

## Better transplant outcome with pre-transplant marrow response after hypomethylating treatment in higher-risk MDS with excess blasts

### Supplementary Material

**Supplementary Table 1**  
**Prognostic factors of marrow response achievement and HMT-related mortality**

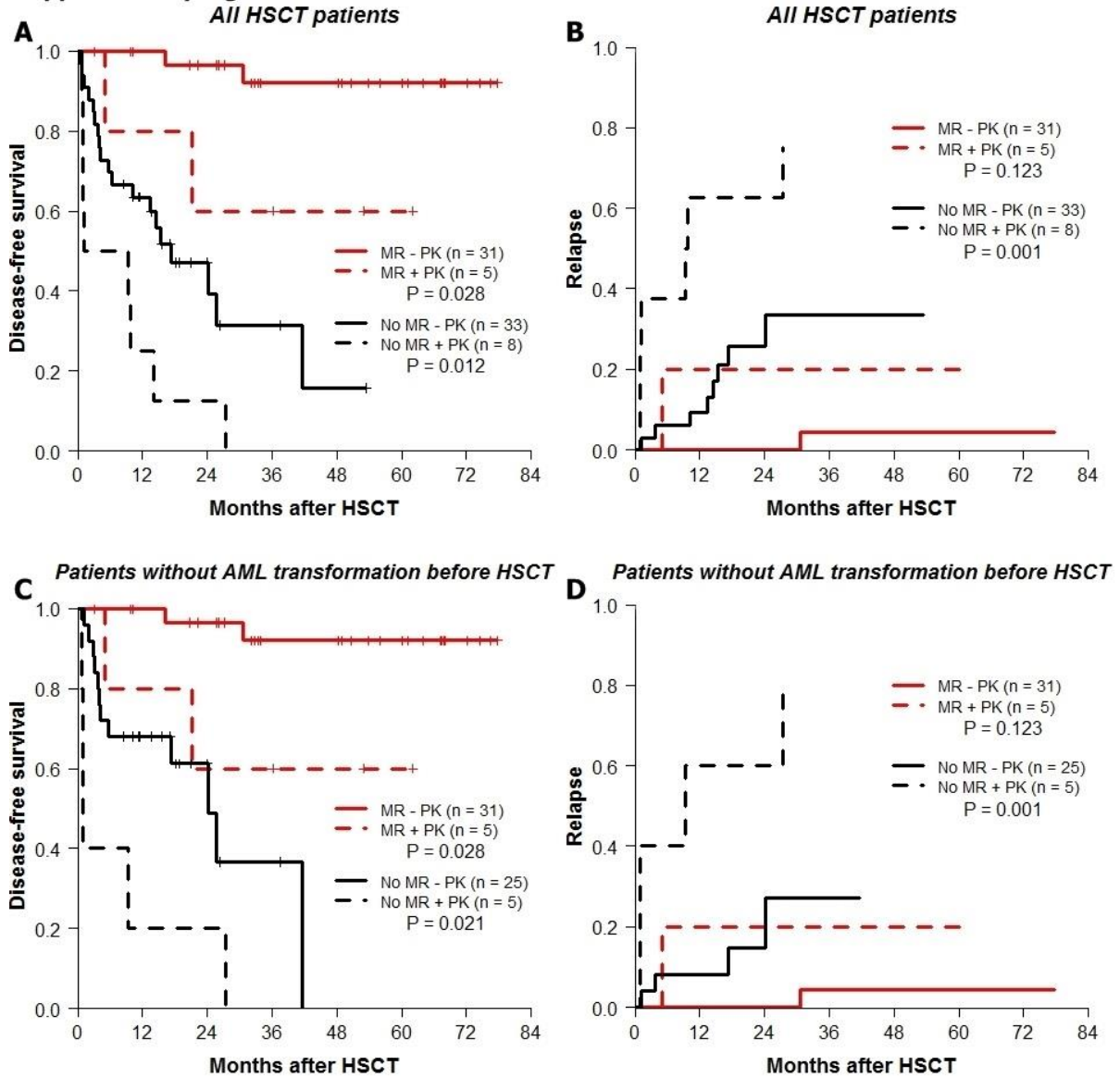
	Achievement of marrow response					HMT-related mortality				
	Univariate analysis			Multivariate analysis		Univariate analysis			Multivariate analysis	
	E/N	%	P	OR (95% CI)	P	E/N	%	P	OR (95% CI)	P
Age										
<53	29/49	59.2				2/49	4.1			
>53	21/49	42.9	0.16			6/49	12.2	0.27		
Sex										
Male	26/61	42.6		1		4/37	10.8			
Female	24/37	64.9	0.04	0.53 (0.22–1.29)	0.17	4/61	6.6	0.47		
Drug										
Decitabine	19/32	59.4				3/32	9.4			
Azacitidine	31/66	47.0	0.18			5/66	7.6	0.71		
MDS type										
De novo	48/90	53.3				7/90	7.8			
Secondary	2/8	25.0	0.12			1/8	12.5	0.51		
WHO diagnosis										
RAEB-1	14/20	70.0				3/20	15.0			
RAEB-2	33/73	45.2				5/73	6.8			
CMMoL-1/2	3/5	60.0	0.12			0/5	0	0.59		
IPSS										
Intermediate-2	37/70	52.9				5/70	7.1			
High	13/28	46.4	0.36			3/28	10.7	0.69		
Cytogenetic risk										
Good/Intermediate	41/75	54.7				3/75	4.0		1	
Poor	9/23	39.1	0.24			5/23	21.7	0.02	4.12 (0.78–21.78)	0.10
Normal karyotype										
Yes	18/38	44.7				2/38	5.3			
No	33/60	55.0	0.41			6/60	10.0	0.49		
WBC ( x10 <sup>6</sup> /L)										
< 3000	30/54	55.6				2/54	3.7			
≥ 3000/	20/44	45.5	0.42			6/44	13.6	0.14		
ANC ( x10 <sup>6</sup> /L)										
< 1000	30/52	57.7				2/52	3.8			
≥ 1000	20/46	43.5	0.22			6/46	13.0	0.14		
Hemoglobin (g/dL)										
< 10	44/80	55.0				7/80	8.8			
≥ 10	6/18	33.3	0.12			1/18	5.6	1.0		
Platelets (x10 <sup>9</sup> /L)										
< 100	35/73	47.9				7/73	9.6			
≥ 100	15/25	60.0	0.36			1/25	4.0	0.46		
PB blast										
No	43/73	58.9		1		4/74	5.4		1	
Yes	7/25	28.0	0.01	0.33 (0.12–0.93)	0.04	4/24	16.7	0.1	3.36 (0.64–17.80)	0.15

BM blast

< 15%	32/57	56.1		4/57	7.0
≥ 15%	18/41	43.9	0.31	4/41	9.8 0.72

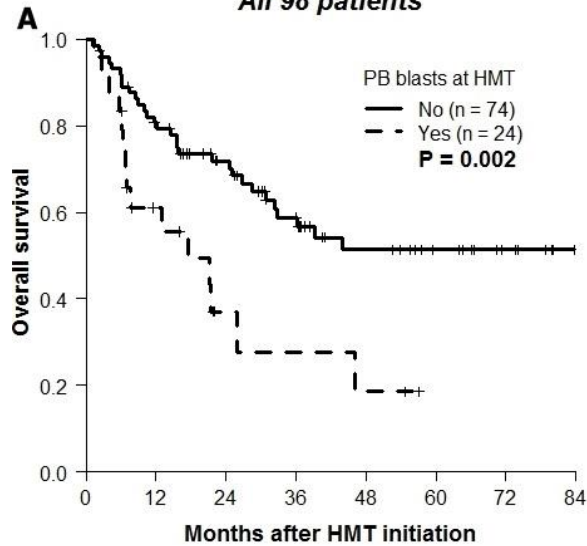
HMT, hypomethylating treatment; OR, odds ratio; CI, confidence interval; MDS, myelodysplastic syndrome; WHO, World Health Organization; RAEB-1, refractory anemia of excess blast -1; RAEB-2, refractory anemia of excess blast -2; CMMoL -1/2, chronic myelomonocytic leukemia -1 & -2; IPSS, International Prognostic Scoring System; WBC, white blood cell; ANC, absolute neutrophil count; PB, peripheral blast; BM, bone marrow

**Supplementary Figure 1**

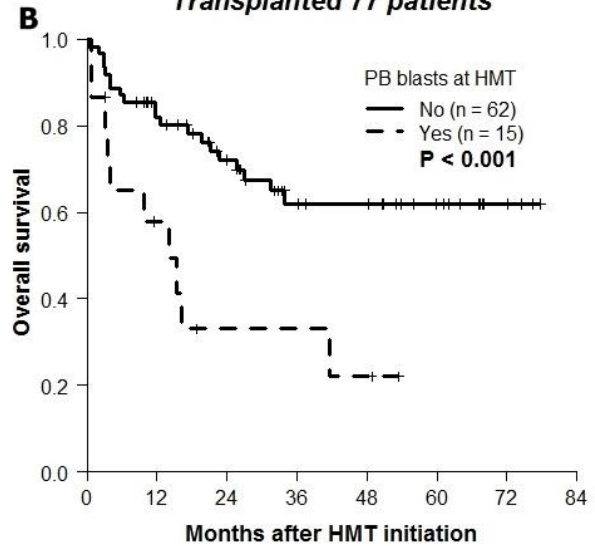


**Supplementary Figure 1. Posttransplantation outcome according to combined risk groups of marrow response (MR) and poor karyotype (PK).** Probability of (A) DFS and (B) cumulative incidence of relapse in all HSCT patients (n = 77); probability of (C) DFS and (D) cumulative incidence of relapse in 66 HSCT patients who did not experience AML transformation before HSCT.

**Supplementary Figure 2**  
*All 98 patients*



*Transplanted 77 patients*



**Supplementary Figure 2. Kaplan-Meier analyses for survival from HMT according to the presence of PB blasts at HMT.** The influences of PB blasts on HMT response and leukemic transformation were further translated into significant differences in 4-year OS from HMT according to the presence of PB blasts among (A) all higher-risk MDS patients who received HMT (n = 98; 20.5% ± 11.0% vs. 52.0% ± 6.9%) and among (B) those who received HSCT following HMT (n = 77; 22.0% ± 12.6% vs. 61.7% ± 7.1%).