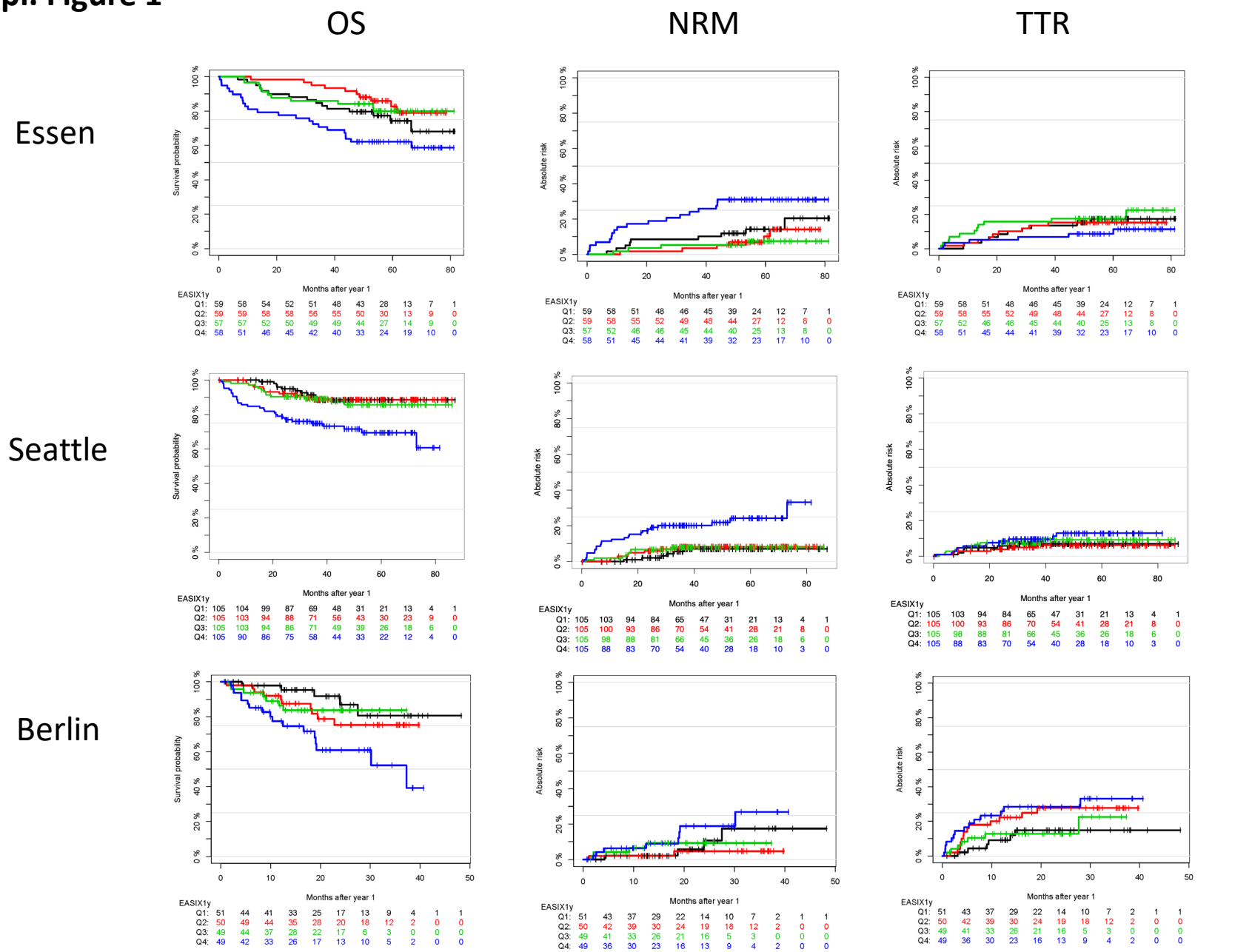
Suppl. Figure 1

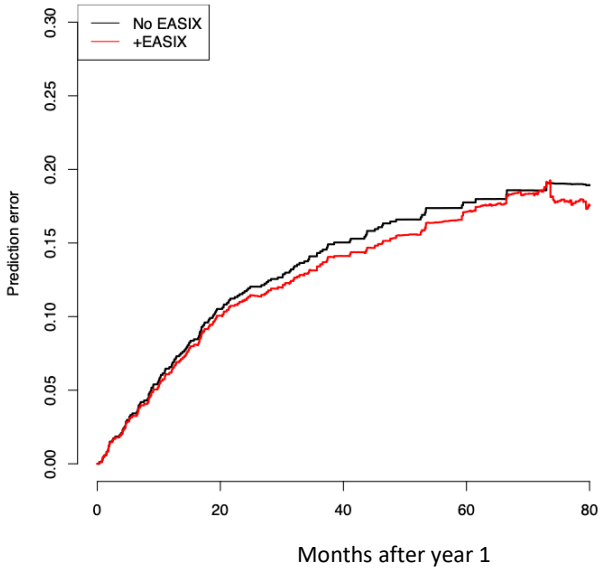


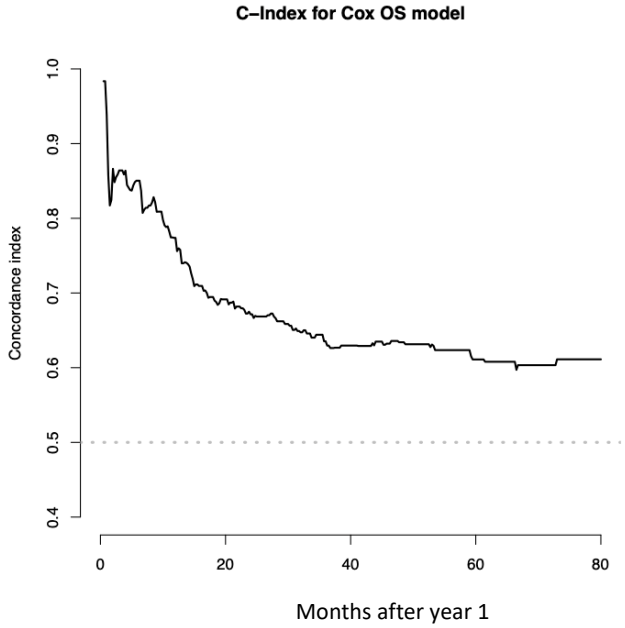
Legend suppl. Figure 1:
EASIX-1year predicts non-relapse mortality in patients surviving without disease progression for 1 year after allogeneic stem cell
Kaplan-Maier curves for overall survival (OS) and cumulative incidences of non-relapse mortality (NRM) and time to relapse (TTR) according to EASIX quartiles raised 1 year after alloSCT in patients without relapse.
The three individual cohorts combined as one validation cohort in **Figure 1B** are shown

Suppl. Figure 2

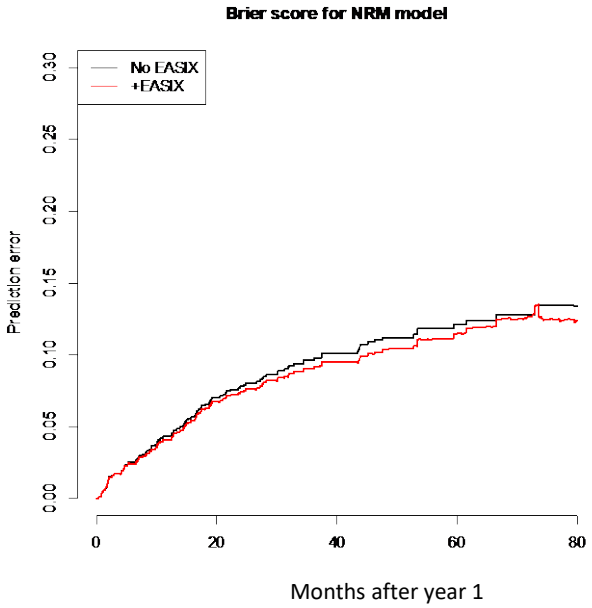
Validation, univariable model, offset HD in Validation cohort

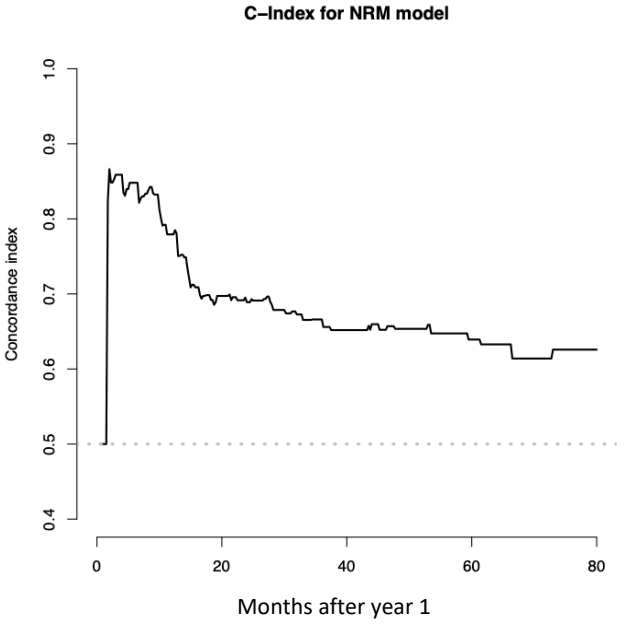
A) OS





B) NRM



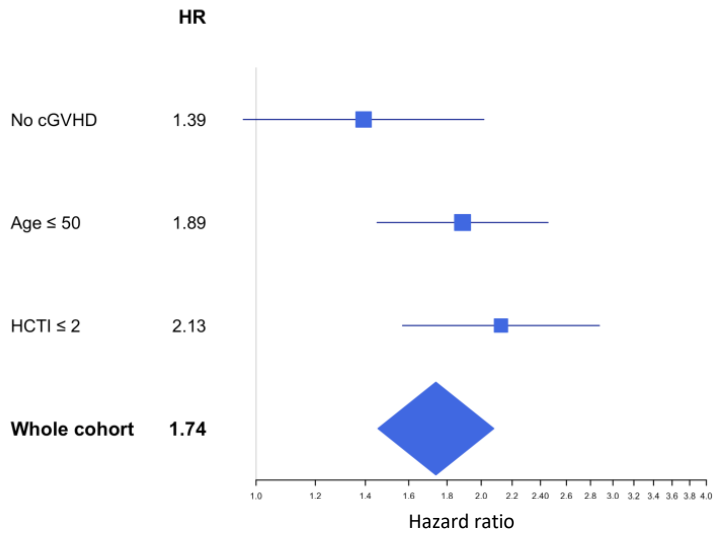


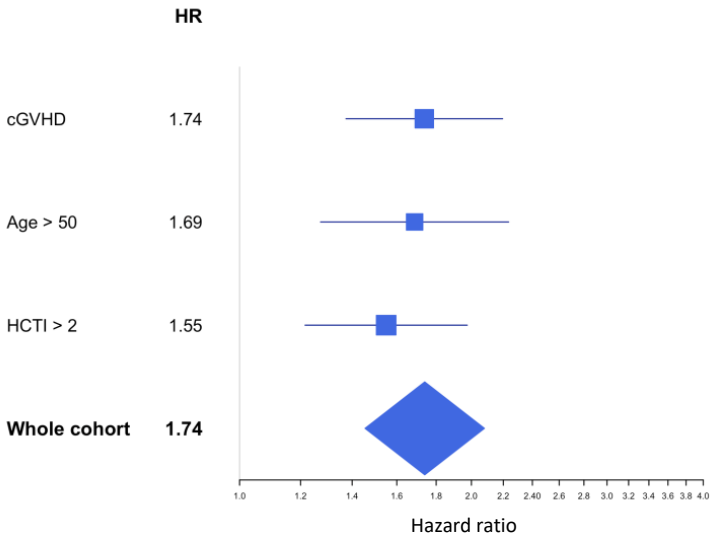
Legend suppl. Figure 2:
EASIX-1year is a validated predictor of non-relapse mortality and overall survival in patients surviving without disease progression for 1 year after allogeneic stem cell
Brier score and c-index analyses for the validation cohort with off-set of the training cohort revealed a predictive impact of EASIX-1year on both, OS and NRM, validating the univariable model (lower prediction errors and higher c-indices with the model including EASIX).

Suppl. Figure 3A

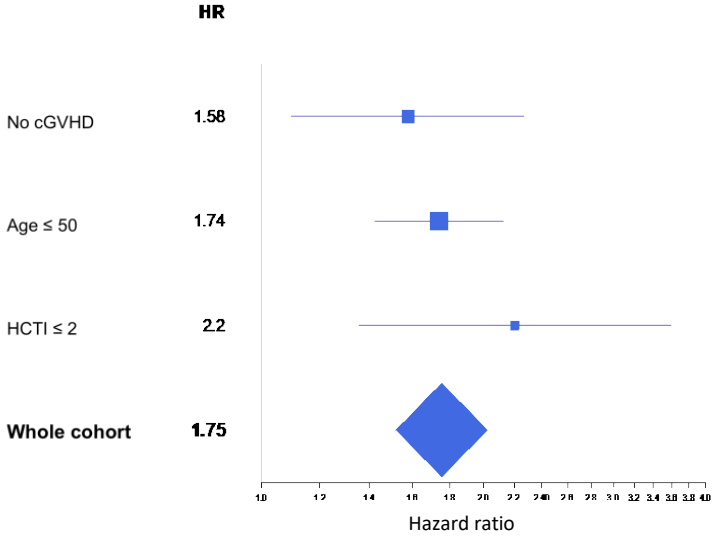
Meta-analyses of the predictive value of EASIX-1y as continuous variable (per log2) for **NRM**.

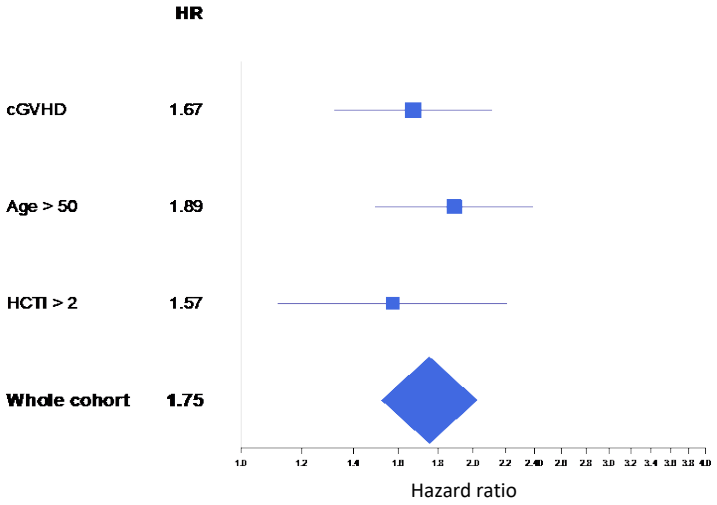
training





validation

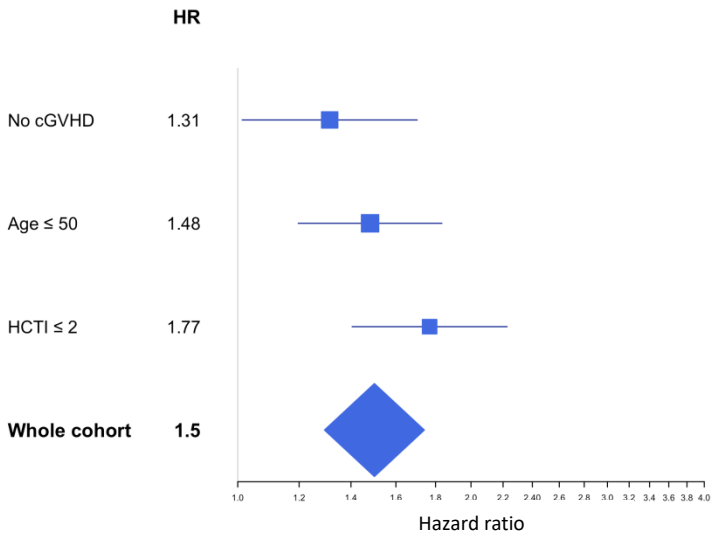


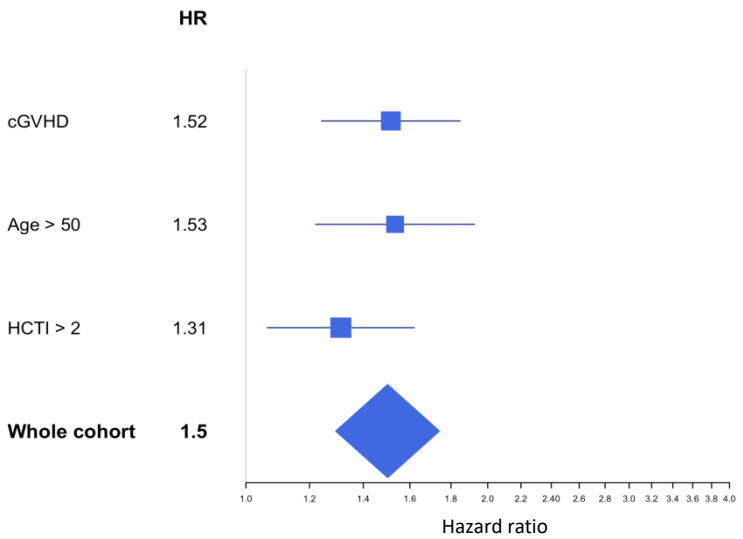


Suppl. Figure 3B

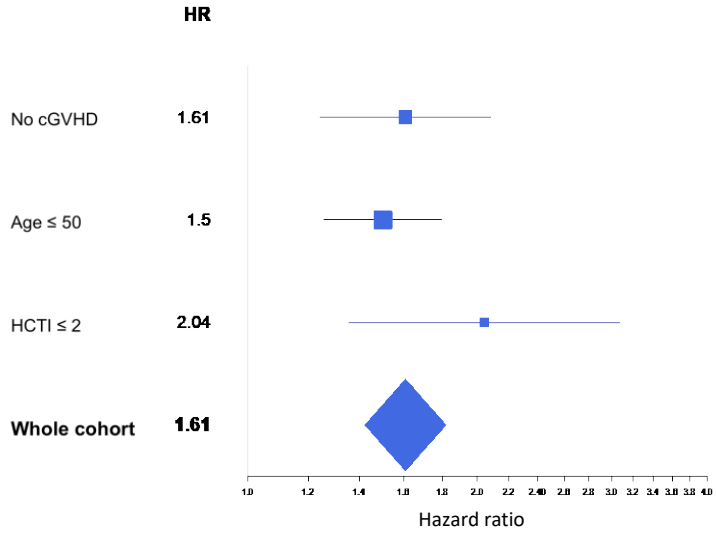
Meta-analyses of the predictive value of EASIX-1y as continuous variable (per log2) for **OS**.

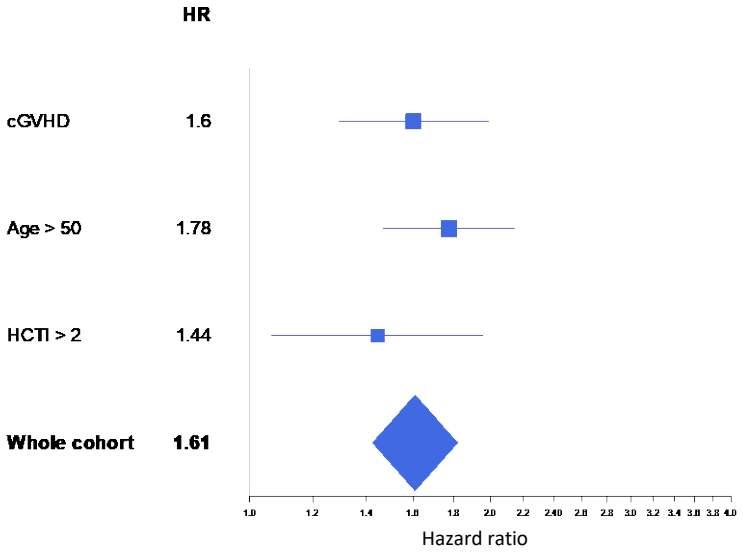
training





validation





Legend suppl. Figure 3:
Meta-analyses of the predictive value of EASIX-1y as continuous variable (per log2)

A) Non-relapse mortality (NRM)
B) Overall survival (OS)

To evaluate differences in the prognostic effect of EASIX-1year between patient subgroups (age above and below 50 years, presence or absence of chronic GVHD, HCT-CI score above or below 2), we performed separate Cox regression models for training and validation cohorts. Forest plots were used to present results for individual subgroups and the combined analysis for training and validation cohort. HCT-CI (validation cohort): only data from cohort III available.

Suppl. Table 1: Patients characteristics, 4 cohorts

		Training Cohort	Validation Cohort I	Validation Cohort II	Validation Cohort III
		Heidelberg, n=610	Berlin, n=199	Essen, n=233	Seattle, n=420
Date of alloSCT		09/2001 - 06/2014	01/2013-12/2015	01/2011 - 12/2013	01/2010 - 12/2013
Median age at alloSCT (years, range)		53 (18-75)	55 (18-74)	52 (20-74)	52 (17-78)
Recipient sex					
	Female	236 (38.7%)	71 (35.7%)	101 (43.4%)	163 (38.8%)
	Male	374 (61.3%)	128 (64.3%)	132 (56.6%)	257 (61.2%)
Donor sex					
	Female	203 (33.3%)	53 (26.6%)	76 (32.6%)	183 (43.6%)
	Male	407 (66.7%)	124 (62.3%)	157 (67.4%)	213 (50.7%)
	Missing	0 (0.0%)	22 (11.1%)	0 (0.0%)	24 (5.7%)
Donor relation					
	MRD	193 (31.6%)	43 (21.6%)	55 (23.6%)	121 (28.8%)
	MUD	304 (49.8%)	127 (63.8%)	155 (66.5%)	207 (49.3%)
	MMUD	100 (16.4%)	26 (13.1%)	23 (9.9%)	36 (8.6%)
	MMRD	7 (1.1%)	3 (1.5%)	0 (0.0%)	5 (1.2%)
	Haplo	6 (1.0%)	0 (0.0%)	0 (0.0%)	10 (2.4%)
	UCB	0 (0.0%)	0 (0.0%)	0 (0.0%)	41 (9.8%)
HLA mismatch					
	No	497 (81.5%)	170 (85.4%)	186 (79.8%)	328 (78.1%)
	Yes	113 (18.5%)	29 (14.6%)	47 (20.2%)	92 (21.9%)
Disease					
	AML	184 (30.2%)	99 (49.8%)	113 (48.5%)	163 (38.8%)
	MPN	47 (7.7%)	23 (11.6%)	55 (23.6%)	53 (12.6%)
	Lymphoma	176 (28.9%)	15 (7.5%)	57 (24.5%)	27 (6.4%)
	MM	70 (11.5%)	23 (11.6%)	8 (3.4%)	0 (0.0%)
	MDS	66 (10.8%)	17 (8.5%)	0 (0.0%)	76 (18.1%)
	ALL	67 (11.0%)	15 (7.5%)	0 (0.0%)	78 (18.6%)
	Other	0 (0.0%)	7 (3.5%)	0 (0.0%)	23 (5.5%)
ATG					
	No	221 (36.2%)	25 (12.6%)	72 (30.9%)	407 (96.6%)
	Yes	389 (63.8%)	173 (86.9%)	161 (69.1%)	13 (3.1%)
	NA	0 (0.0%)	1 (0.5%)	0 (0.0%)	0 (0.0%)
GvHD Prophylaxis					
	MMF	397 (65.1%)	121 (60.8%)	16 (6.9%)	225 (53.6%)
	MTX	213 (34.9%)	78 (39.2%)	217 (93.1%)	195 (46.4%)
conditioning					
	MAC, Apl.	107 (17.5%)	57 (28.6%)	205 (88.0%)	212 (50.5%)
	RIC	503 (82.5%)	142 (71.4%)	28 (12.0%)	208 (49.5%)
HCT-CI					
	0	115 (21%)			62 (21.6%)
	1+2	163 (30%)			96 (33.5%)
	3+4	196 (36%)			87 (30.3%)
	>4	72 (13%)			42 (14.6%)
	n.a.	64 (11%)			133 (31.7%)

MRD=matched related donor, MUD=matched unrelated donor, MMUD=mismatched unrelated donor, MMRD= mismatched related donor, UCB=umbilical cord blood, AML=acute myeloid leukaemia, MPN=Myeloproliferative Neoplasm, MM=multiple myeloma, MDS=myelodysplastic syndrome, ALL=acute lymphoblastic leukaemia, ATG = anti-thymocyte globulin, NA=not available, MAC=myeloablative conditioning, RIC=reduced-intensity conditioning, -aol. = aplasia conditioning, MMF = mycofenolat mofetil; MTX = methotrexate, HCT-CI, haematopoietic strem cell transplantation comorbidity index.

Suppl. Table 2

Cox model with covariates log2(Platelets), log2(creatinine) and log2(LDH) and response NRM in the training cohort. The model corresponds to an individual weighting of each lab parameter of the EASIX score.

Covariate	**CSHR**	**95% CI**	**p**
Thrombocytes (log2)	0.68	0.53-0.88	0.003
Creatinine (log2)	1.85	1.16-2.57	0.010
LDH (log2)	2.76	1.78-4.27	<0.0001

Suppl. Table 3

Multivariable Cox regression, endpoint OS calculated from the 1year landmark

	Training N=550, events=125	**Validation N=654, events=90**
EASIX-1year (log2)	1.33 (1.03-1.72) P= 0.030	1.61 (1.24-2.08) P<0.001
Ongoing or cleared cGVHD	0.81 (0.55-1.19) P=0.278	0.71 (0.42-1.20) P=0.200
EASIX-1year:cGVHD Interaction term	1.12 (0.81-1.54) P=0.494	1.00 (0.71-1.40) P=0.996

Suppl. Table 4

Multivariable Cox regression, end point OS after 1 year and NRM after 1 year
Training cohort, n=486, 109 OS events, 60 NRM events, TTR 76 events

HR, (95% CI), p	OS after 1 year	NRM after 1 year	TTR after 1 year
EASIX-1year (log2)	1.41 (1.19-1.68) p<0.001	1.62 (1.31-2.01) p<0.001	0.98 (0.78-0.89) p=0.890
EASIX-pre (log2)	0.96 (0.83-1.11) p=0.575	1.11 (0.93-1.33) p=0.243	0.80 (0.66-0.97) p=0.024
HCT-CI 1+2 3+4 >4	 0.76 (0.43-1.33) p=0.331 1.10 (0.66-1.84), p=0.714 1.74 (0.93-3.24) p=0.083	 0.77 (0.35-1.71) p=0.524 1.01 (0.48-2.16), p=0.985 2.13 (0.93-4.85), p=0.072	 0.52 (0.26-1.02) p=0.058 1.02 (0.58-1.80), p=0.936 0.90 (0.40-2.02) p=0.803
EBMT 1+2 >2	 1.37 (0.81-2.31), p=0.3234	 0.84 (0.46-1.54), p=0.568	 3.47 (1.40-8.649) p=0.007

Excluded from this analysis were 64 patients without available HCT-CI scores and 60 patients without available EBMT scores.

Suppl. Table 5

Multivariable Cox regression, endpoints OS and NRM **calculated from the 1y landmark** , pooled validation cohort, n=791, 151 OS events and 95 NRM events

HR, (95% CI), p	**OS after 1 year**	**NRM after 1 year**
EASIX-1year (log2)	1.59 (1.39-1.81) p<0.001	1.75 (1.50-2.05) p<0.001
EASIX-pre (log2)	1.08 (0.95-1.22) p=0.242	1.08 (0.93-1.26) p=0.322

Suppl. Table 6

Multivariable Cox regression, endpoints OS and NRM **calculated from the 1y landmark**
Validation cohort III (Seattle), n=287, 44 OS events and 29 NRM events

HR, (95% CI), p	**OS after 1 year**	**NRM after 1 year**
EASIX-1year (log2)	1.44 (1.14-1.82) p=0.002	1.61 (1.21-2.14) p=0.011
EASIX-pre (log2)	1.26 (1.03-1.55) p=0.026	1.15 (0.87-1.51) p=0.337
HCT-CI 1+2 3+4 >4	 0.55 (0.24-1.23) p=0.143 0.33 (0.13-0.85), p=0.022 1.14 (0.49-2.64) p=0.766	 0.64 (0.20-1.45) p=0.220 0.31 (0.10-0.99), p=0.048 0.98 (0.34-2.86), p=0.972