

Supplementary Tables and Figures – MS#ADV-2023-0009840

Table 1 – Disease status at transplantation

	MAC	RIC
n	32	46
Diagnoses		
AML	14 (43.8)	25 (54.3)
CR1	8	13
CR2	6	11
>CR2	0	1
ALL	9(28.1)	3(6.5)
CR1	7	1
CR2	2	2
CML		
CP1	1(3.1)	0
MDS	3 (9.3)	2 (4.3)
NHL:	3 (9.3)	7 (15.2)
CR1	0	1
CR2	1	1
>CR2/PR	2	5
HL	0	4 (8.7)
CR1	-	0
CR2	-	2
>CR2/PR	-	2
MPD	2 (6.2)	3 (6.5)
MM CR1	-	1 (2.2)
CLL PR	-	1 (2.2)

Table 2: VOD characteristics and outcome

Patient	HSCT	Day post HSCT	Severity*	Outcome
RAH01 59yo M AML CR2	RIC	D157	Severe	Deceased D 232 COD: GHVD, graft failure
RMH16 50yo M AML CR2	MAC	D34	Very severe	Alive after a course of defibrotide
SVH14 20yo M ALL CR2	MAC	D28	Moderate	VOD responded to Defibrotide Rx Deceased D 1065 COD: Chronic GVHD lung post DLI
SVH21 31yo F ALL CR1	MAC	D35	Very Severe	Alive after a course of defibrotide

Abbreviations: VOD = veno-occlusive disease, MAC = myeloablative HSCT, RIC = reduced intensity HSCT, COD= cause of death. DLI – Donor lymphocyte infusion. * as measured by EBMT criteria 2016.

Table 3: Cause of death due to transplant-related mortality (TRM) at 12 months post HSCT

3(a) – MAC recipients

Patient	Day post HSCT	Cause of death
RMH17 38yo M CML CP1	273	GVHD
SVH 02 28yo F AML CR1	156	Sepsis/secondary graft failure
SVH 01 44yo M MDS	304	Progressive disease post First MAC Haplo Died post Second RIC Haplo from VOD
SVH 05 54yo F ALL CR1	67	Severe gut GVHD
WMH 01 22yo M ALL CR1	149	Multi-organ failure
WMH04 38yo F NHL CR3	28	Respiratory failure

3(b) – RIC recipients

Patient	Days post HSCT	Cause of death
RAH01 59yo M AML CR2	232	GVHD/graft failure
RMH010 59yo M AML CR1	233	Respiratory failure due to interstitial pneumonitis and lung cGVHD
SVH016 55yo M AML CR1	123	Fungal and bacterial infection
WMH21 69yo M AML CR2	39	Bacterial infection

Table 4: Individual Tapering of CNI with timelines and outcome**Table 4(a):** Early disease recurrence/low chimerism – excluded from elective CNI analysis.

Patient	Chimerism D40	CNI Stop (day)	Acute GVHD D100	Chronic GVHD 1 year	Outcome	Survival days
SVH01	0%	43	no	-	Death from VOD second HSCT	304
SVH10	52%	60	no	-	Disease Recurrence	175
WMH19	76%	89	II	no	Alive	530
RNS02	95%	126	no	-	Relapse D111, death D196	196
SVH16	95%	72	II	-	Relapse D85	123
SVH02	100%	81	no	-	Secondary graft failure despite DLI	156

Table 4(b): Early TRM (< D120) – excluded from elective CNI analysis.

Patient	CNI Stop (day)	Acute GVHD D100	Chronic GVHD 1 year	Cause of death	Survival days
SVH05	67	III	-	GVHD gut	67
WMH04	28	-	-	Respiratory failure	28
WMH21	39	-	-	Bacterial infection	39

Table 5: Donor Lymphocyte infusions

Patient	Indication	Day	CD3 Dose X 10⁶/kg	Outcome	Alive (y/n)	Day
SVH02	Secondary Graft failure	105	0.5	Death due to infection/graft failure	n	156
RAH01	Donor chimerism 71%	122	0.5	Acute GVHD III on day 141 Death from GVHD	n	232
RAH02	Loss of chimerism	601	0.5	No GVHD but continued pancytopenia. Multiple infections	n	781
WMH13	Early disease recurrence (molecular)	125	0.5	No GVHD	y	1016
SVH13	Pancytopenia Full donor chimerism	166	0.5	Moderate Chronic GVHD	y	1096
SVH14	Pre-emptive ALL CR2	121	0.5	Severe chronic GVHD CNS Relapse of disease	n	1065

Figure 1: CMV viraemia cumulative incidence (using CMV +ve recipients as denominator)

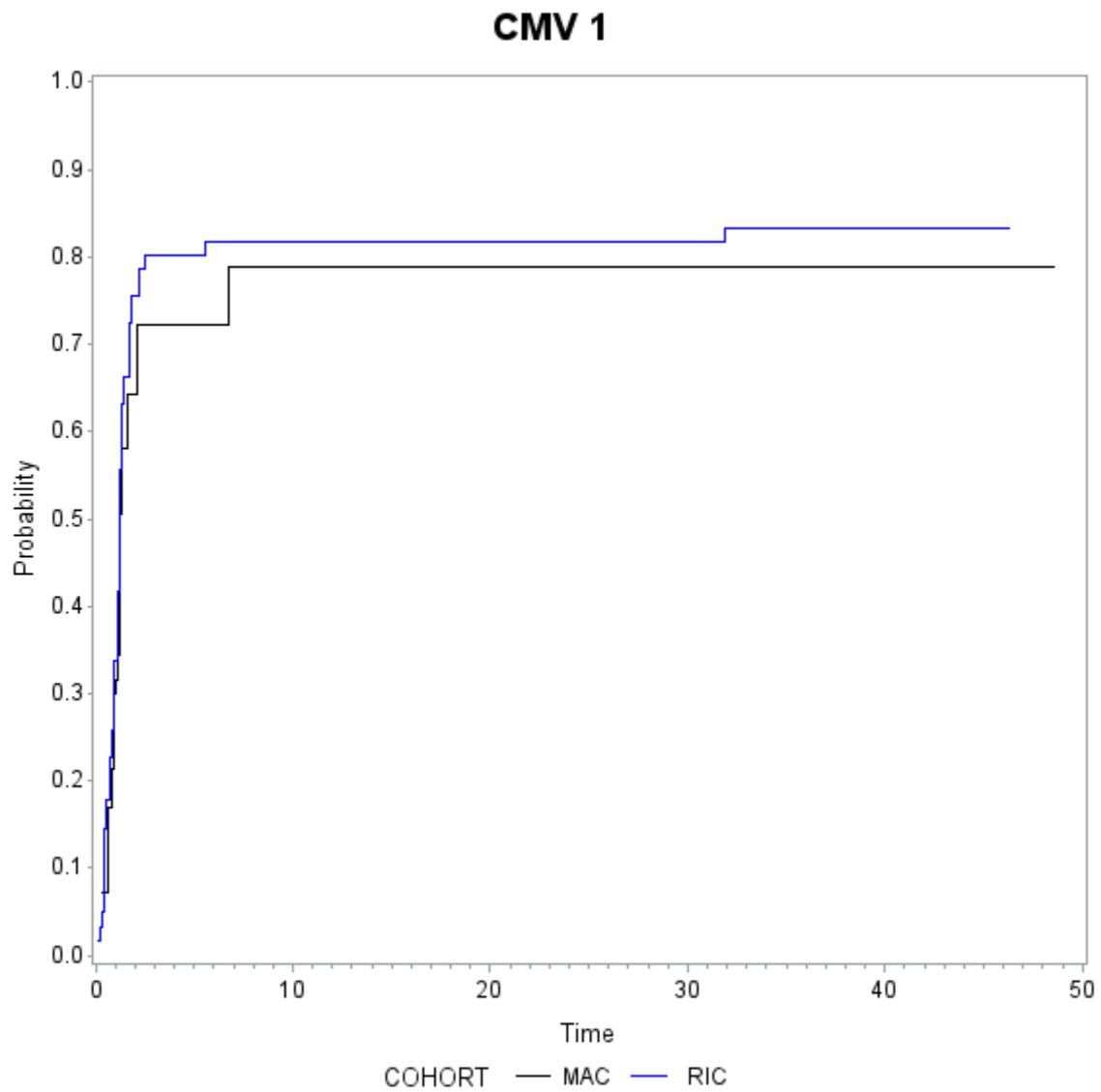


Figure 2: CNI cessation cohorts

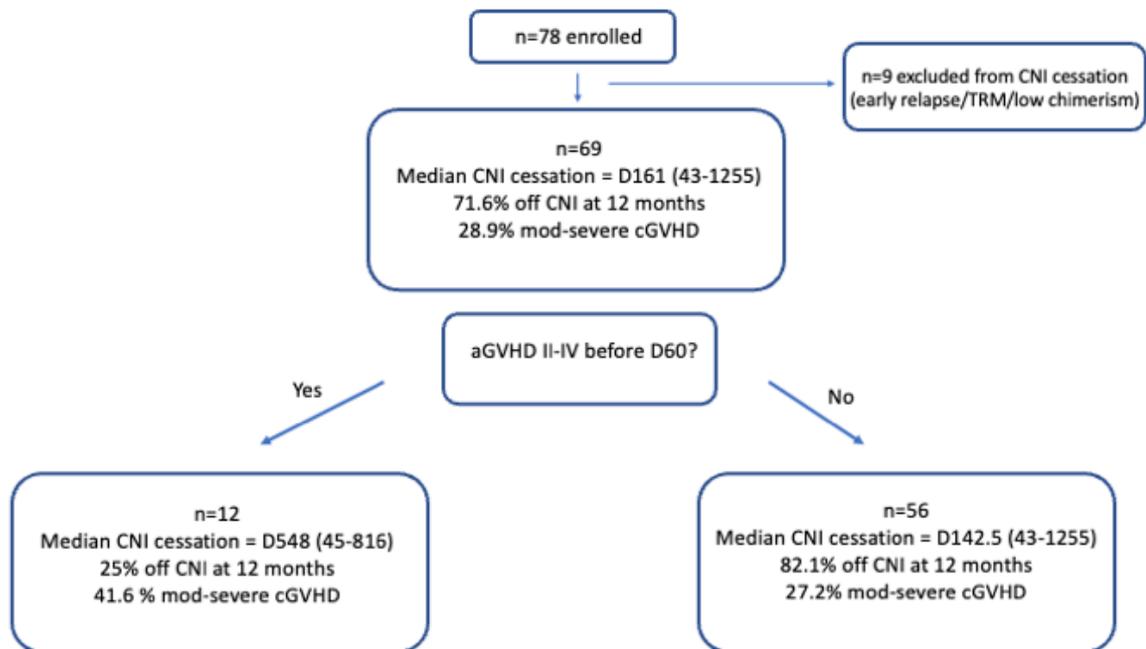
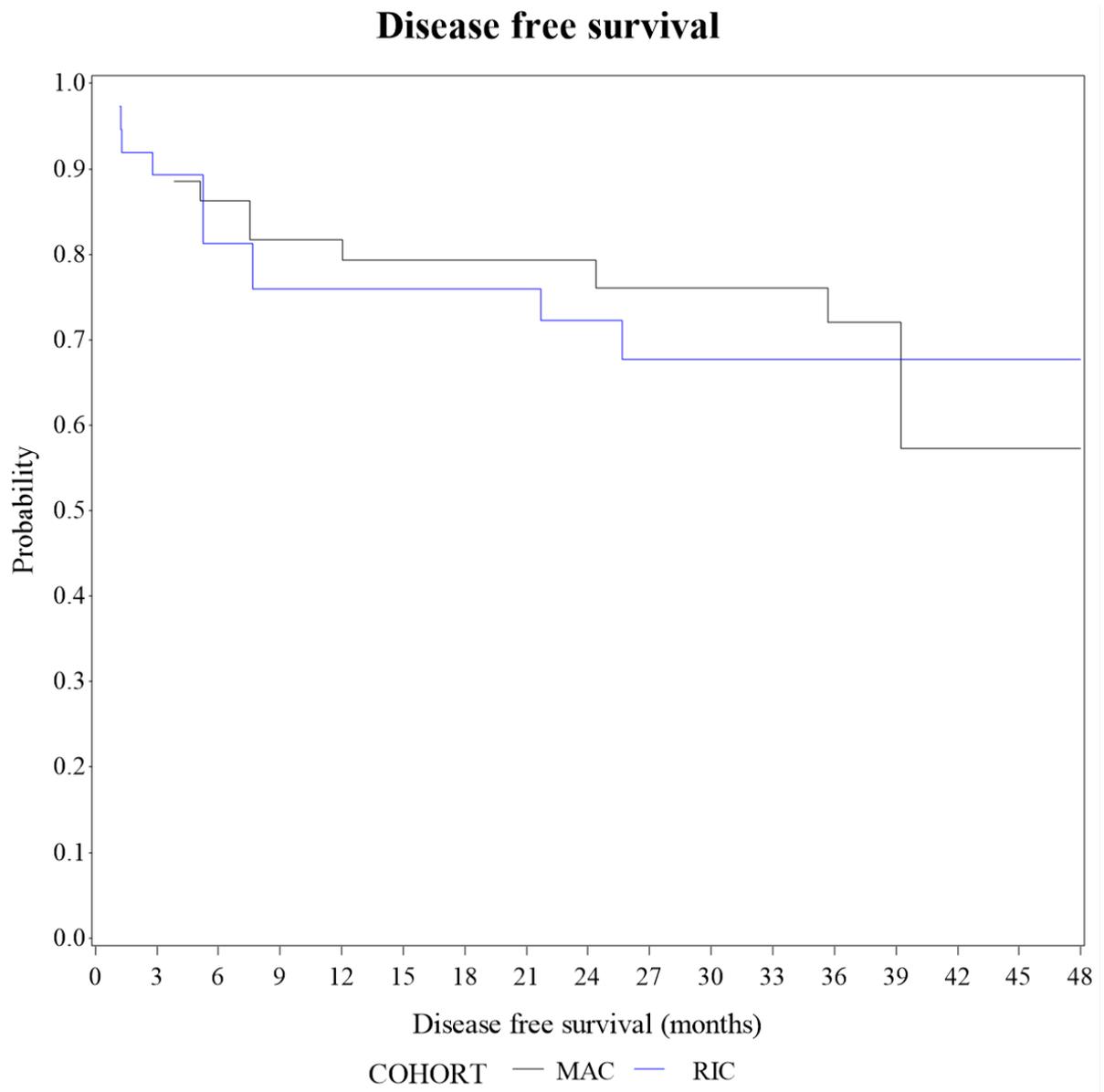


Figure 3: AML survival curves

3(a): AML Disease Free Survival



3(b): AML overall survival

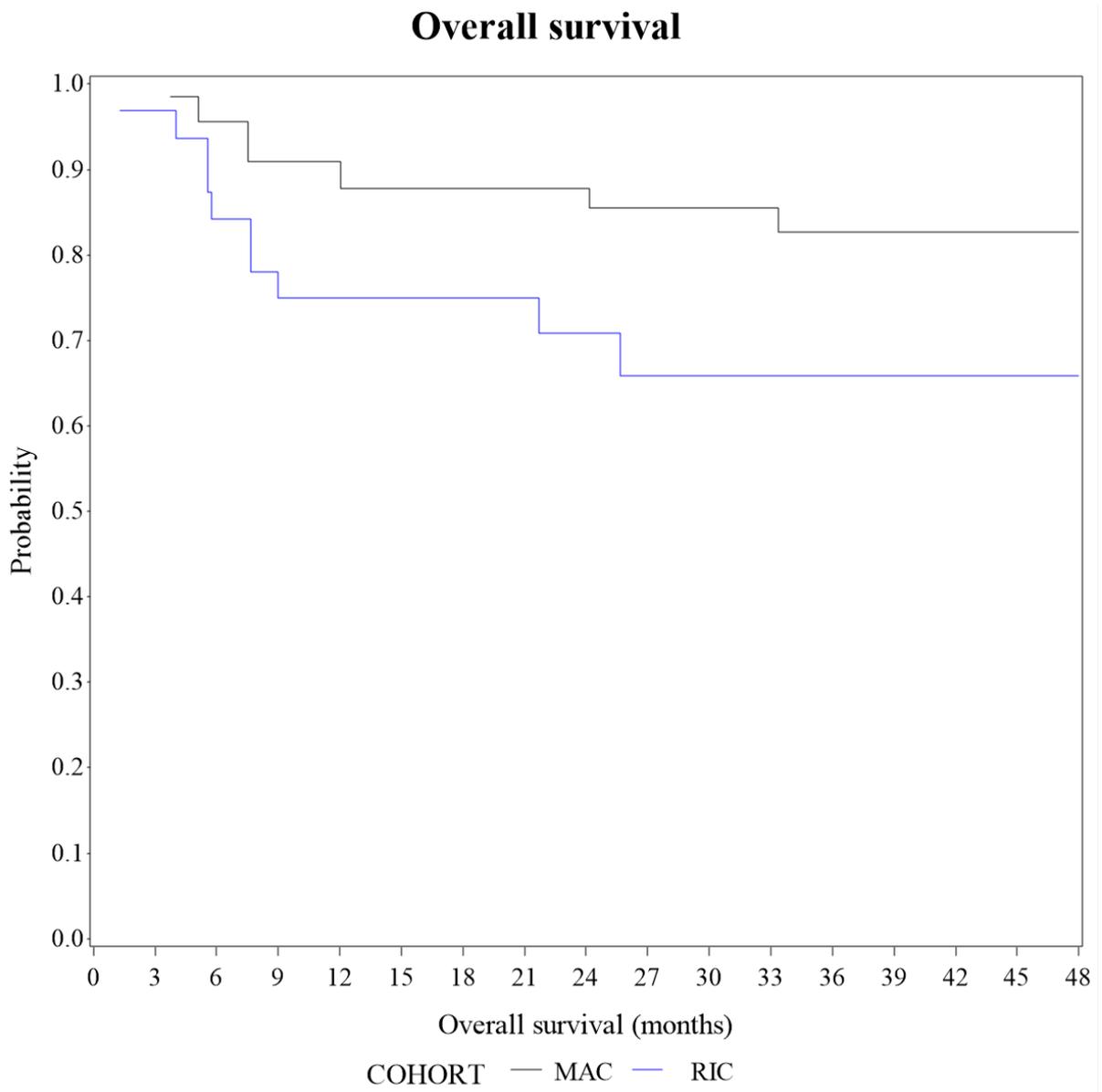


Table 6: Univariate analysis – Disease Free Survival

Covariate	Comparison	Point Estimate	Lower 95% Wald Confidence Limit	Upper 95% Wald Confidence Limit	Pr > ChiSq
Cohort	MAC vs RIC	1.033	0.486	2.196	0.9324
Age group (patient)	<60 years vs >=60 years	1.106	0.470	2.605	0.8170
DRI	High/V high vs Low/Int	2.334	0.980	5.559	0.0557
Previous autologous transplant	No vs Yes	1.745	0.414	7.359	0.4485
HCT CL (age)	<3 vs >=3	0.748	0.259	2.159	0.5913
Age group (donor)	<40 years vs >=40 years	0.736	0.345	1.574	0.4296
CMV status of patient/donor	Patient and donor negative vs Patient and donor positive	0.579	0.194	1.729	0.4205
	Patient and donor negative vs Patient positive/donor negative	0.985	0.277	3.509	.
	Patient and donor positive vs Patient positive/donor negative	1.702	0.653	4.434	.
AML	AML vs Other	0.746	0.353	1.578	0.4434
aGVHD grade II-IV	Grade II-IV aGVHD vs None/grade I aGVHD	0.933	0.422	2.063	0.8631
Elective cessation of CNI <D120 excluding non-electives	CNI ceased > 120 days vs CNI electively ceased <= 120 days	0.629	0.259	1.532	0.3075
cGVHD within 12 months	Mod/severe vs None/mild	1.171	0.527	2.602	0.6979
CR at transplant	No vs Yes	0.678	0.203	2.261	0.5271
Donor relationship	Child vs Other	0.610	0.199	1.866	0.5879
	Child vs Sibling	0.668	0.283	1.581	.
	Other vs Sibling	1.096	0.398	3.020	.
CD34 dose category	< median vs >= median	0.989	0.447	2.188	0.9777
CD3 count category	< median vs >= median	0.724	0.342	1.532	0.3984
cd34cat2	CD34 dose <5 vs CD34 dose =5	0.824	0.359	1.889	0.5969
	CD34 dose <5 vs CD34 dose >5	1.450	0.446	4.712	.
	CD34 dose =5 vs CD34 dose >5	1.760	0.581	5.325	.

Table 7: Univariate analysis – overall survival

Covariate	Comparison	Point Estimate	Lower 95% Wald Confidence Limit	Upper 95% Wald Confidence Limit	Pr > ChiSq
Cohort	MAC vs RIC	1.085	0.480	2.451	0.8448
Age group (patient)	<60 years vs >=60 years	1.163	0.461	2.934	0.7492
DRI	High/V high vs Low/Int	2.509	1.038	6.064	0.0410
Previous autologous transplant	No vs Yes	2.978	0.401	22.097	0.2859
HCT CL (age)	<3 vs >=3	0.683	0.233	2.006	0.4882
Age group (donor)	<40 years vs >=40 years	0.794	0.347	1.818	0.5852
CMV status of patient/donor	Patient and donor negative vs Patient and donor positive	0.508	0.147	1.757	0.2390
	Patient and donor negative vs Patient positive/donor negative	1.242	0.273	5.657	.
	Patient and donor positive vs Patient positive/donor negative	2.443	0.762	7.826	.
AML	AML vs Other	0.724	0.321	1.631	0.4355
aGVHD grade II-IV	Grade II-IV aGVHD vs None/grade I aGVHD	0.814	0.337	1.965	0.6465
Elective cessation of CNI <D120 excluding non-electives	CNI ceased > 120 days vs CNI electively ceased <= 120 days	0.613	0.236	1.596	0.3161
cGVHD within 12 months	Mod/severe vs None/mild	1.412	0.617	3.232	0.4135
CR at transplant	No vs Yes	0.824	0.244	2.778	0.7543
Donor relationship	Child vs Other	0.517	0.167	1.599	0.4634
	Child vs Sibling	0.944	0.378	2.358	.
	Other vs Sibling	1.826	0.630	5.294	.
CD34 dose category	< median vs >= median	1.061	0.452	2.488	0.8922
CD3 count category	< median vs >= median	0.682	0.303	1.536	0.3551
cd34cat2	CD34 dose <5 vs CD34 dose =5	0.807	0.337	1.935	0.3099
	CD34 dose <5 vs CD34 dose >5	2.554	0.542	12.041	.
	CD34 dose =5 vs CD34 dose >5	3.164	0.718	13.933	.

Table 8: Univariate analysis – Graft versus host disease, relapse-free survival (GRFS)

Covariate	Comparison	Point Estimate	Lower 95% Wald Confidence Limit	Upper 95% Wald Confidence Limit	Pr > ChiSq
Cohort	MAC vs RIC	0.776	0.395	1.522	0.4598
Age group (patient)	<60 years vs >=60 years	0.920	0.443	1.912	0.8235
DRI	High/V high vs Low/Int	2.358	1.099	5.062	0.0277
Previous autologous transplant	No vs Yes	0.908	0.319	2.585	0.8567
HCT CL (age)	<3 vs >=3	0.588	0.244	1.417	0.2366
Age group (donor)	<40 years vs >=40 years	0.769	0.393	1.504	0.4424
CMV status of patient/donor	Patient and donor negative vs Patient and donor positive	0.867	0.351	2.141	0.6610
	Patient and donor negative vs Patient positive/donor negative	1.282	0.427	3.852	.
	Patient and donor positive vs Patient positive/donor negative	1.479	0.632	3.462	.
AML	AML vs Other	0.884	0.457	1.710	0.7146
Elective cessation of CNI <D120 excluding non-electives	CNI ceased > 120 days vs CNI electively ceased <= 120 days	1.259	0.587	2.699	0.5547
CR at transplant	No vs Yes	0.731	0.257	2.077	0.5567
Donor relationship	Child vs Other	1.093	0.385	3.104	0.8841
	Child vs Sibling	0.878	0.425	1.813	.
	Other vs Sibling	0.803	0.299	2.154	.
CD34 dose category	< median vs >= median	0.762	0.367	1.584	0.4665
CD3 count category	< median vs >= median	0.633	0.326	1.230	0.1772
cd34cat2	CD34 dose <5 vs CD34 dose =5	0.627	0.293	1.346	0.3372
	CD34 dose <5 vs CD34 dose >5	1.080	0.392	2.974	.
	CD34 dose =5 vs CD34 dose >5	1.721	0.690	4.297	.

Table 9: Univariate analysis – transplant related mortality

Covariate	Hazard ratio	comparison	P value
Cohort	1.60159	MAC vs RIC	0.36492
Age group (patient)	2.37396	<60 years vs >=60 years	0.25175
DRI	0.86521	High/V high vs Low/Int	0.84307
Age group (donor)	0.94312	<40 years vs >=40 years	0.91670
CMV status of patient/donor	1.15395	Patient and donor negative vs Patient and donor positive	0.64642
CMV status of patient/donor	2.20033	Patient and donor negative vs Patient positive/donor negative	.
CMV status of patient/donor	1.90678	Patient and donor positive vs Patient positive/donor negative	.
AML	0.55559	AML vs Other	0.28808
aGVHD grade II-IV	0.79302	Grade II-IV aGVHD vs None/grade I aGVHD	0.69612
Elective cessation of CNI <D120 excluding non-electives	0.39630	CNI ceased > 120 days vs CNI electively ceased <= 120 days	0.20529
cGVHD within 12 months	1.31014	Mod/severe vs None/mild	0.61902
CR at transplant	0.94582	No vs Yes	0.94057
Donor relationship	0.24703	Child vs Other	0.22007
Donor relationship	0.29248	Child vs Sibling	.
Donor relationship	1.18400	Other vs Sibling	.
cd34cat	1.59275	< median vs >= median	0.37593
cd3cat	0.38679	< median vs >= median	0.10426