Long term results of Unrelated Hematopoietic Stem Cell Transplantation for malignant diseases in Brazil: 21 years of follow up

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Abstract

During the last years, Hematopoietic Stem Cell Transplantation from unrelated donors (HSCT-UD) has increased. Better results have been achieved due to the development of less toxic conditioning regimens, new immunoprophylaxis strategies, and more accurate donor selection methods.

Objective

- The primary endpoint → was analyzing long-term results of adult patients who underwent HSCT-UD for malignant diseases.
- Secondary endpoints → risk factors analysis for overall survival (OS).

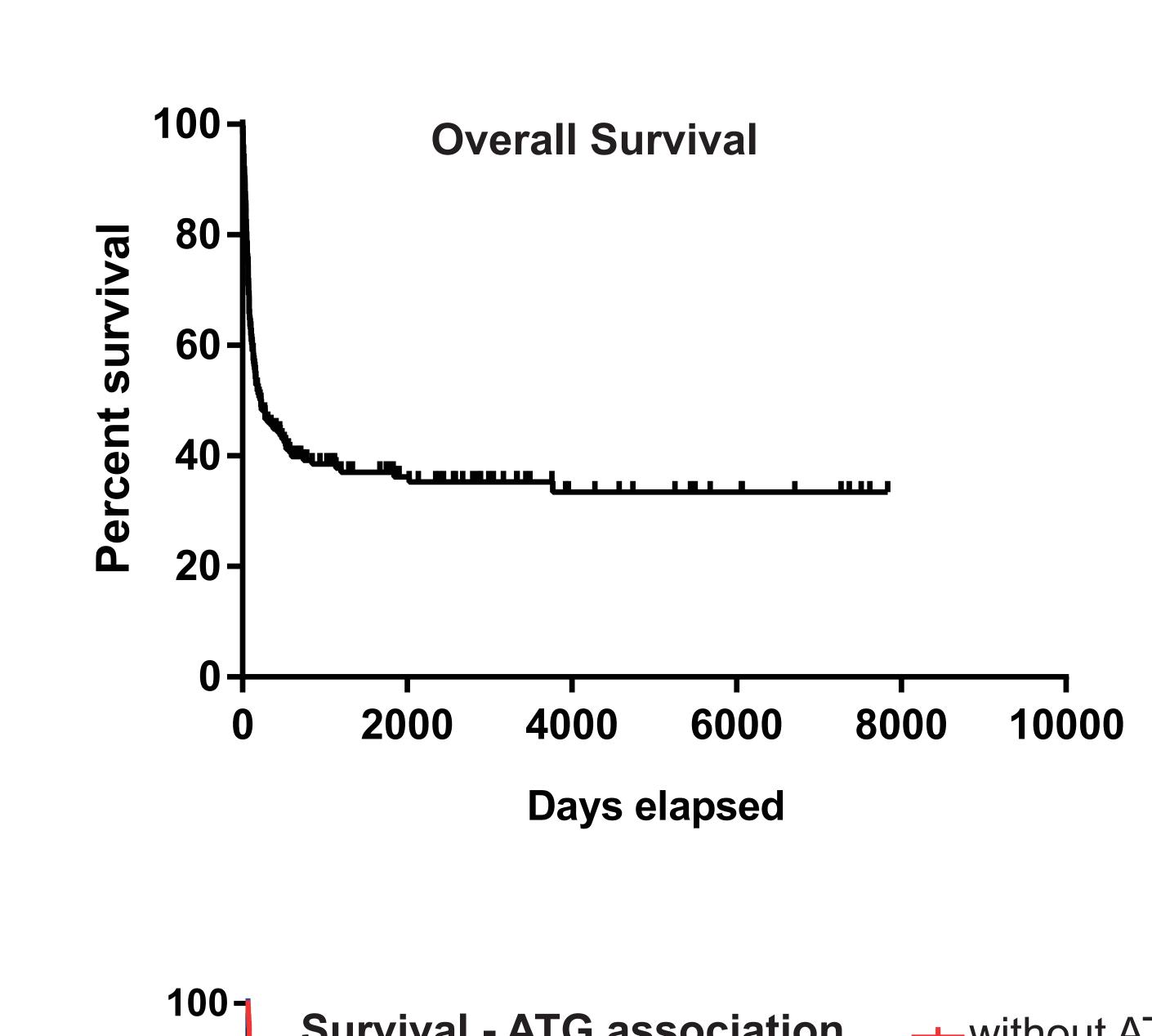
Materials & Methods

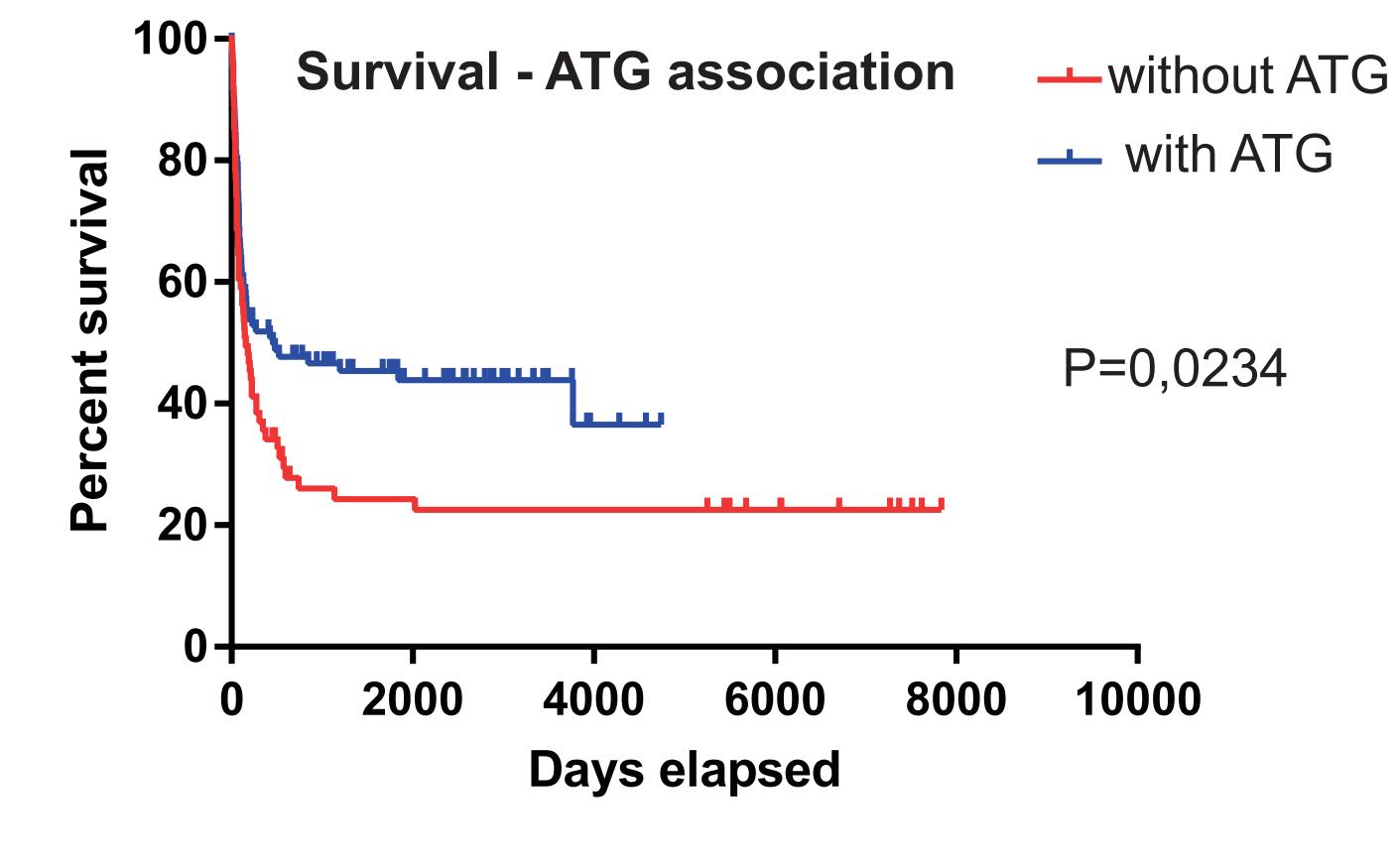
From September 1995 to November 2016, 179 patients older than 14 years have received HSCT-UD for malignant diseases at the BMT center of Federal University of Parana, Brazil. Information was collected from the Center database. Statistical analysis was performed using Graphpad Prism program. Kaplan-Meier method was used for survival curves; p level of significance <0.05.

Patient sex	N= 179	%
Male	101	56
Female	78	44
Patient Age		
< 30 year	91	51
>/= 30 year	88	49
Classification of diseases		
AML	49	27,3
ALL	48	26,8
MDS	10	5,5
CLL	4	2,2
CML	53	29,6
Others	15	8,25
Disease Status		
Initial disease	106	60
Advarced disease	68	38
NI	5	2
Donor Sex		
Male	103	57
Female	73	40
NI	3	3
Graft Source		
BM	134	74,8
PB	33	18,4
UCC	12	6,7
Transplant gar		
< 2005	65	36
> ou = 2005	114	64
Conditioning		
Myeloablative	158	88
Non-myeloablative Programme	8	4,4
Others	13	7,6

Table of Patient Characteristics

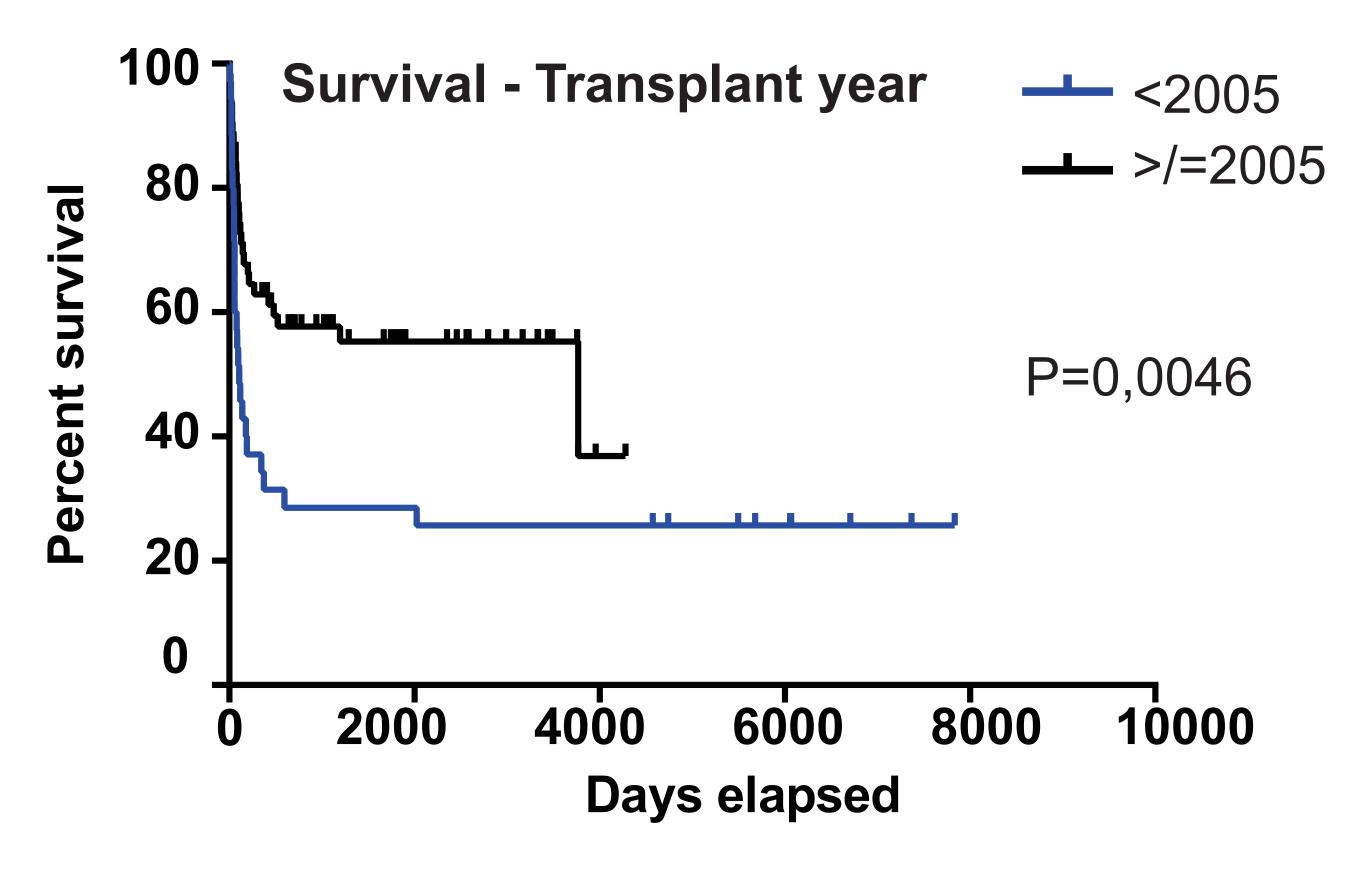
Immunoprophylaxis		
MTX + CSA	132	73,7
MTX + CSA +		
methylprednisolone	31	17,3
CSA + methylprednisolone	11	6,2
Others	5	2,8
ATG		
WithoutATG	74	41,3
WithATG	105	58,7
HLA compatibility		
Compaible	94	53
1 mm	59	32,5
> 1 mm	26	14,5
GVHD acute		
Absente	110	62
Gradel	7	4
Gradell	33	18,4
GradeIII	13	7,3
GradelV	16	9
GVHDchronic		
Absent	126	70,3
Mild	21	11,7
Moderate/severe	32	18
Patient CMV		
Positive	131	73,1
Negati v e	16	8,9
NI	32	18
DonorCMV		
Positive	71	40
Negative	43	24
NI	65	36
Chimerism		
>95%	91	51
1- 94%	9	5
0%	29	16,2
NI	50	27,8

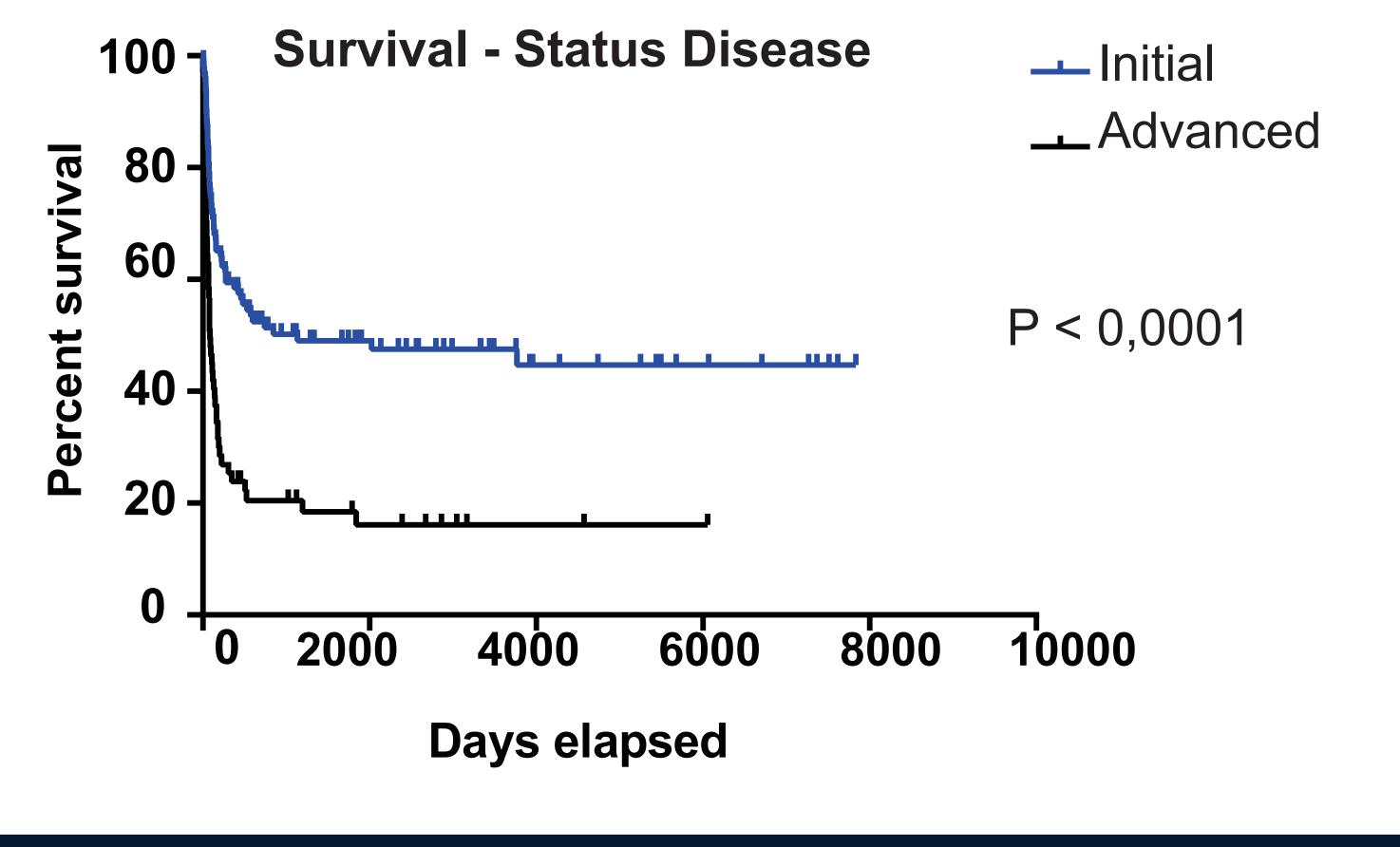


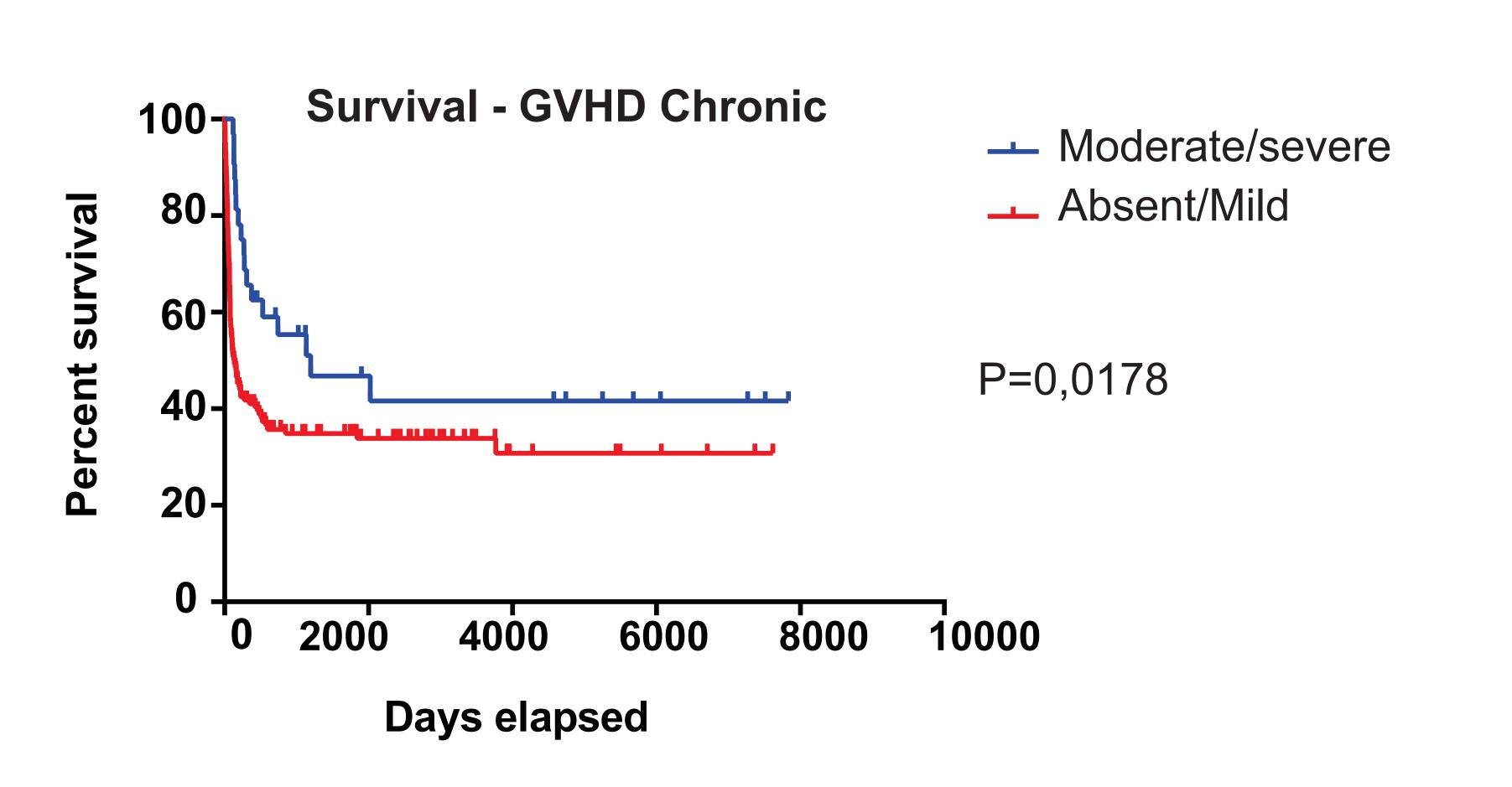


Survival - Patient Age ->30 --</-> ->30 --</-> ->30 --</-> ->30 --</-> P=0,017

Days elapsed







Results

Median age was 29 years and 56% of the patients were male. The most frequent diagnoses were: CML (29,6%); AML (27,3%) e ALL (26,8%); 59% of the patients had early disease. Bone marrow was the graft source in 74.8%. Approximately 88% of the patients received myeloablative conditioning, 73.3% used methotrexate and cyclosporine as immunoprophylaxis, and 52.3% underwent a full matched HSCT-UD. Regarding donors, 57.5% were male, with a median age of 33 years. Acute GVHD rate was 44%, being 9% grade IV. Chronic GVHD rate was 30%, being 12% moderate to severe. Over these 21 years, OS was 40% and median OS was 216 months. The main causes of death were infection (20%) and relapse (14%). Variables associated to a better OS were: use of Thymoglobulin; age at transplant less than 30 years; transplants performed after 2005; early disease and absence of severe GVHD-C

Conclusion

OS was 40% in 21 years. Use of Thymoglobulin, age less than 30 years, transplantation after 2005, early disease and absence of severe GVHD-C were factors that positively influenced OS.

References

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