P)		0.149	0.087	0.174	0.261	0.164	0.029	0.121	0.003	0.568	0.385
Unmarried	80	71.5(13.6)	91.8(13.1)	70.3(39.8)	77.1(36.9)	82.1(17.8)	96.7(9.2)	74.9(14.7)	74.0(13.3)	82.6(14.2)	77.0(14.4)
Married	143	73.2(17.9)	88.6(16.2)	63.1(43.1)	68.5(42.8)	83.8(19.9)	94.4(12.1)	77.1(14.9)	78.7(15.5)	79.9(17.9)	77.0(18.4)
Education (P)		0.102	0.112	0.157	0.281	0.234	0.510	0.120	0.288	0.506	0.876
Junior and below	29	79.1(15.1)	85.9(13.6)	53.4(46.6)	57.5(48.7)	88.5(14.1)	96.9(7.7)	81.0(10.6)	80.8(10.8)	78.8(17.9)	77.0(17.8)
High school	83	72.5(16.9)	90.1(15.6)	70.2(41.2)	74.7(38.5)	83.3(20.0)	94.9(13.4)	76.1(14.7)	77.2(15.2)	81.9(17.4)	77.8(17.0)
Diploma and above	111	70.9(16.3)	90.6(15.2)	65.5(41.0)	73.0(40.1)	81.7(19.5)	95.0(10.0)	75.2(15.7)	75.9(15.5)	80.5(15.9)	76.4(16.9)
Cost Types (P)		0.949	0.636	0.507	0.465	0.976	0.202	0.585	0.233	0.508	0.570
Health insurance	108	72.6(16.6)	89.9(12.3)	62.7(42.1)	68.2(42.4)	84.1(17.3)	95.5(8.9)	76.6(14.3)	77.2(13.8)	80.2(15.5)	76.5(16.1)
Rural cooperative medical	41	72.0(18.0)	88.9(17.9)	67.7(43.7)	73.2(43.0)	84.0(17.9)	97.2(8.3)	78.2(12.8)	80.1(13.6)	81.5(18.4)	78.9(17.1)
Self-paying	74	73.0(15.8)	90.1(17.4)	68.9(41.1)	75.7(37.5)	81.4(22.2)	93.7(14.8)	74.8(16.6)	75.0(16.8)	81.5(17.6)	76.7(18.4)
SAA course (P)		0.220	0.954	0.193	0.282	0.652	0.383	0.093	0.940	0.162	0.409
≤2	126	71.3(16.4)	89.4(14.2)	62.7(42.2)	69.3(41.0)	82.7(19.5)	94.9(11.2)	74.8(15.8)	76.7(16.3)	79.7(16.2)	75.9(17.4)
>2	97	74.3(16.6)	89.7(16.4)	69.6(41.7)	74.6(40.8)	83.7(18.8)	95.6(11.1)	78.2(13.3)	77.4(12.9)	82.3(17.3)	78.5(16.5)
cGvHD (P)		0.001	0.003	0.001	0.001	0.001	0.001	0.001	0.022	0.001	0.001
No	179	74.5(16.0)	91.9(11.7)	72.3(39.9)	77.5(37.7)	84.7(18.6)	96.6(10.1)	77.4(15.0)	78.0(15.0)	83.9(15.1)	79.4(16.0)
Yes	44	65.0(16.8)	81.3(22.9)	38.6(39.8)	47.7(45.1)	77.0(20.4)	89.4(13.4)	71.9(13.6)	72.9(13.9)	68.6(17.4)	67.4(17.6)

Donor type (P)		0.244	0.682	0.057	0.081	0.005	0.519	0.018	0.009	0.102	0.004
HID	94	70.7(17.5)	88.9(17.4)	59.3(44.0)	65.6(43.6)	78.3(22.9)	95.3(11.8)	73.8(16.8)	73.7(16.7)	78.6(17.6)	72.8(19.0)
ISD	129	74.0(15.6)	90.4(13.4)	70.3(40.0)	76.0(38.4)	86.7(14.9)	95.2(10.7)	78.1(13.1)	79.4(12.9)	82.5(15.9)	80.1(14.8)

Supplemental Figure 1. The cumulative incidences of neutrophil engraftment and platelet engraftment between HID and ISD group. The left panel (a) represented the cumulative incidence of neutrophil engraftment and the right panel (b) represented the cumulative incidence of platelet engraftment.



Supplemental Figure 2. The cumulative incidences of aGvHD between HID and ISD group. The left panel (a) represented the cumulative incidence of II-IV aGvHD and the right panel (b) represented the cumulative incidence of III-IV aGvHD.



Supplemental Figure 3. The cumulative incidence of cGvHD between HID and ISD group. The left panel (a) represented the cumulative incidence of overall cGvHD and the right panel (b) represented the cumulative incidence of moderate to severe cGvHD.

