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The CLL-Sub committee on behalf of the EBMT CLWP

Introduction

We performed a retrospective analysis from the EBMT registry on allogeneic hematopoietic stem cell transplantations (HSCT) for Chronic Lymphocytic Leukemia (CLL) patients, we found 374 patients eligible for the analysis. Our principal objective was to analyze the difference between standard and reduced intensity conditioning also to analyze the clinical outcomes in the two groups.

Materials and methods

374 B-CLL Patients registered in the EBMT registry

282(75%) M and 92(25%) F, Median age = 53 years [24-69]

Median Interval diagnosis-transplantation: 53 months [3-308]

Pre-transplantation status:

302 (81%) good performance status (PS)
21(6%) poor PS and 51(13%) not evaluated

51(13%) CR, 163(43%) PR

39(10%) SD, 105(28%) PD and 21(6%) not evaluated

45(12%) of patients have received a previous HSCT

Transplantation:

292(78%) Standard conditioning and 82(22%) RIC

314(84%) PBSC, 55(14%) BM and 5(2%) Cord blood cells

Donors:

202 HLA siblings

2 mismatched related donors

170 unrelated donors

Sex-Matching:

136(36%) sex-mismatched : 90(24%) F→M and 46(12%) M→F

238(64%) sex-matched : 46(12%) F→F and 189(42%) M→M

CMV Matching:

80(21%) positive pairs, 148(39%) negative,

112(30%) mixed and 34(10%) not known

ABO compatibility:

224(60%) compatible, 150(40%) incompatible(61minor, 99major)

Results

359(96%) patients engrafted

AGVHD: 201(54%) [gr I: 76, gr II: 79, gr III: 30 and gr IV:16]

cGVHD: 153(41%) [75 limited and 78 extensive].

Cumulative incidence of AGVHD at day 100 (total population):

17% (13-22) for gr I, 31% (26-36) for gr ≥ II

Cumulative incidence of cGVHD at 1 year:

Standard: 15 % (6-24) limited and 29.5% (18-41) extensive

RIC: 18.6 % (13-24) limited and 18% (13-23) extensive

Multivariate analysis

Factors

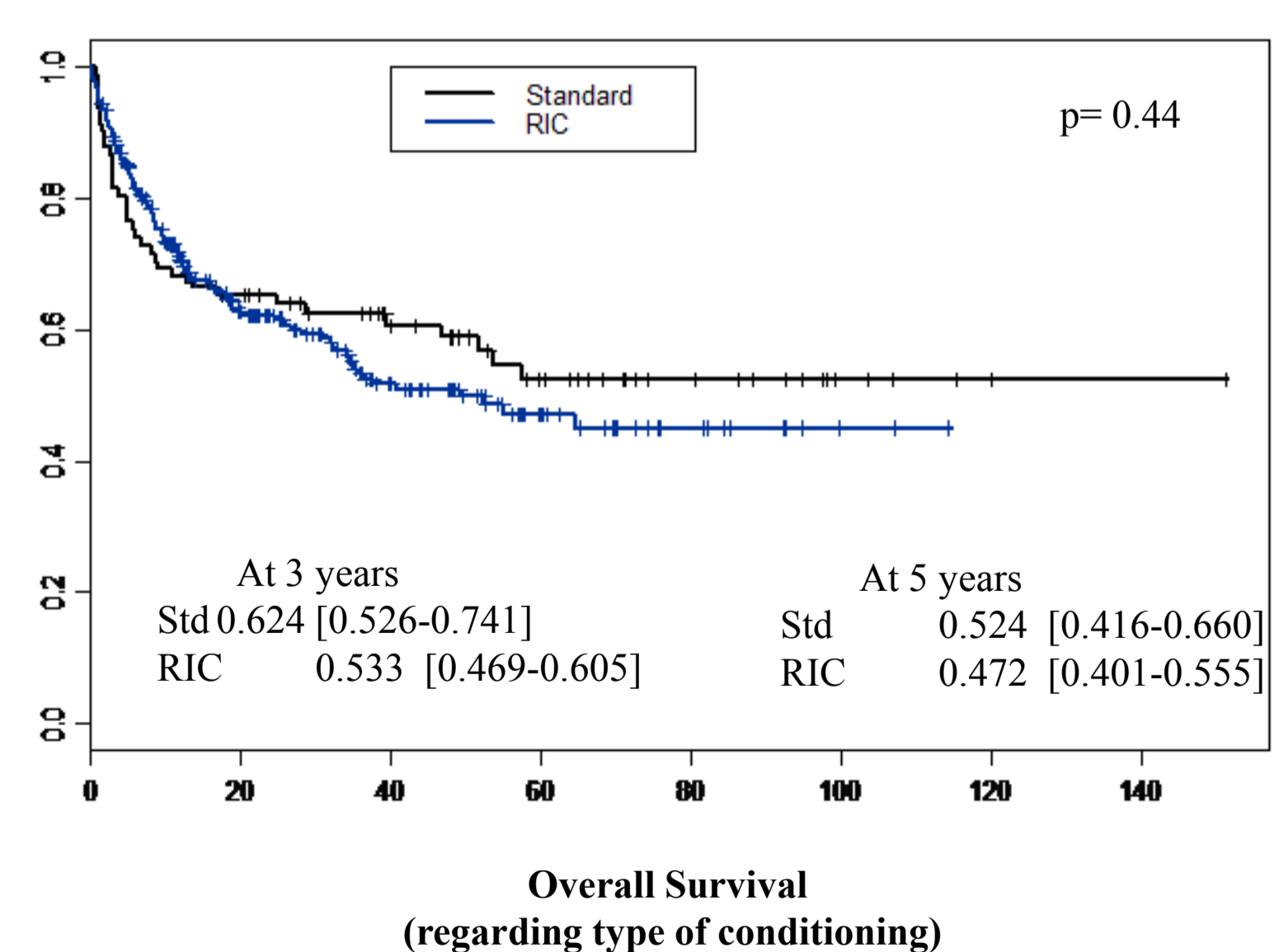
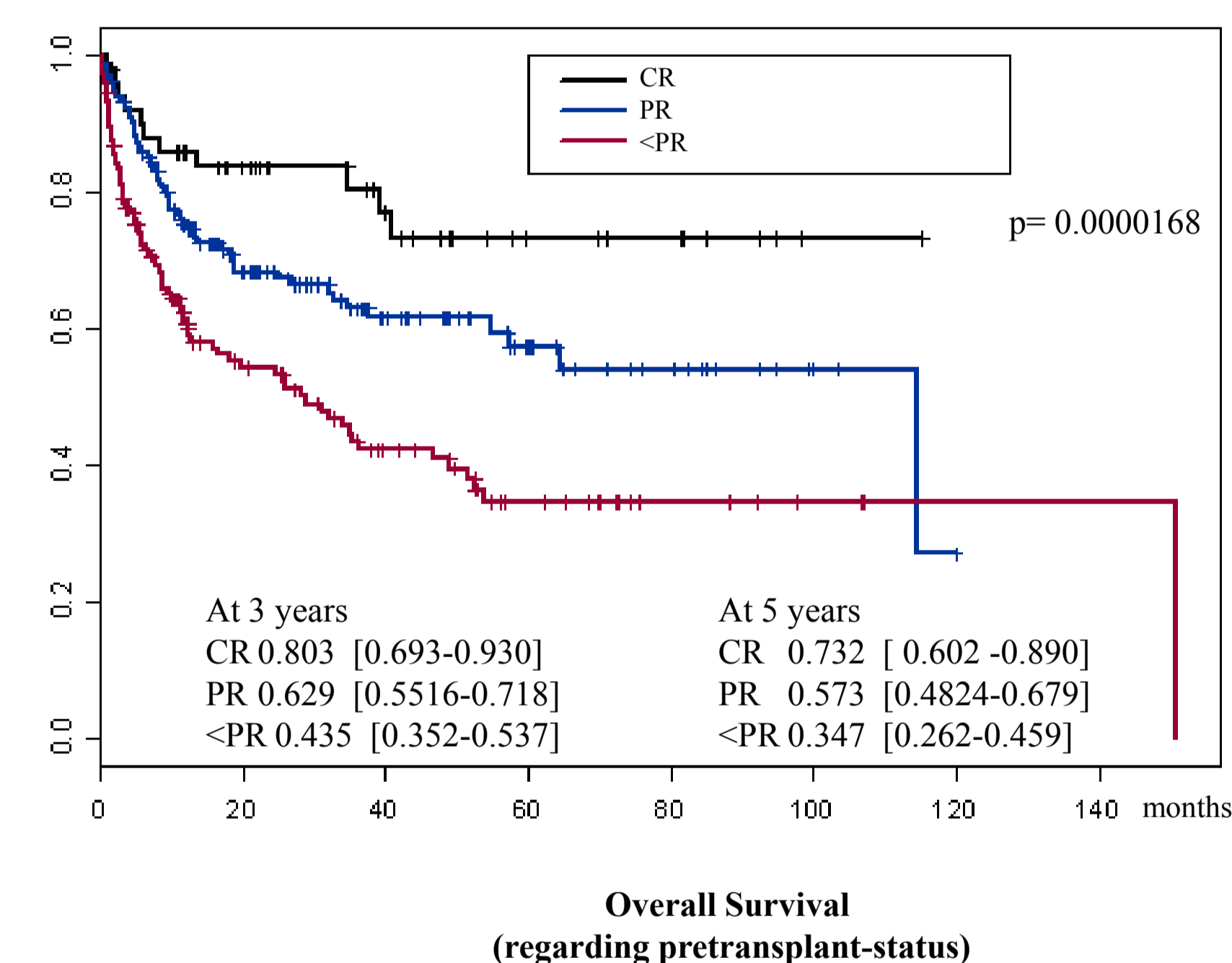
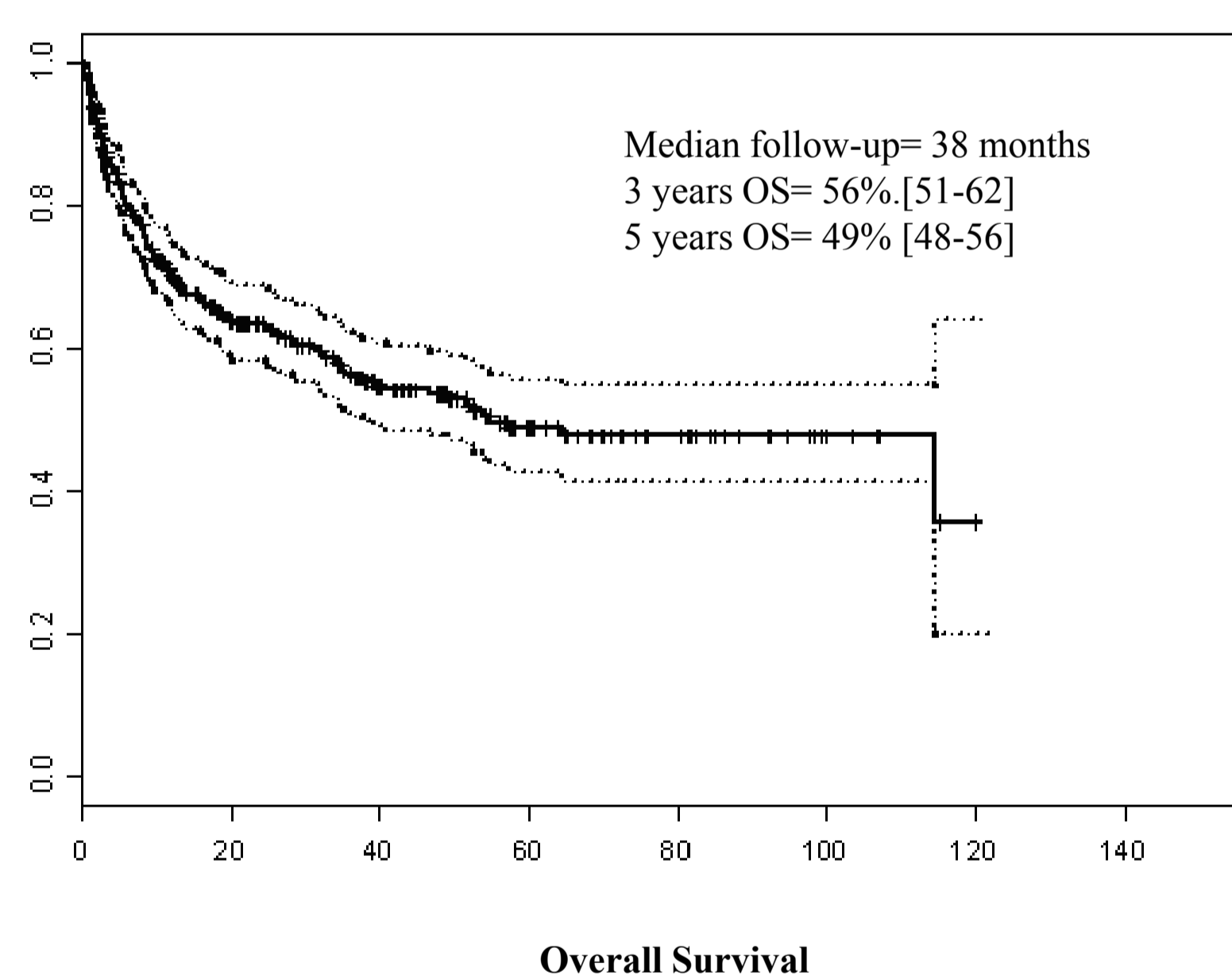
- Age
- Diag-transplant. interval
- Sex-matching
- HLA compatibility
- CMV status
- Type of conditioning
- HSC or BM
- ABO compatibility
- Disease status at transplantatic

3 significant factors impacting OS

Age: HR=1.061 (1.02-1.10) p<0.0001

Gender: HR=2.29 (1.02-5.11) p=0.04

PS: HR=3.15 (1.40-7.10) p=0.005



		RIC	Std
HLA siblings			
A GVHD (D100)	gr I	15% [9 - 20.5]	34% [19 - 49]
	gr II	15% [9 - 21.4]	19.5% [7 - 49]
	gr III - IV	11% [6 - 16]	12% [2 - 22]
NRM at 1 year	18.4% [12 - 25]	23% [11-35.6]	
RM at 1 year	13% [8 - 19]	6% [0-14]	
Unrelated Donors			
A GVHD (D100)	gr I	13% [6 - 20]	22% [4 - 39]
	gr II	22% [13 - 30]	26% [7.6 - 45]
	gr III - IV	14% [7 - 21]	22% [4 - 39]
NRM at 1 year	24% [16 - 32]	36% [17-59]	
RM at 1 year	16% [9 - 23]	4% [0-12]	

Table 1: cumulative incidence of AGVHD, NRM and RM according to HLA typing and kind of conditioning

Conclusion

This large retrospective analysis showed a high percentage of long-term OS after HSCT for CLL either after Std or RIC conditioning without any difference between the 2 groups except for the AGVHD (gr I, III and IV) where we had an higher incidence in the Std group, and for the RM with a higher level in the RIC group. Moreover, we demonstrated the important impact of disease status pretransplant (univariate); age, PS and sex-matching (multivariate) on the global OS