

Supplemental table 1. Patients per site in the MAGIC cohort.

MAGIC site	Patient number
Bambino Gesù Childrens Hospital - Rome	1
Children's Hospital of Philadelphia	2
Childrens Hospital of Los Angeles	1
City of Hope Comprehensive Cancer Center	15
Columbia University	23
Emory University	8
Freiburg University Medical Center	4
Hannover Medical School	5
Icahn School of Medicine at Mount Sinai	63
King Chulalongkorn Memorial Hospital - Bangkok	14
Massachusetts General	25
Mayo Clinic	62
Ohio State University	112
University Hospital Carl Gustav Carus Dresden	8
University of Erlangen	60
University of Hamburg	134
University of Michigan	13
University of Pennsylvania	33
University of Regensburg	119
University of Würzburg	6
Vanderbilt University	2
Total	710

Supplemental table 2. Patient characteristics of the MAGIC and Hôpital Saint-Louis cohorts.

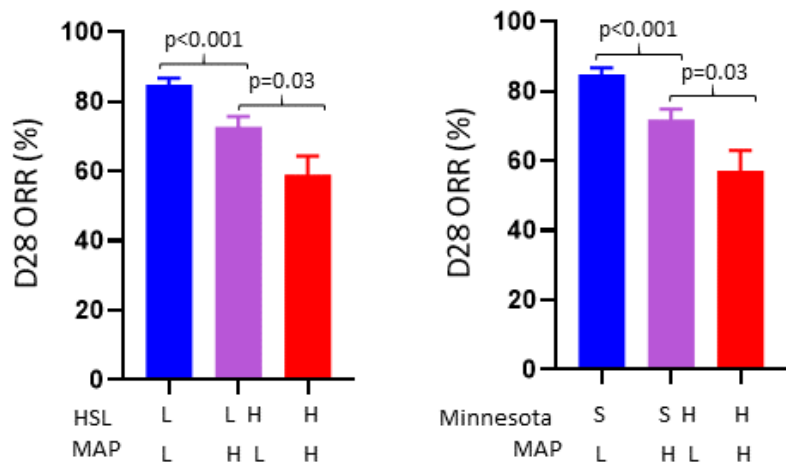
Characteristic	MAGIC (N=710)	Hôpital Saint-Louis (N=204)
Recipient sex		
Female	319 (45%)	72 (35%)
Male	391 (55%)	132 (65%)
Recipient Age, median (IQR) yr	57.0 [45, 64]	45 [27, 58]
Comorbidities		
No	249 (35%)	32 (16%)
Yes	461 (65%)	172 (84%)
Disease		
Acute leukemia	367 (52%)	90 (44%)
MDS/MPN	170 (4%)	56 (27%)
Lymphoma	62 (9%)	35 (17%)
Chronic leukemia	44 (6%)	13 (6%)
Other Malignant	47 (7%)	7 (3%)
Other non-Malignant	20 (3%)	9 (4%)
Disease Risk Index		
Low	41 (6%)	20 (10%)
Intermediate	375 (53%)	131 (64%)
High	136 (19%)	53 (26%)
Unclassified diseases ^a	40 (6%)	-
Not available	118 (17%)	-
Conditioning regimen		
Myeloablative regimen	319 (45%)	65 (32%)
Reduced intensity regimen	391 (55%)	139 (68%)
Donor		
HLA-matched sibling donor	140 (20%)	60 (29%)
HLA-matched unrelated donor	394 (56%)	93 (46%)
HLA-mismatched unrelated donor	92 (13%)	43 (21%)
HLA-mismatched related donor	84 (12%)	8 (4%)
Donor age, median (IQR) yr	32 [25, 44]	28 [21, 42]
Donor recipient sex matching		
Female donor/male recipient	94 (13%)	45 (22%)
Other combinations	616 (87%)	159 (78%)
Cell source, n (%)		
Peripheral blood stem cell	573 (81%)	162 (79%)
Bone marrow	115 (16%)	26 (13%)
Cord blood	22 (3%)	16 (8%)
CMV donor/recipient matching		
D+/R-	77 (11%)	26 (13%)
D+/R+	268 (38%)	67 (33%)
D-/R+	136 (19%)	46 (23%)

D-/R-	219 (31%)	65 (32%)
Indeterminate	10 (1%)	-
GVHD prophylaxis		
CNI based	540 (76%)	204 (100%)
Cyclophosphamide based	138 (19%)	-
Other ^b	32 (5%)	-
GVHD grade at treatment initiation		
I/II	536 (76%)	143 (70%)
III	143 (20%)	61 (30%)
IV	31 (4%)	-
Steroid dose for GVHD Tx (mg/kg of prednisone equivalents) - median [range]	1.48 [1.00-13.4]	-
^a Patients with diseases where DRI has not been defined		
^b Ex-vivo T-cell depletion or Tacrolimus/Sirolimus		

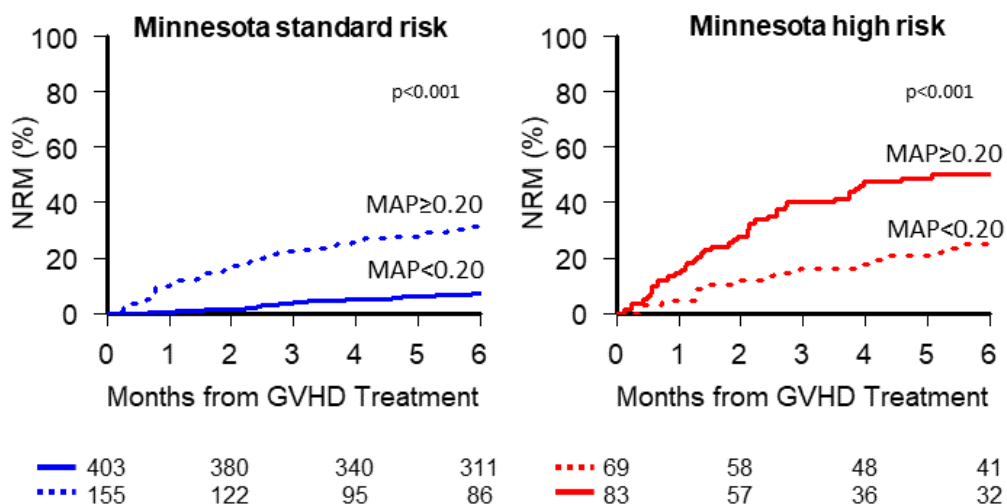
Supplemental table 3. C-indices of HSL and Minnesota models with and without the addition of the MAP score as a continuous variable according to Hartwell et al and Etra et al for the prediction of Day 180 NRM.

Clinical model		HSL model		Minnesota	
Biomarker algorithm		Hartwell et al	Etra et al	Hartwell et al	Etra et al
C-index	Clinical	0.63 (0.58-0.69)		0.62 (0.57-0.68)	
	MAP	0.74 (0.69-0.80)	0.75 (0.69-0.80)	0.74 (0.69-0.80)	0.75 (0.69-0.80)
	Clinical + MAP	0.76 (0.71-0.82)	0.76 (0.71-0.81)	0.75 (0.70-0.81)	0.75 (0.70-0.81)
ΔC-index	Clinical vs Clinical + MAP	0.13 (0.08-0.18)	0.13 (0.08-0.18)	0.13 (0.07-0.18)	0.13 (0.08-0.17)

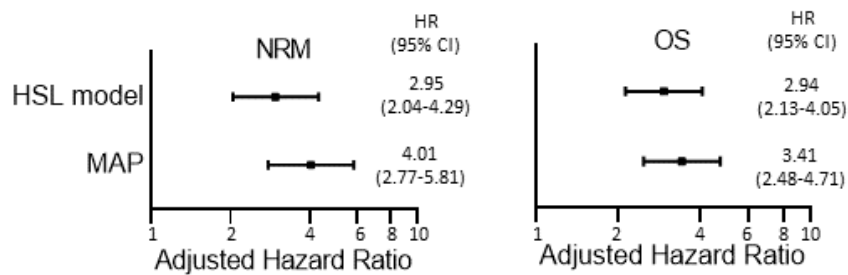
Supplemental figure 1. Overall response rates at D28 after systemic treatment initiation according to combinations of clinical predictor systems (HSL and Minnesota) and the MAP score (low vs high). 1) Blue: left panel - HSL low-risk with low MAP, right panel – Minnesota standard-risk with low MAP. 2) Purple: left panel - HSL low-risk with low MAP or HSL high-risk with high MAP, right panel – Minnesota standard-risk with high MAP or Minnesota high-risk with low MAP. 3) red: left panel - HSL high-risk with high MAP, right panel – Minnesota high-risk with high MAP.



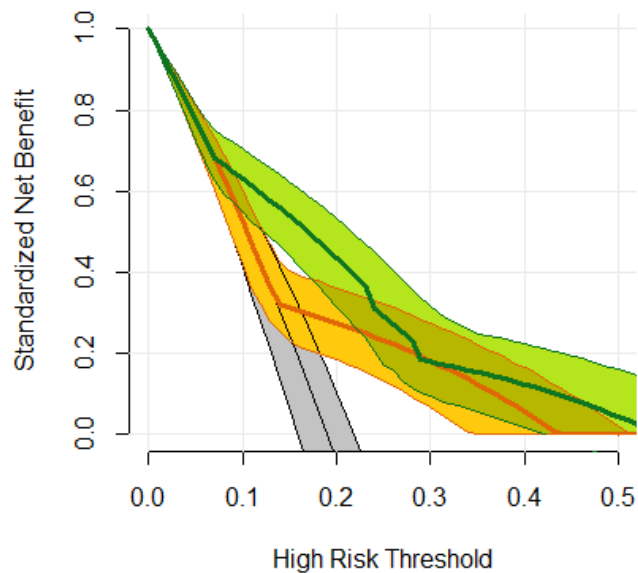
Supplemental figure 2. 6-month NRM for MAGIC patients in the Minnesota standard-risk and high-risk subgroup classified by high vs low MAP.



Supplemental figure 3. Forest plots of adjusted hazard ratios for NRM and OS by multivariate analysis including only the HSL clinical model (low vs high risk), and the binary MAP score (low vs high).



Supplemental figure 4. Decision curve analysis for the HSL clinical model (orange) and the combined HSL clinical and MAP (as a binary variable, MAP \geq 0.20 or MAP<0.20) model (green) for 6-month NRM.



Supplemental figure 5. Decision curve analysis for the Minnesota clinical model (orange) and the combined Minnesota clinical and MAP (as a continuous and as a binary variable) model (green) for 6-month NRM.

