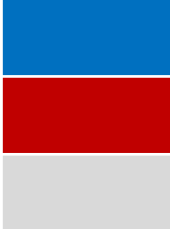


# TBI in conditioning regimen : The « Against » part

# Chemo vs TBI : retrospective studies

	CIR	NRM	OS	
<i>Cahu X</i>	Blue	Grey	Blue	 <p>Favor TBI</p> <p>Favor Chemo</p> <p>Similar results</p>
<i>Eder S</i>	Blue	Grey	Grey	
<i>Kebriaei P</i>	Blue	Red	Grey	
<i>Pavlu J</i>	Blue	Grey	Blue	
<i>Wang YH</i>	Red	Grey	Red	
<i>Mitsuhashi K</i>	Grey	Grey	Grey	
<i>Eroglu C</i>	Blue	Blue	Blue	

*Eroglu C and al, L & Lymphoma 2013*

*Wang YH and al, Cancer Report 2022*

*Cahu X and al, BMT 2016*

*Eder S. and al, Am J Hematol. 2017*

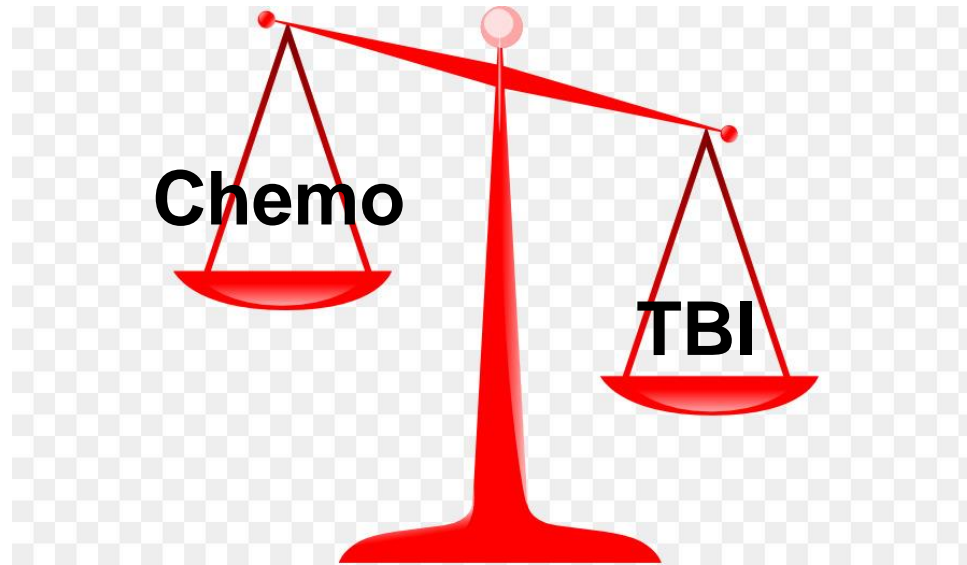
*Pavlu J and al, BBMT 2019*

*Mitsuhashi K and al, BBMT 2016*

*Kebriaei P and al, BBMT 2018*

# Randomized controlled trial

## The FORUM study



# Randomized controlled trial

## Busulfan Plus Cyclophosphamide Versus Total Body Irradiation Plus Cyclophosphamide for Adults Acute B Lymphoblastic Leukemia: An Open-Label, Multicenter, Phase III Trial

Journal of Clinical Oncology\*

# Randomized controlled trial

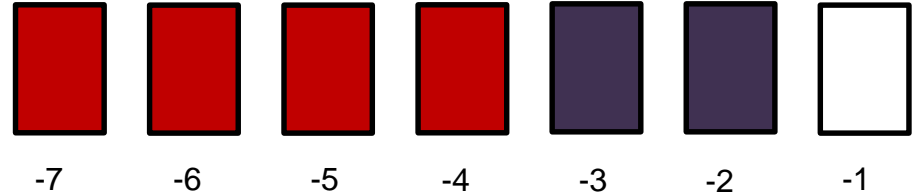
- B ALL in CR1
- Standard risk cytogenetics
- 14-65 yo
- MRD/MUD donors

## GVH prophylaxis :

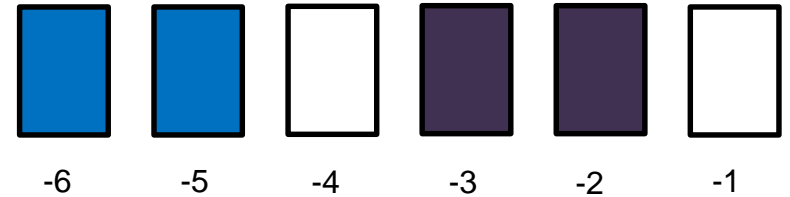
MRD : MTX CSA MMF

MUD : MTX CSA MMF + ATG

Bu 12,8



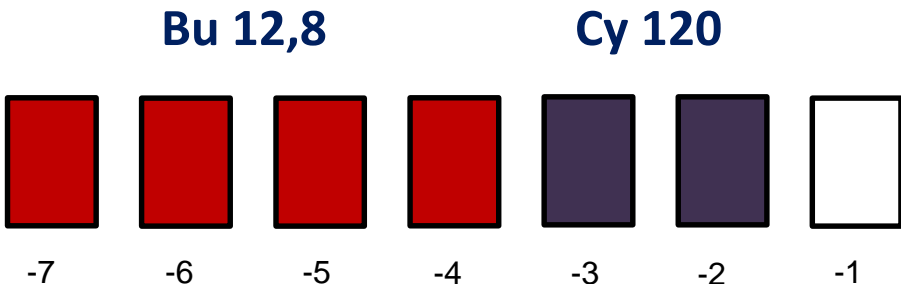
TBI 9



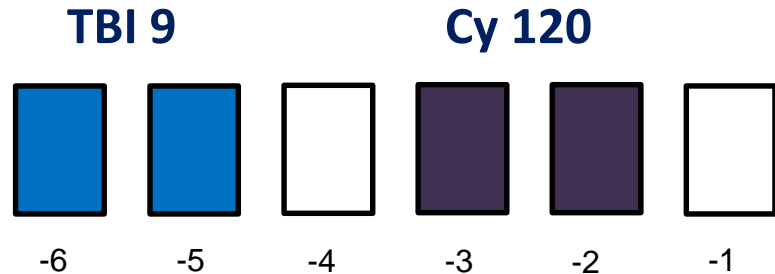
# Randomized controlled trial

26 (14-59)	82%	75%
27 (14-61)	86%	72%
<b>Med Age</b>	<b>MRD neg</b>	<b>MSD</b>

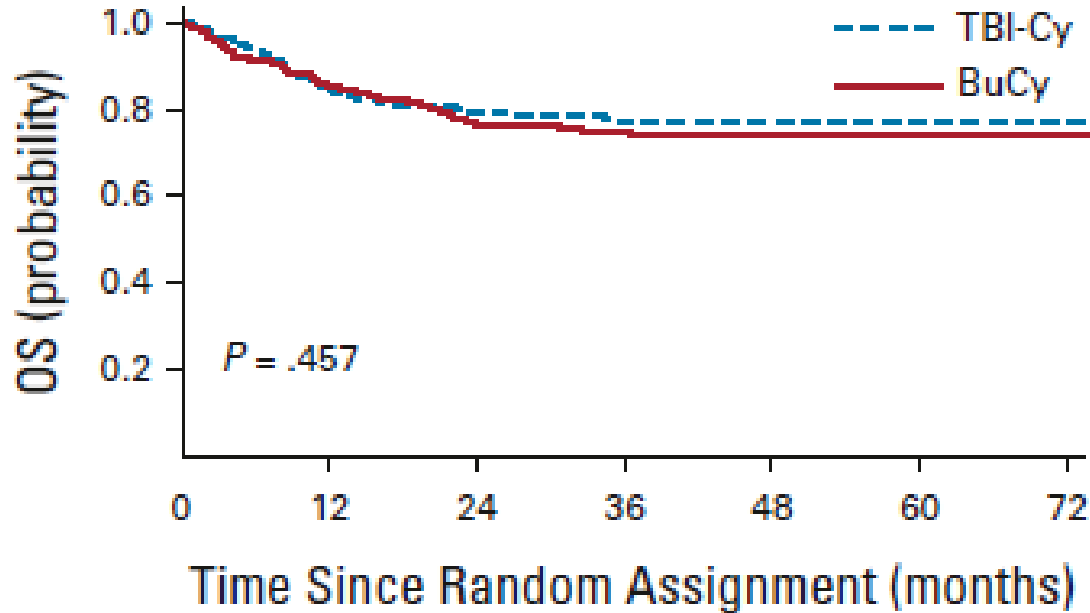
**N = 273**



**N = 272**



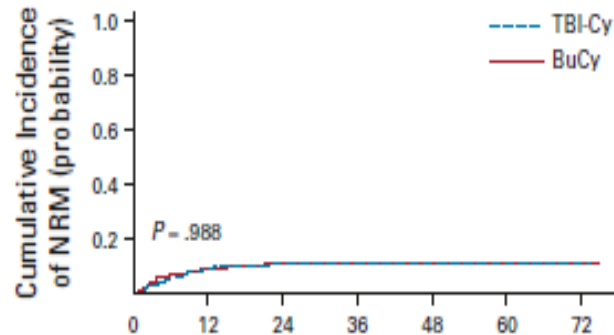
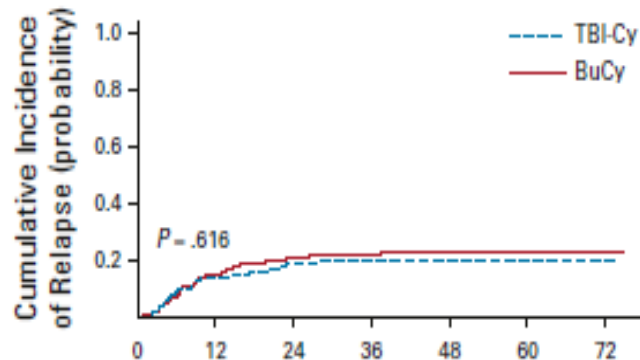
# Primary end point



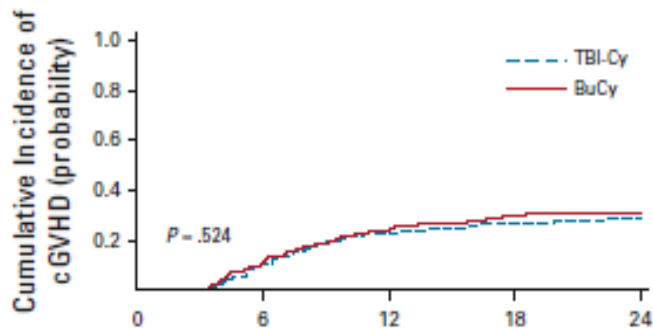
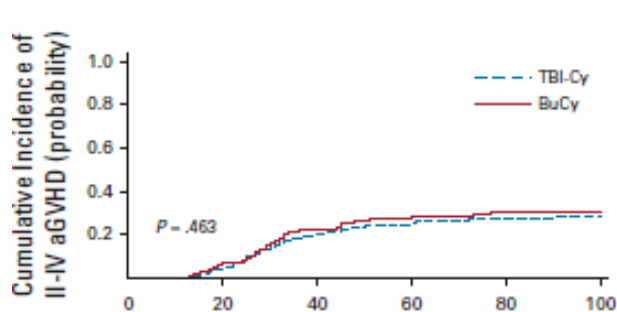
Median follow up : 42 months

2 years OS = 77 vs 79%

# Secondary end points

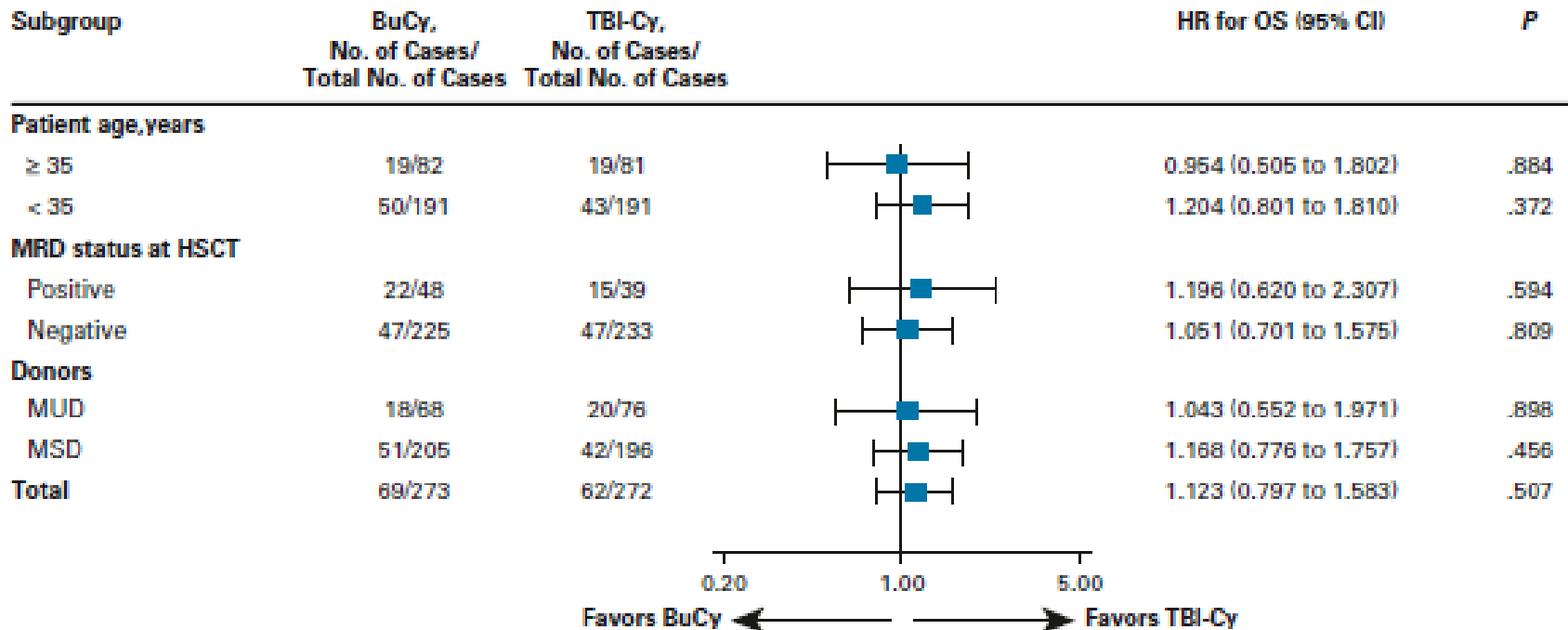


2 years	Bu Cy	TBI Cy	p
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# Subgroup analysis



# Discussion

- B ALL in CR1 with standard risk cytogenetics, MRD/MUD
- **Non inferior efficacy and safety of BuCy compared with TBI Cy**

## 2 remarks

1/ Role of VP16

2/ TBI 9 Grays : Suboptimal?

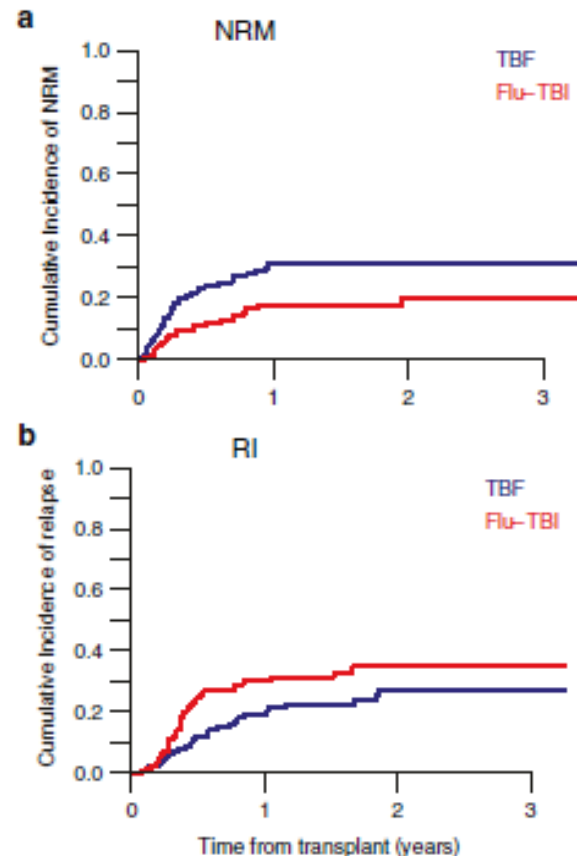
# What about Haplo SCT?

**MAC : Flu TBI (>10 Gy) vs TBF (T2B3F)**

	Flu-TBI (N = 117)	TBF (N = 119)
Median patient age (years)	30.9 (18.1–59.9)	35.8 (18.8–61.7)
Diagnosis:		
- Ph- B-ALL	49 (41.9%)	46 (38.7%)
- Ph+ B-ALL	36 (30.8%)	40 (33.6%)
- T-ALL	32 (27.3%)	33 (27.7%)
GvHD prophylaxis		
- CSA + MMF	81 (69.2%)	90 (75.7%)
- CSA + Tacrolimus	24 (20.5%)	8 (6.7%)
- Other	12 (10.3%)	21 (17.6%)

OS / DFS : no difference

**Patients in CR : CIR in favor of TBF**



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# Thanks for your attention