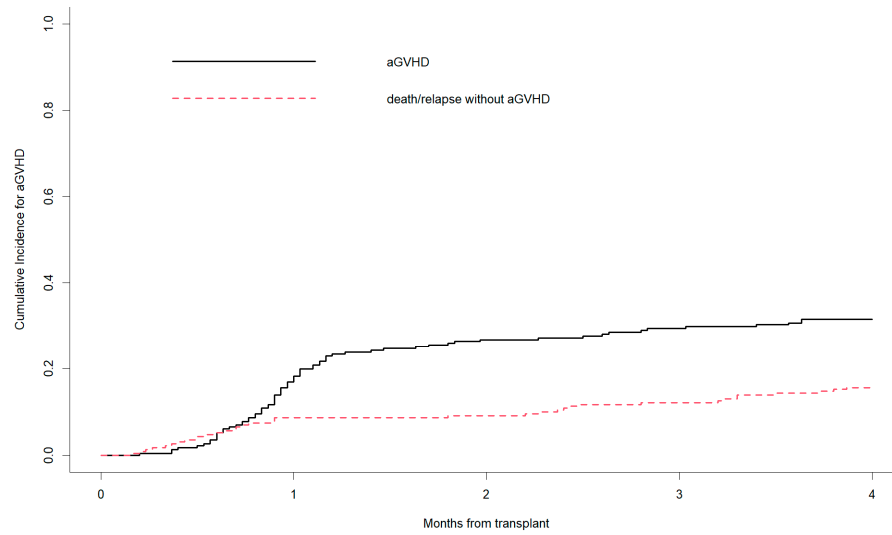
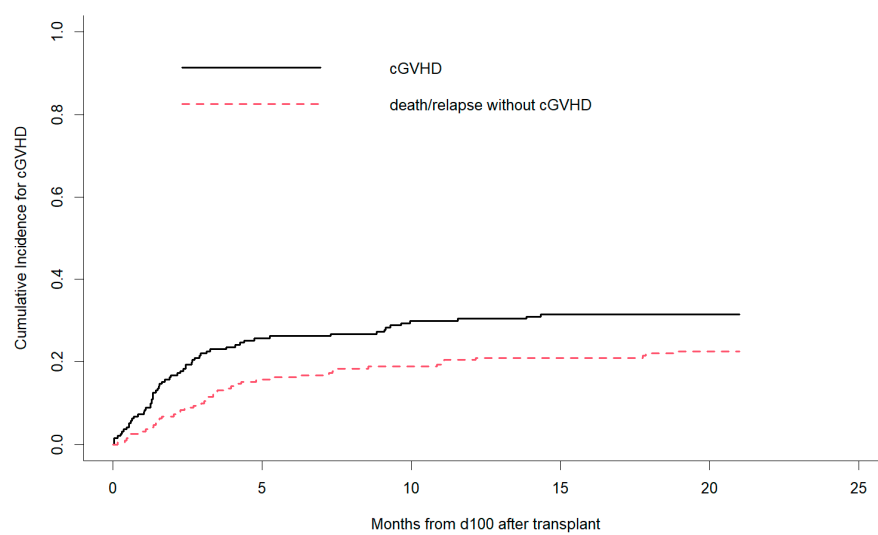


## Supplementary material

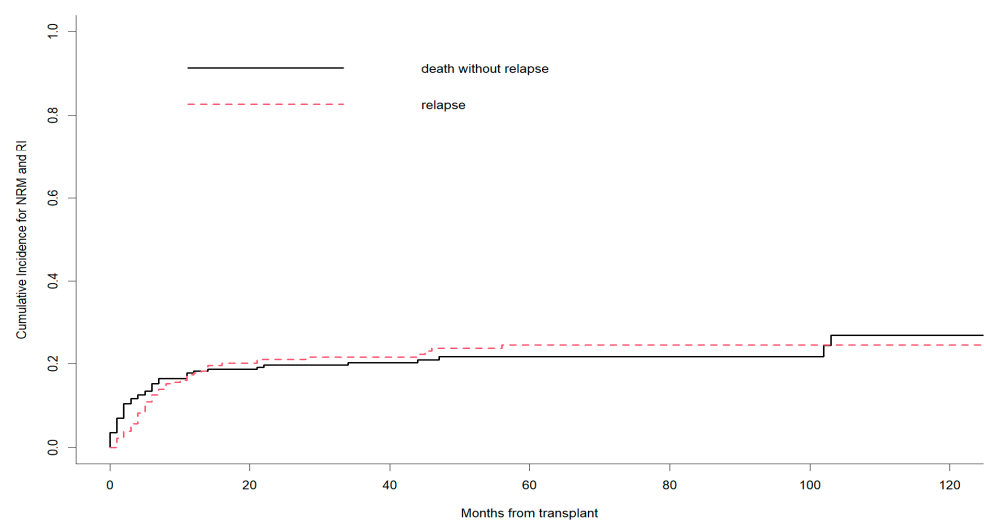
**Figure S1.** Cumulative incidence of aGVHD and death/relapse without aGVHD.



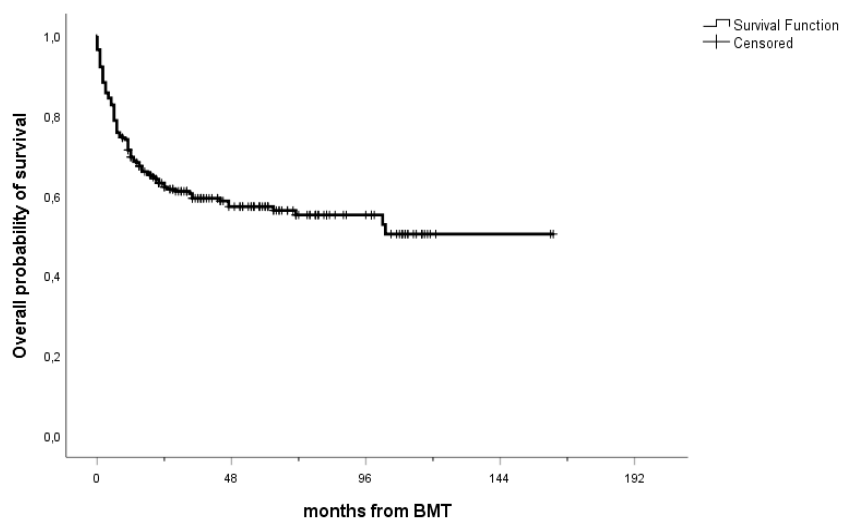
**Figure S2.** Cumulative incidence of cGVHD and death/relapse without cGVHD.



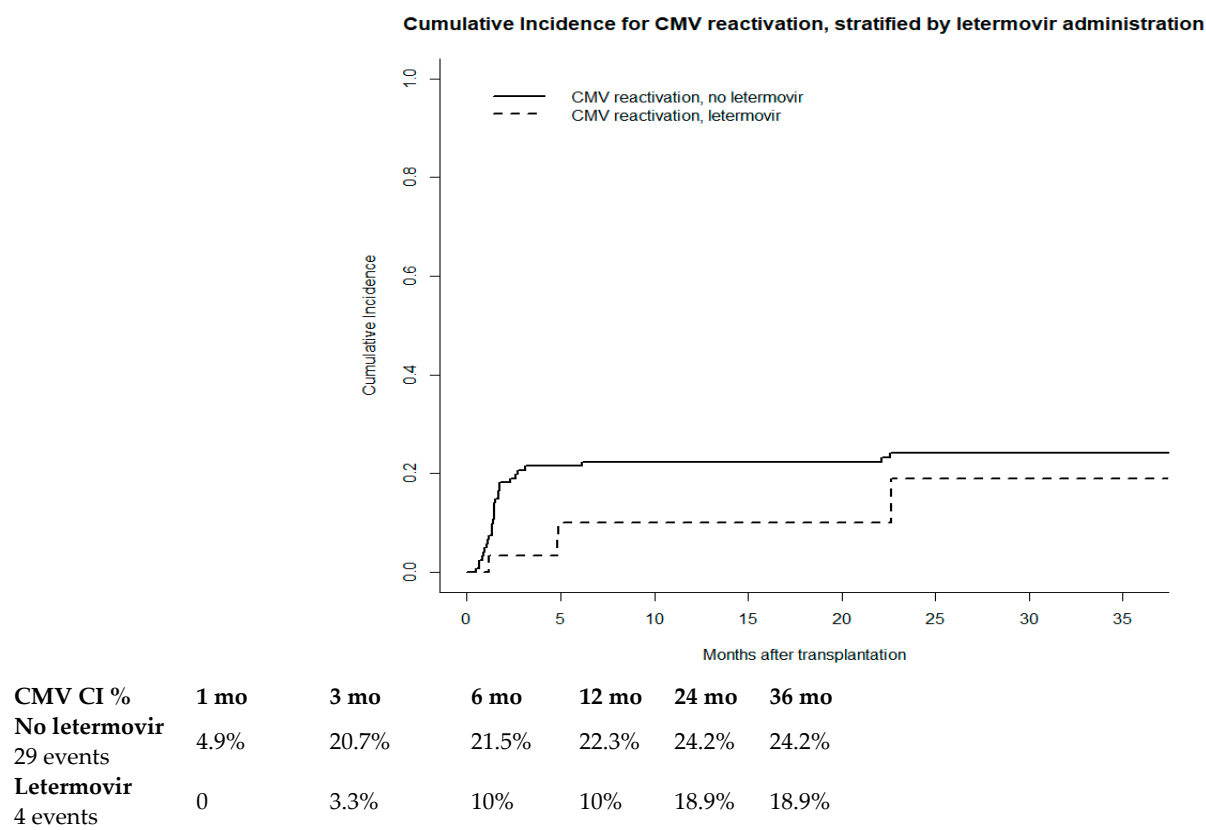
**Figure S3.** Cumulative incidence of NRM and RI.



**Figure S4.** Overall Survival for the whole cohort.



**Figure S5.** Cumulative incidence for CMV reactivation, stratified by letermovir prophylaxis.



**Table S1.** Cumulative incidence for NRM (at 1 year) and RI (at 2 years), overall and stratified by the main risk factors.

Characteristics	NRM at 1 yr	p-value*	RI at 2 yrs	p-value*
Overall cumulative incidence	18.2%	-	21.0%	-
<i>Age at transplant</i>				
<40 yrs	6.7%	<0.001	27.2%	0.116
40-60 yrs	14.8%		22.8%	
>60 yrs	35.1%		12.3%	
<i>Gender</i>				
Male	19.0%	0.570	24.0%	0.447
Female	17.2%		17.4%	
<i>Underlying disease</i>				
AML/ALL	17.5%	0.489	22.9%	0.501
other	18.6%		20.0%	
<i>HCT-CI</i>				
0-2	6.7%	0.007	14.5%	0.021
≥3	25.5%		27.6%	
<i>Cytogenetics</i>				
Low risk	15.1%	0.996	9.6%	0.005
Interm/High	16.7%		27.3%	
<i>Disease status at transplant</i>				
CR1	16.3%	0.949	17.4%	0.239
other	16.2%		26.0%	
<i>CMV Donor status</i>				
negative	19.5%	0.444	19.6%	0.292
positive	14.8%		23.6%	
<i>CMV Recipient status</i>				
negative	12.0%	0.042	21.4%	0.953
positive	20.8%		19.6%	
<i>Stem cell source</i>				
PBSC	38.5%	0.194	21.3%	0.829
BM	17.0%		15.4%	
<i>Number of Ly at ATG administration,</i>				
under median	19.9%	0.522	22.9%	0.998
over median	15.9%		19.6%	
<i>Number of CD34+ cells infused</i>				
under median	14.3%	0.171	19.8%	0.611
over median	20.4%		22.5%	
<i>Number of CD3+ cells infused</i>				
under median	15.8%	0.800	21.8%	0.669
over median	15.0%		19.5%	
<i>Duration of neutropenia,</i>		0.057		0.997

under median	9.0%		20.8%	
over median	16.8%		22.0%	
<i>Conditioning regimen</i>				
MAC	15.6%	0.012	21.3%	0.674
RIC	34.6%		18.9%	
<i>Recipient-donor HLA</i>				
<i>matched alleles</i>				
10/10 & 9/10	17.3%	0.683	22.7%	0.131
≤8/10	19.6%		15.2%	
<i>Year of transplant</i>				
2008-2012	31.9%	0.031	23.4%	0.595
2013-2017	15.3%		21.5%	
2018-2021	14.0%		18.7%	
<i>Acute GvHD</i>				
0-I	17.6%	0.236	25.0%	0.021
II-IV	19.5%		13.1%	
<i>Chronic GvHD</i>				
absent/mild	22.4%	0.136	27.0%	<0.001
moderate/severe	7.6%		6.2%	

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\* Comparisons calculated using Gray-test.

**Table S2.** Univariate and multivariate Cox proportional hazard models for Overall Survival after allogeneic HSCT

	Univariate models		Multivariate model	
	HR (95% CI)	P-value	HR (95%CI)	p-value
Age	1.30 (0.73-	0.080	1.30 (0.73-	0.127
(40-60 vs. <40 years)	2.31)	0.369	2.31)	0.157
(>60 vs. <40 years)	1.93 (1.04-	0.038	1.93 (1.04-	0.976
	3.59)		3.59)	
Gender (male vs. female)	1.30 (0.87-	0.201	-	-
	1.95)			
Underlying disease (AML/ALL vs. other)	1.06 (0.69-	0.795	-	-
	1.62)			
HCT-CI ( $\geq 3$ vs. 0-2)	3.11 (1.86-	<0.001	3.09 (1.70-	<0.001
	5.21)		5.63)	
Cytogenetics (interm/high vs. low risk)	1.80 (1.02-	0.044	1.46 (0.77-	0.248
	3.20)		2.79)	
Disease status at transplant (other vs. CR1)*	1.27 (0.70-	0.434	-	-
	2.30)			
HLA (mismatched vs. matched)	0.84 (0.50-	0.493	-	-
	1.40)			
CMV donor status (positive vs. negative)	1.07 (0.71-	0.750	-	-
	1.61)			
CMV recipient status (positive vs. negative)	1.69 (1.04-	0.035	1.00 (0.45-	0.994
	2.76)		2.25)	
Year of transplant (2013-2017 vs. 2008-2012)	0.51 (0.32-	0.007	2.10 (0.50-	0.288
	0.82)	0.005	8.79)	0.309
(2018-2021 vs. 2008-2012)	0.49 (0.29-	0.007	1.32 (0.30-	0.712
	0.82)		5.71)	
Graft source (PBSC vs. BM)	0.76 (0.35-	0.487	-	-
	1.64)			
Number of Ly at ATG administration (over vs. under median), $10^6/l$	0.86 (0.58-	0.470	-	-
	1.29)			
Number of CD34+ cells infused (over vs. under median), $10^6/kg$	1.34 (0.89-	0.169	-	-
	2.02)			
Number of CD3+ cells infused (over vs. under median), $10^8/kg$	0.89 (0.57-	0.892	-	-
	1.40)			
Duration of neutropenia (over vs. under median), days	1.36 (0.88-	0.172	-	-
	2.11)			



Conditioning (RIC vs. MAC)	1.71 (1.02-2.90)	0.044	1.15 (0.48-2.76)	0.749
Acute GvHD II-IV (yes vs. no) *	0.66 (0.39-1.13)	0.130	-	-
Chronic GvHD moderate-severe (yes vs. no) *	0.19 (0.09-0.40)	<0.001	0.12 (0.04-0.43)	0.001