Il ruolo di Treosulfano nel condizionamento pre-HSCT nuove prospettive di utilizzo

Torino – GITMO – 6 May- 25

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(ONEDRIVE 3-Cell Therapy)

University of Brescia & ASST Spedali Civili of Brescia

UNIVERSITÀ DEGLI STUDI DI BRESCIA

Sistema Socio Sanitario Regione Lombardia ASST Spedali Civili

Treosulfan – Phamacologic Profile

- **Treosulfan** is a water-soluble, bifunctional alkylating agent.
- Treosulfan is a prodrug (pH >5 dependent activation)
  - **NOT require enzymatic activation or hepatic metabolism**
- LOW INTER- and INTRAPATIENT VARIABILITY
- NOT require DRUG LEVEL MONITORING and ADJUSTMENT

EUROPEAN MEDICINES AGENCY
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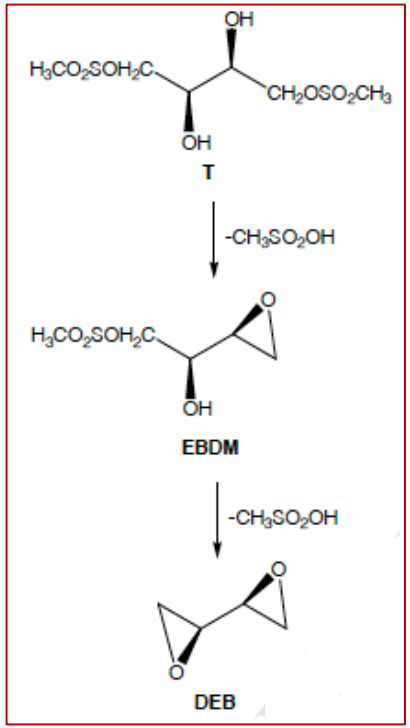
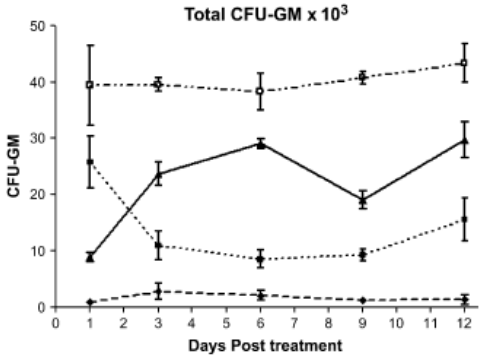


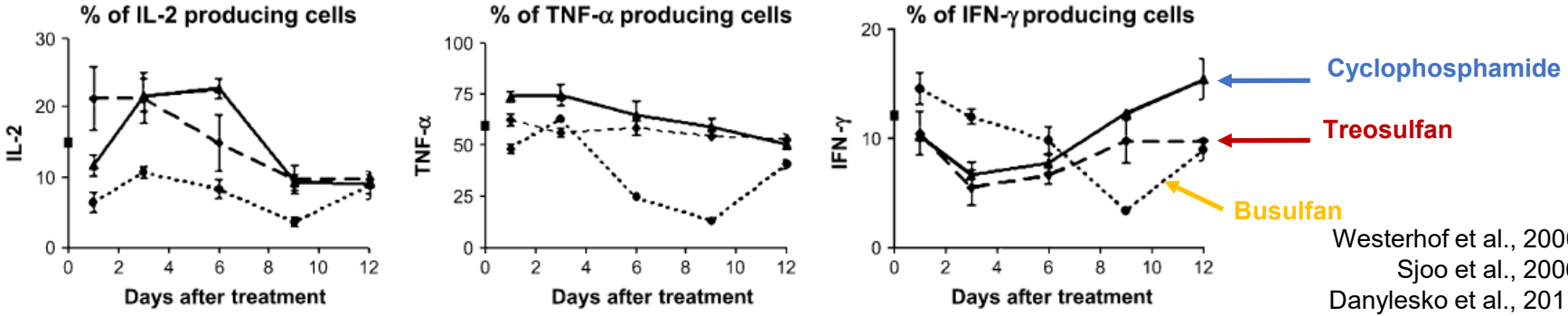
Danylesko et al., 2011
Romanski et al., 2017
Shimoni et al., 2018

Treosulfan is an attractive candidate for allo-HSCT conditioning regimens

- **Treo** induces deep and stable **Myelosuppression** on committed and non-committed stem cells
- BM suppression at a dose of **10 g/m²**
- Max tolerated cumulative dose from **10 up to 14 g/m²**

  before mucositis, diarrhea, dermatitis, or metabolic acidosis became dose-limiting.
- No episodes of severe hepatotoxicity or central nervous system toxicity were observed.
- **Low pro-inflammatory cytokine release**
  - → Facilitate stem cell engraftment
  - → Low GVHD



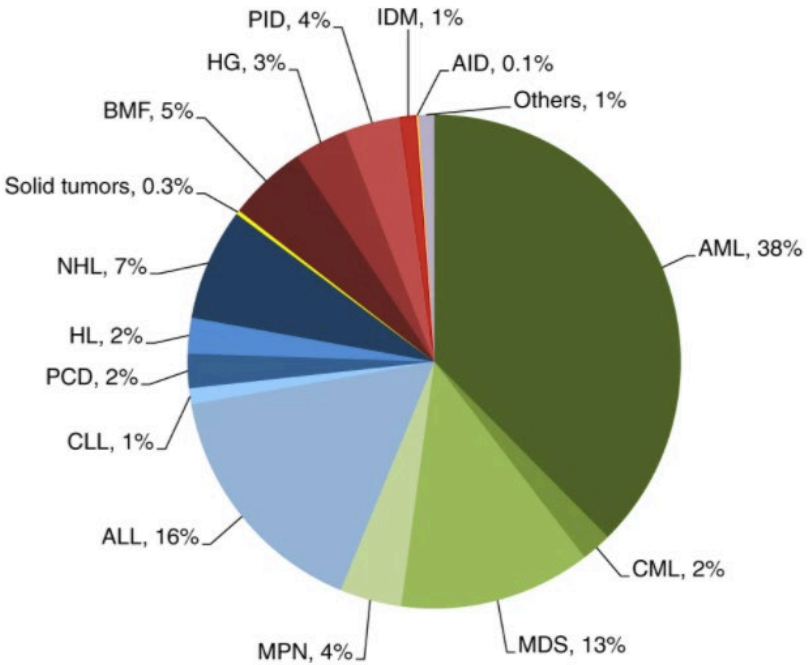


Westerhof et al., 2000
Sjoo et al., 2006
Danylesko et al., 2011

The question is :

Is Treosulfan a **distinctive and interesting candidate** for conditioning regimens in Allogeneic Hematopietic Stem Cell Transplantation?

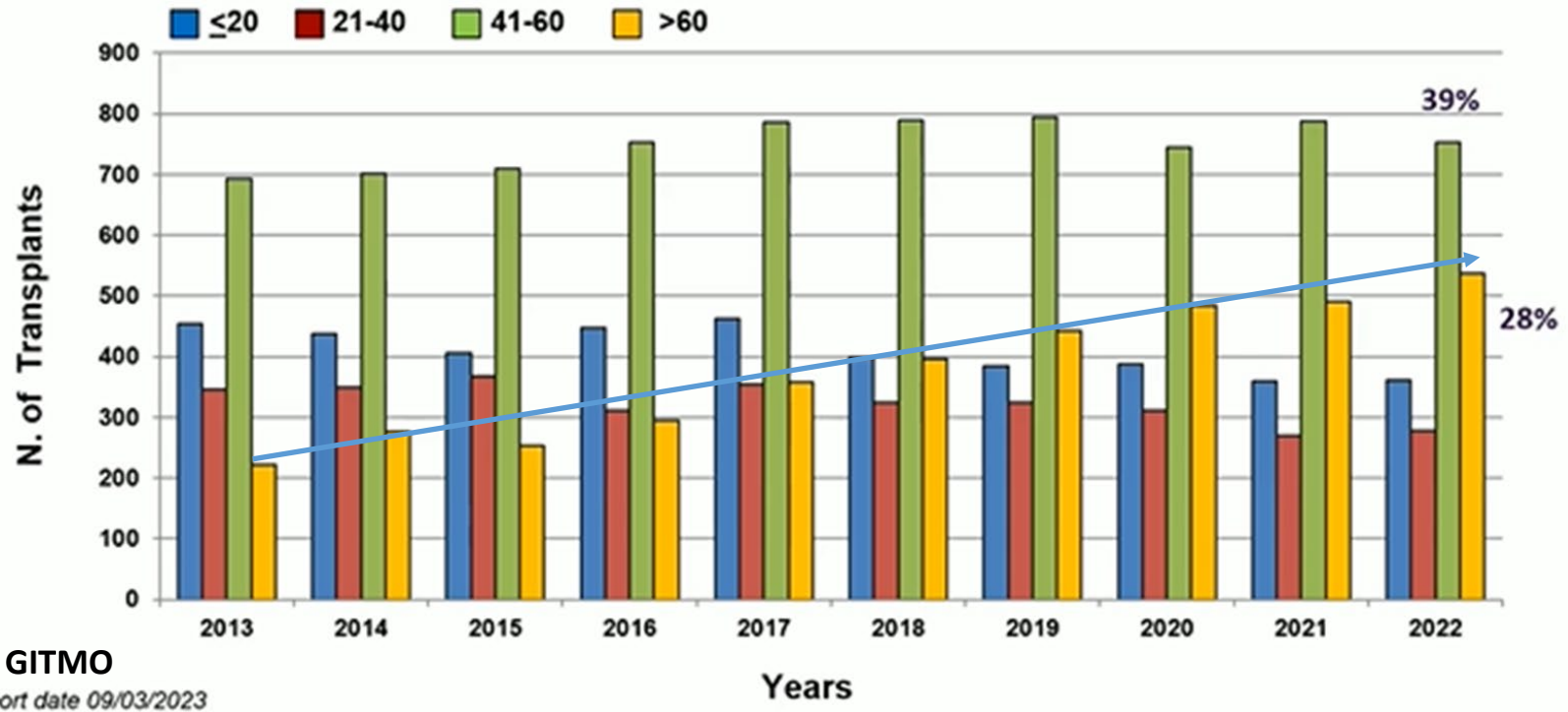
Allo-HSCT indications



Diseases	Age mean
1) AML	68 yy
2) ALL	60 yy
3) MDS	70 yy
4) NHL	50-60 yy
5) MPNs	70 anni

Passweg, J. R. *et al.* ***Bone Marrow Transplant***. 55, 1604–1613 (2020).

Allogeneic Transplants – Patient age at transplantation



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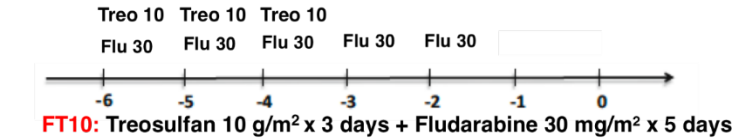
MC-FludT.14/L study

Prospective Randomised controlled clinical trial

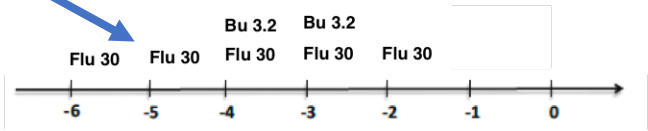
Objective:
-**Non-inferiority** of treo-based conditioning vs. busulfan based regime
-To compare the associated **safety profiles**

Inclusion criteria:

- **AML** in CR or **MDS**
-aged **≥ 50 ys** at HSCT
-and/or a HCT-CI score >2
- Karnofsky Index ≥ 60%



FT10: Treosulfan 10 g/m² x 3 days + Fludarabine 30 mg/m² x 5 days

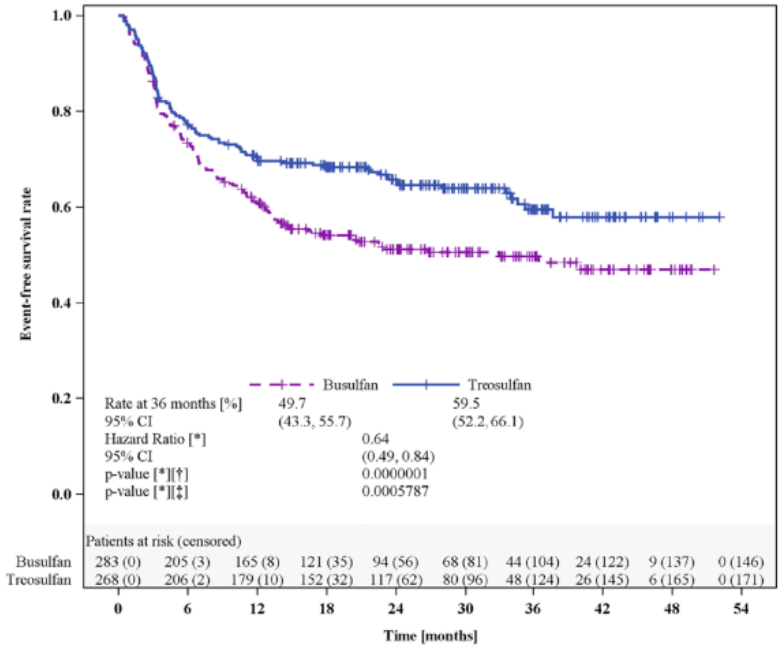


FB2: Busulfan 3.2 mg/kg/d x 2days + Fludarabine 30 mg/m² x 5 days

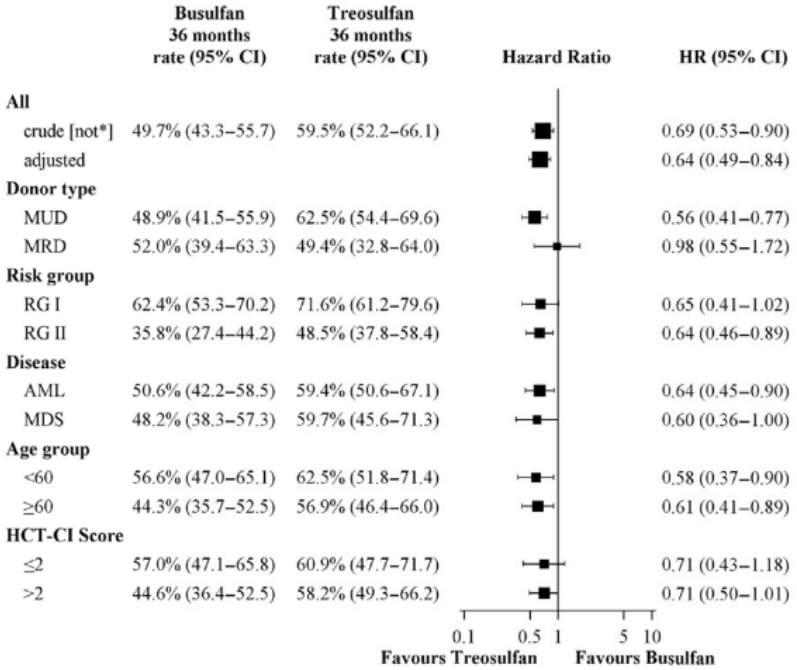
	Busulfan plus fludarabine group (n=240)	Treosulfan plus fludarabine group (n=220)
All patients		
Sex		
Male	149/240 (62%)	130/220 (59%)
Female	91/240 (38%)	90/220 (41%)
Age, years		
Median	61·0 (56·5–64·0)	60·0 (55·0–65·0)
≥50	229/240 (95%)	205/220 (93%)
Comorbidity		
HCT-CI score	3·0 (1·0–4·0)	3·0 (1·0–4·0)
HCT-CI score >2	140/240 (58%)	131/220 (60%)
Donor type		
Matched related donor	59/240 (25%)	52/220 (24%)
Matched unrelated donor	181/240 (75%)	168/220 (76%)
Graft source		
Peripheral blood	235/240 (98%)	214/220 (97%)
Bone marrow	5/240 (2%)	6/220 (3%)
Diagnosis		
Acute myeloid leukaemia	138/240 (58%)	155/220 (71%)
Myelodysplastic syndrome	102/240 (43%)	65/220 (30%)
Complete remission		
First complete remission	117/138 (85%)	133/155 (86%)
Consecutive remission	21/138 (15%)	22/155 (14%)

Beelen et al., Lancet Haematol. 2019

EFS



[*] adjusted for donor type as factor, and risk group and centre as strata using Cox regression model
[†] for testing non-inferiority of Treosulfan compared to Busulfan
[‡] for testing superiority of Treosulfan compared to Busulfan

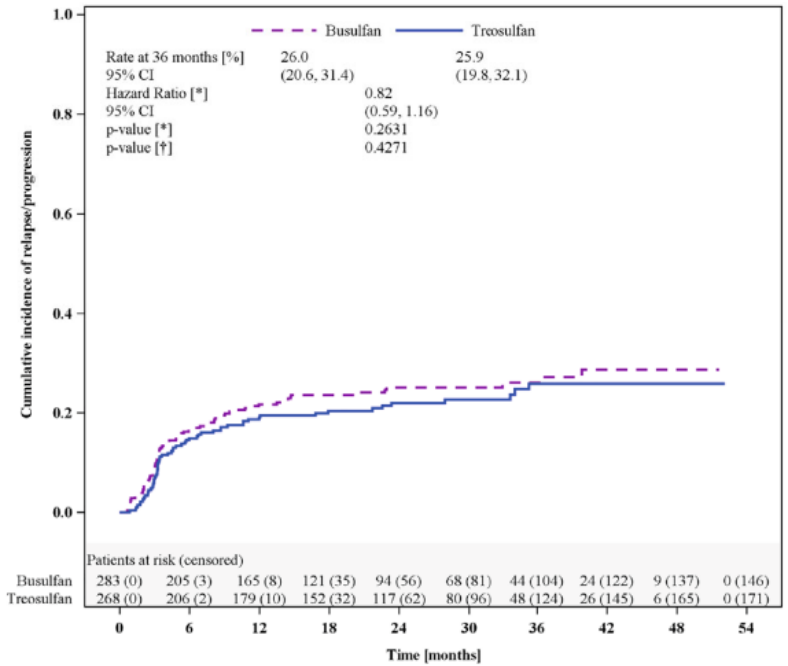


[not*] not adjusted. Others are adjusted for donor type as factor, and risk group and centre as strata using Cox model.

Follow up with 570 patients reached superiority

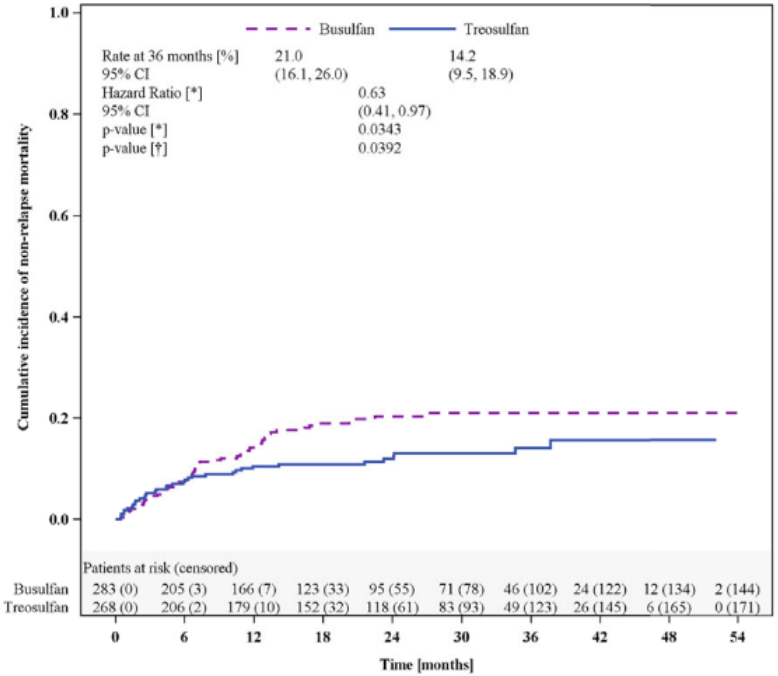
Beelen, AJH 2022

CIR



[*] adjusted for donor type as factor and risk group as stratum using Fine and Gray model
[†] based on test of Gray

TRM



[*] adjusted for donor type as factor and risk group as stratum using Fine and Gray model
[†] based on test of Gray

Beelen, AJH 2022

EMA Approval for FT10 as Part of Conditioning Treatment Before Allo-SCT

Treosulfan in combination with fludarabine is indicated as part of conditioning treatment before allo-HSCT in **adult patients** with **malignant and nonmalignant** diseases

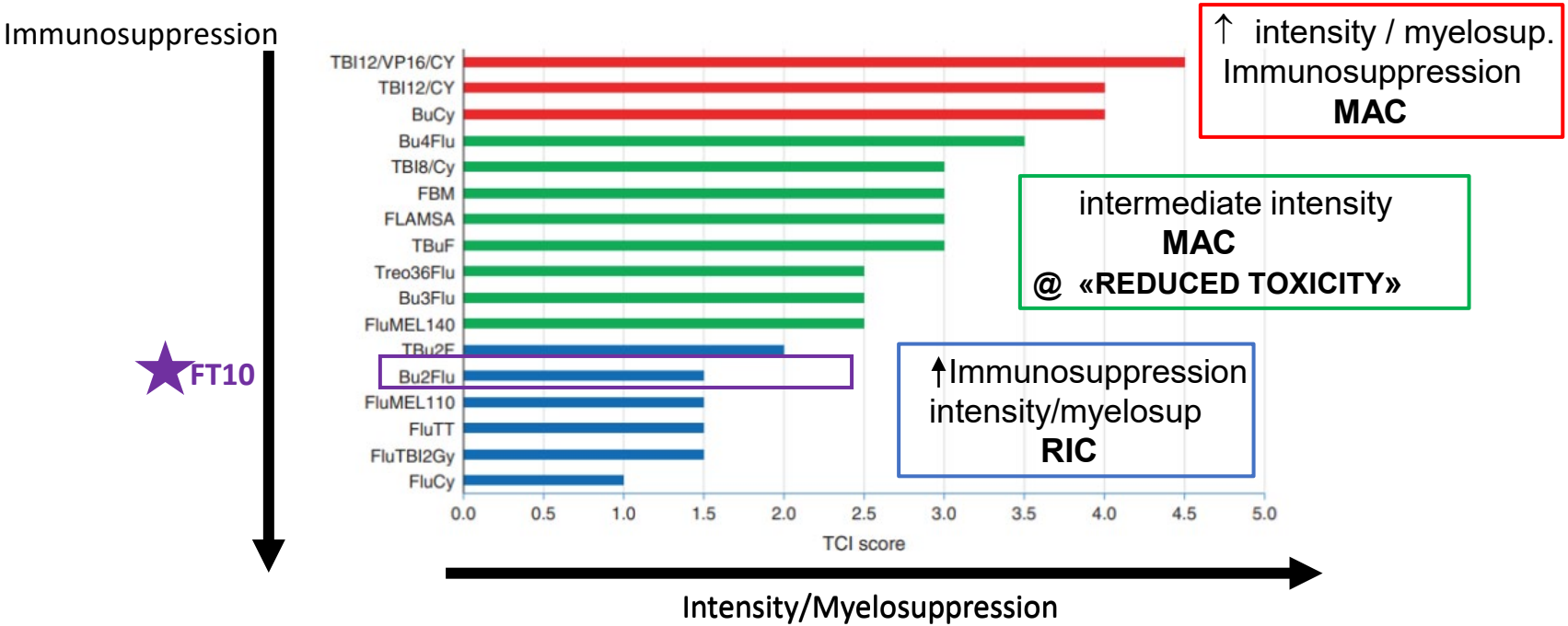
For malignant disease

- **Treo 10 g/m² given on 3 consecutive days** (days −4, −3, −2) before stem cell infusion (day 0)
- **Flu 30 mg/m² given on 5 consecutive days** (days −6, −5, −4, −3, −2) before stem cell infusion (day 0)

EMA, European Medicines Agency.
Treosulfan [PI]. EMA. Published July 22, 2019. Updated January 25, 2023.

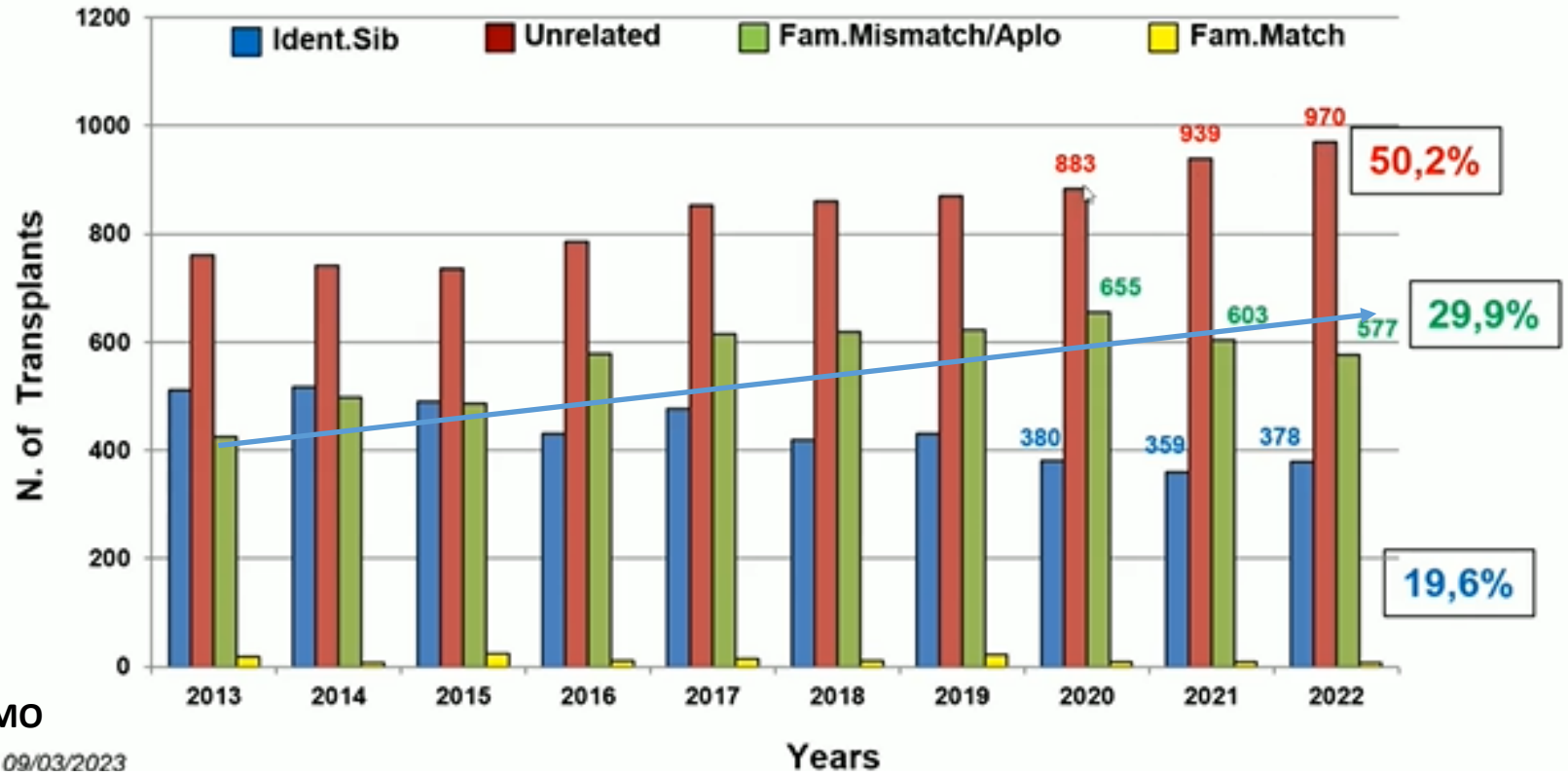
Tailored Conditioning.Regimen

Max Efficacy vs Min Toxicity



Spyridonidis A, et al. *Bone Marrow Transplant.* 2020;55(6):1114-1125.

Allogeneic Transplants – Donor type



GITMO

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- **Retrospective multicenter study of "Apulian Hematological Network"**
  1 "Vito Fazzi"Hospital, Lecce;
  2 "Casa Sollievo della sofferenza" Hospital, San Giovanni Rotondo
  3 "CTMO Grande Ospedale Metropolitano Bianchi-Melacrino Morelli", Reggio Calabria
  4 "Civile" Hospital, Pescara
- **From Jun 2019 to Dic 2023**
  AML older than 65 years
- **Conditioning Regimen:**
  Treo 30 gr/m2, Flu 150 mg/m2; followed by PTCy (FT10)
- **Donor type**
  Haploidentical
- **Stem cell source**
  Peripheral blood stem cells
- **Endpoint**
  OS, DFS, ICR, NRM, GVHD, safety

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AML characteristic	N° patients
N° patients	**35**
Age, years, median (range)	**69 (65-74)**
• < 70, n (%)	22 (63)
• ≥ 70, n (%)	13 (37)
Sex, n (%)	
• Male	22 (63)
• Female	13 (37)
ECOG, n (%)	
• 0	8 (23)
• 1-2	27 (77)
KPS, n (%)	
• ≥ 90	22 (63)
• < 90	13 (37)
Comorbidities, n (%)	
• ≤ 2	18 (51)
• > 2	17 (49)

AML response and treatment	N° patients
N° patients	**35**
Response, n, (%)	
• **CR/MRD NEGATIVE**	**20 (58)**
• **CR/MRD POSITIVE**	**8 (22)**
• **< CR**	**7 (20)**
N° Line pre haplo HSCT, n (%)	
• **1 Line**	**28 (80)**
• **2 Line**	**7 (20)**
1° line treatment, n (%)	
• **Chemoterapy**	**15 (43)**
• **HMA + Venetoclax**	**20 (57)**
2° line treatment, n (%)	
• **HMA/Venetoclax**	**4 (57)**
• **Gilteritinib**	**3 (43%)**

Transplant characteristic	N° patients
N° patients	35
Time diagnosis to HAPLO-PT-CY	
months (range)	11 (5-77)
HCT-CI (SORROR) n, %	
• ≤ 2	17 (48)
• ≥ 3	18 (51)
Donor Kinship, n, %	
• Brother/sister	8 (23)
• Child	23 (66)
• Niece	4 (11)
Donor age, y, median (range)	38 (23-62)

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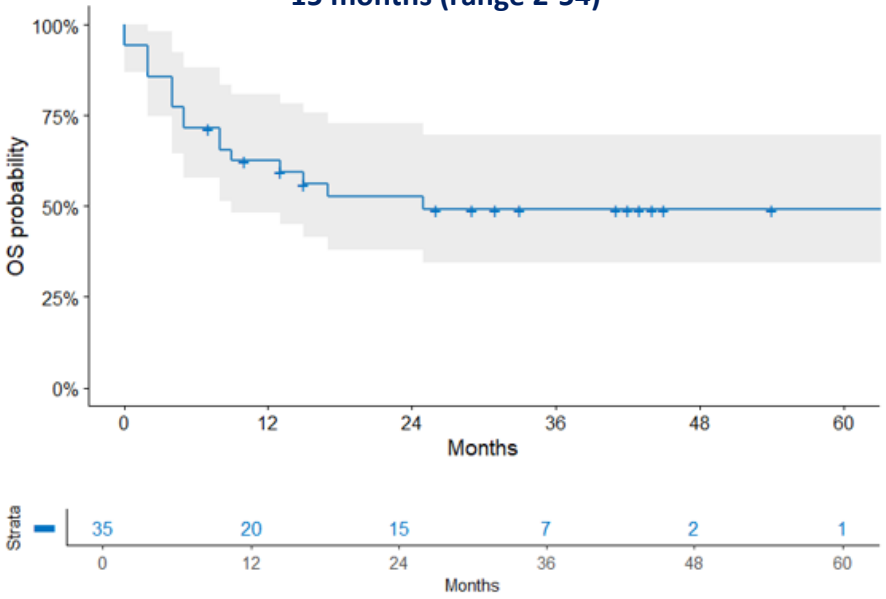
OVERALL SURVIVAL

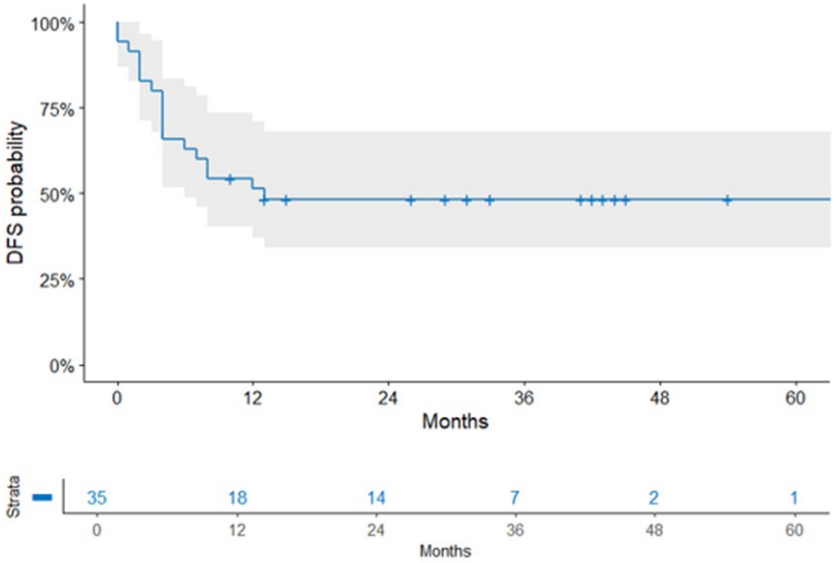
MEDIAN FOLLOW UP
15 months (range 2-54)



Characteristic	6 Months	12 Months	24 Months
Overall	71.4% (57.9%, 88.1%)	62.5% (48.3%, 80.9%)	52.6% (38.0%, 72.7%

DISEASE FREE SURVIVAL

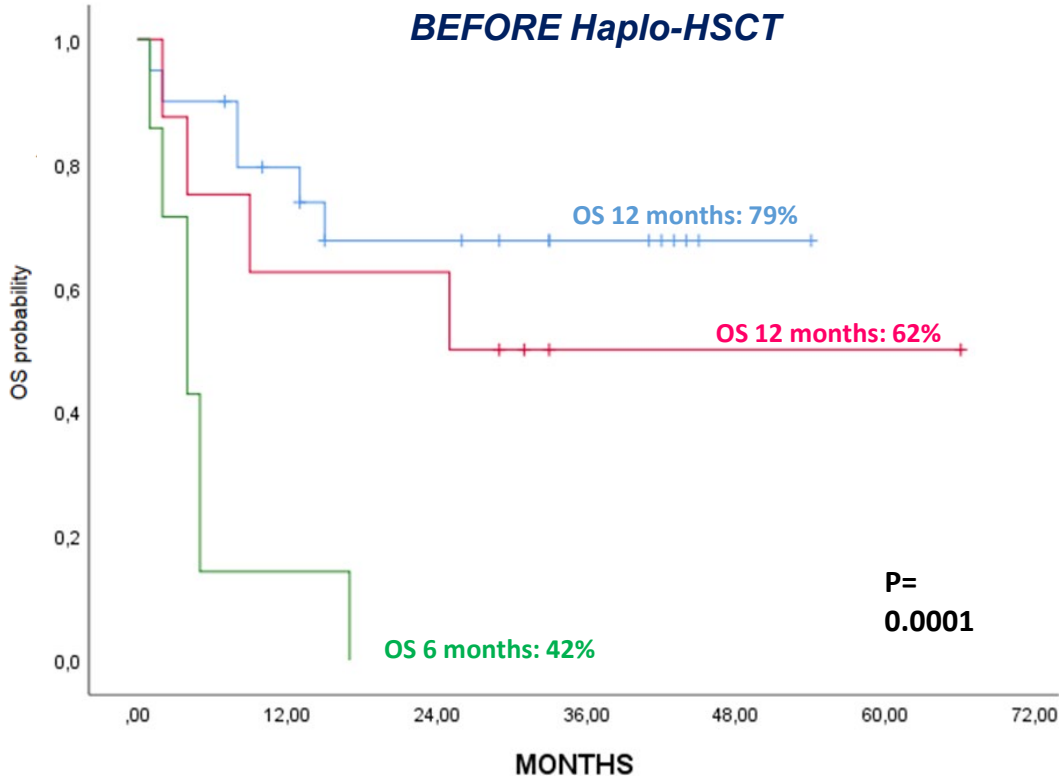
MEDIAN FOLLOW UP
15 months (range 2-54)



Characteristic	6 Months	12 Months	24 Months
Overall	62.9% (48.7%, 81.1%)	51.3% (37.1%, 70.9%)	48.3% (34.2%, 68.1%)

EBMT 2024 Poster A131 - Abstract 1593

DISEASE STATUS BEFORE Haplo-HSCT



	Chi-quadrato	gl	Sign.
Log Rank (Mantel-Cox)	16,444	2	,000

- **CR/MRD NEGATIVE**
- **CR/MRD POSITIVE**
- **No CR**

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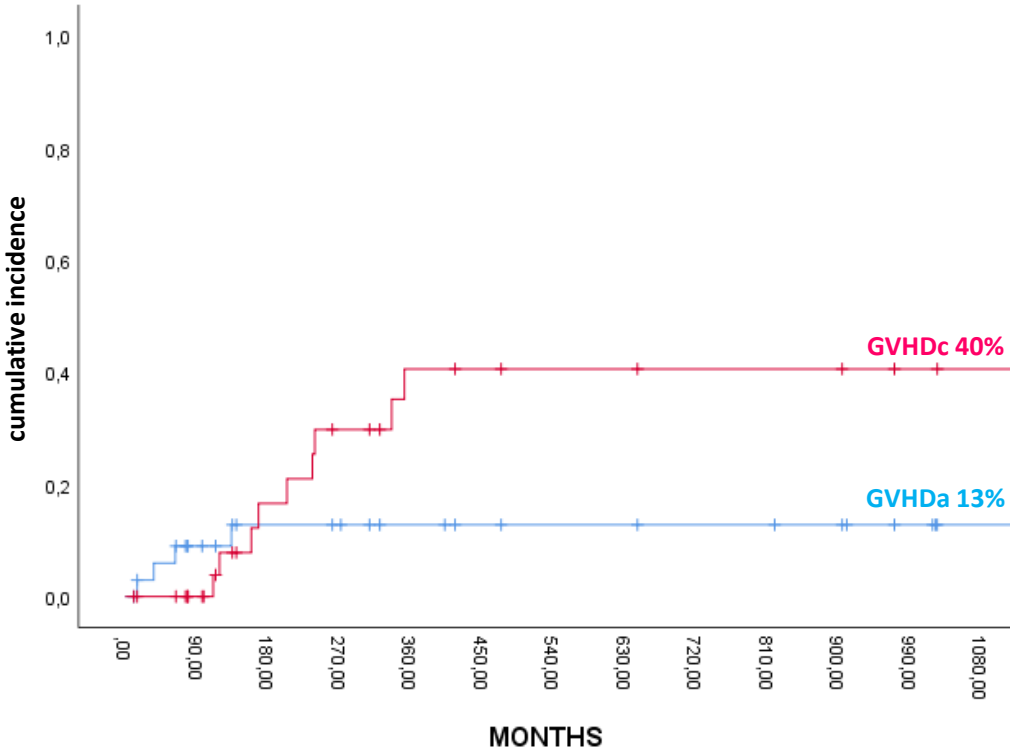
GVHD
score 2-4



EBMT 2024 Poster A131 - Abstract 1593

Fludarabine Treosulfan Reduced-Intensity Conditioning Regimen Prior Haploidentical Hematopoietic Cell Transplantation with Post Transplantation Cyclophosphamide in Frail/Older AML Patients: Preliminary Results of a Single Center Experience

Benjamin Bouchacourt[1], Anne-Charlotte Le Floch[1], Sabine Fürst[1], Sylvain Garciaz[1], Samia Harbi[1], Yosr Hicheri[1], Thomas Pagliardini[1], Boris Calmels[1], Faezeh Legrand[1], Claude Lemarie[1], Federico Pagnussat[1], Christian Chabannon[1], Pierre-Jean Weiller[1], Marie-Anne Hospital[1], Norbert Vey[1], Didier Blaise[1], Raynier Devillier[1]

Affiliation: [1]Institut Paoli Calmettes, Marseille, France

Study design	Single center study	**Aim**	Safety of FT10 prior to haploHSCT in AML pts unfit for MAC
Endpoint, primary	Safety		
Patients	20	**Median age (range)**	60 y (49 – 68)
Disease	AML		
Conditioning regimen	FT10: Treo 30 g/m², Flu 150 mg/m², followed by PTCy		
Results			
AEs	No hemorrhagic cystitis or hepatic SOS		
Mucositis	75% (n=10 grade 1, n=5 grade 2)		
Engraftment [median (range)]	100%: neutrophil 17 d (11 - 25), platelets 20 d (8 – 161)		
Full donor T-cell chimerism	100%		
aGvHD	n=3 (all grade II)		
cGvHD	n=6 (moderate to severe)		
1 y LFS	89%		
1 y OS	89%		
Conclusion	• FT10 regimen prior to haplo-SCT with PTCy provides rapid full engraftment and low early toxicity in AML patients who are unfit for MAC.		

EBMT 50th Annual Meeting Glasgow 14-17 April 2024

B103
Poster presentation

GITMO

GRUPPO ITALIANO PER IL TRAPIANTO DI MIDOLLO OSSEO, CELLULE STAMINALI EMOPOIETICHE E TERAPIA CELLULARE

PROSPECTIVE STUDY ON THIOTEPA, TREOSULFAN AND FLUDARABINE (TTF10) BEFORE HAPLOIDENTICAL SCT IN PATIENT WITH AML IN COMPLETE REMISSION OR MDS NOT ELIGIBLE FOR MYELOABLATIVE CONDITIONING REGIMENS

GITMO

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Tratment plan

Thiotepa 5 mg/kg day -6 and -5. Dose may be reduced in case of age above 65 yrs and comorbidity as follows:

	TT
Regular dose	**10 mg/kg**
Age >65y	5 mg/kg
Cardiac comorbidities	5 mg/kg
FE <50%	5 mg/kg
HCT-CI ≥3	5 mg/kg

Treosulfan (Treo) 10 g/m2 x day for 3 days (days –4 to –2)
Fludarabine (Fluda) 50 mg/m2 x day for 3 days (days –4 to –2), namely TTF10

GITMO

GRUPPO ITALIANO PER IL TRAPIANTO DI MIDOLLO OSSEO, CELLULE STAMINALI EMOPOIETICHE E TERAPIA CELLULARE

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	PRINCIPAL_INVESTIGATOR	HOSPITAL	CITY	STATUS	apertura centro	primo paziente	TOT PAZ.
392	Luca Castagna	CTMO Osp. V. Cervello Azienda Ospedaliera Ospedali Riuniti Villa Sofia Cervello	PALERMO	CET ha approvato lo studio.	30/12/2024	31/12/2024	1
141	Michele Malagola	USD, Trapianti di Midollo osseo, Azienda Spedali Civili di Brescia	BRESCIA		20/02/2025	20/02/2025	2
231	Luisa Giaccone	Divisione Universitaria di Ematologia-SSD Trapianto Allogenico di cellule Staminali- A.O.U. Citta della Salute e della Scienza A.O.U. Citta della Salute e della Scienza	TORINO	Contratto finalizzato con Dipartimento - mancano firme. In attesa di revisione contratto AOU. Richiesto chiarimento in merito alla possibilità d'utilizzo del Fondo Aziendale per la copertura degli oneri.			
232	Walter Barberi	Policlinico Umberto I - Sapienza Università di Roma	ROMA	Contratto finalizzato - in attesa delibera aziendale.			
248	Annalisa Natale	Ospedale Civile Santo Spirito - Pescara	PESCARA	In attesa firma contratto e delibera aziendale.			
265	Giorgia Saporiti	IRCCS Ca' Granda Ospedale Maggiore Policlinico - Università degli Studi di Milano	MILANO		18/03/2025		
299	Irene Maria Cavattoni	Ospedale Santa Chiara	BOLZANO		28/03/2025		
304	Chiara Nozzoli	Terapie Cellulari e Medicina Trasfusionale, Ospedale Careggi	FIRENZE	RITIRO ADESIONE STUDIO			
307	Patrizia Chiusolo	Fondazione Policlinico Universitario a. Gemelli - IRCCS Policlinico A. Gemelli	ROMA	In attesa controfirma contratto e delibera aziendale.			
526	Angelo Michele Carella	Casa Sollievo della Sofferenza IRCCS U.O. Ematologia, Viale Cappuccini, 1	FOGGIA		11/02/2025		
587	Barbara Loteta	CTMO Centro Unico, Regionale Trapianti di Cellule Staminali e Terapie Cellulari, "A. Neri", Grande Osp. Bianchi, Melacrino Morelli	REGGIO CALABRIA		18/03/2025		
649	Paola Carluccio	Azienda Ospedaliero-Universitaria Policlinico	BARI		11/02/2025	19/03/2025	1
692	Maurizio Musso	Ospedale La Maddalena	PALERMO		11/02/2025	27/03/2025	1
705	Francesca Patriarca	Azienda Sanitaria Universitaria Friuli Centrale	UDINE		11/03/2025		
756	Raffaella Cerretti	Policlinico Tor Vergata	ROMA		27/02/2025		
788	Francesco Saraceni	Azienda Ospedaliero Universitaria delle Marche	ANCONA	In attesa PF. In attesa revisione contratto.			
789	Camilla Frieri	Ospedale S. Giuseppe Moscati	AVELLINO		11/02/2025		
811	Eugenia Piras	Azienda Ospedaliera Brotzu	CAGLIARI	In attesa firma contratto e delibera aziendale.			
868	Nicola Di Renzo	Azienda Unità Sanitaria Locale Lecce – Presidio Ospedaliero "Vito Fazzi"	LECCE		11/02/2025	17/02/2025	2 di cui 1 screening failure
920	Alessandro Spina	Azienda Sanitaria Locale BR Ospedale "A. Perrino"	BRINDISI		11/02/2025		
1006	Nicola Polverelli	Fondazione IRCCS Policlinico San Matteo	PAVIA		20/02/2025	24/04/2025	1

Centri Attivi: 14 Pazienti arruolati: 7

Treosulfan-Fludarabine Conditioning Regimen with Post-Transplant High-Dose Cyclophosphamide: A Retrospective Analysis

Aura Arola[1], Lotta Tapana[2], Maija Itälä-Remes[1]

Affiliations: [1]Turku University Hospital and University of Turku, Turku, Finland, [2]Auria Clinical Informatics, Turku, Finland

Study design	Single center retrospective study	**Aim**	Safety and efficacy of FT10 combined with PTCy
Endpoints	OS, RFS, CIR, TRM, toxicities		
Patients	97	**Median age (range)**	62 y (17 – 75)
Disease	MDS (n=28), AML (n=26), ALL (n=3), MDS/MPN (n=7), MF (n=7), lymphoma (n=15), other (n=11)		
Conditioning regimen	FT: Treo 30 g/m^2, Flu 150 mg/m^2, followed by PTCy 50 mg/kg on days 3 and 4		
Results*			
OS	88% (1 y) 80% (2 y)		
RFS	74% (1 y) 67% (2 y)		
CIR	21% (1 y) 27% (2 y)		
TRM	5.3% (1 y) 6.6% (2 y); causes of death: relapse (n=17), GvHD (n=2), infection (n=3), organ failure/toxicity (n=1)		
	one PGF, one early rejection (both in MF pts, both rescued by 2nd allograft)		
GRFS	62% (1 y) 54% (2 y)		
Conclusion	• FT10 in combination with PTCy had low TRM with acceptable CIR, especially taking into account the rather unfavorable patient/disease characteristics.		

*Numbers differing from abstracts were based on final presentation at conference

EBMT 50th Annual Meeting Glasgow 14-17 April 2024

B115
Poster presentation

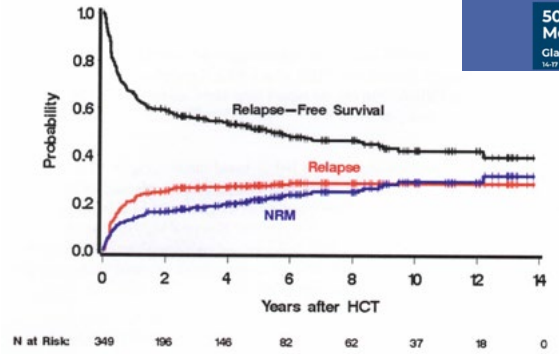
5-Year Transplant Success After Treosulfan Conditioning

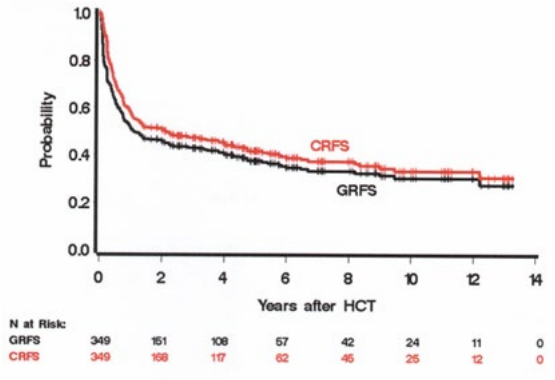
Rohtesh S. Mehta[1], Joachim Deeg[1], Ted Gooley[1], Stephanie J. Lee[1], Laurel Thur[1], Filippo Milano[1]

Affiliation: [1]Fred Hutch Cancer Center, Seattle, United States

B096
Poster presentation

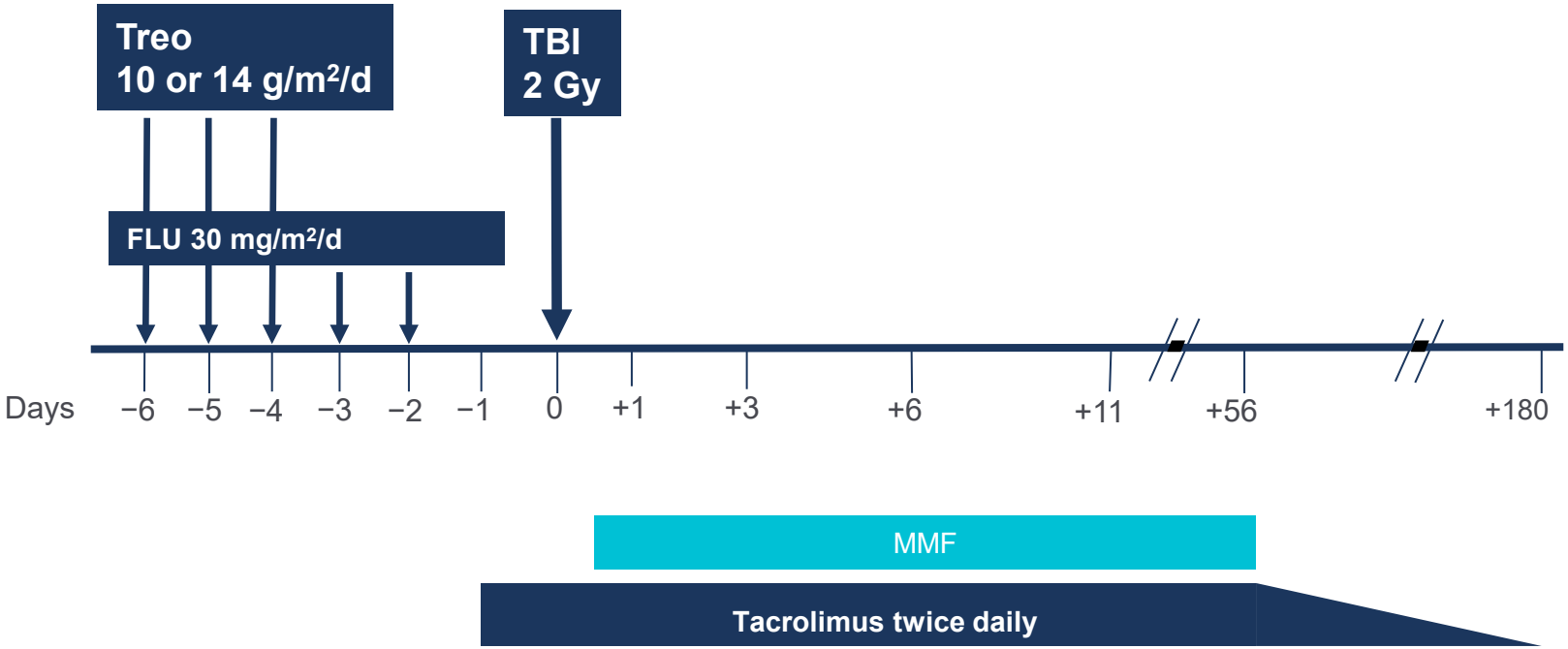
Study design	Retrospective single center analysis	**Aim**	Long-term outcomes of patients treated with Treo-based conditioning
Parameters assessed	OS, RFS, RI, NRM, GRFS, CRFS, return to work		
Patients	345	**Median age (range)**	50.2 y (0.7 – 70.5)
Disease	AML (n=186), MDS (n=106), ALL (n=36), other (n=17)		
Conditioning regimen	FT: Treo 30 – 42 g/m², Flu 150 - 200 mg/m²; in n=255 additional 2 Gy TBI		
Results			
5 y OS	56%		
5 y RFS	51%		
5 y RI	27%		
5 y NRM	21%		
5 y GRFS	38%		
5 y CRFS	42%		
Return to work or school	54% (1 y)	60% (3 y)	58% (5 y)
Unemployed or home	10% (1 y)	10% (3 y)	8% (5 y)
Limited by health	34% (1 y)	30% (3 y)	32% (5 y)
None of the above	3% (1 y)	1% (3 y)	2% (5 y)
Conclusion	• Treo-based regimens yield encouraging long-term outcomes. • The return-to-work status in this population is consistent with reports from the registry studies while GRFS and CRFS appear to be superior to what has been reported in large registry studies with other regimens.		





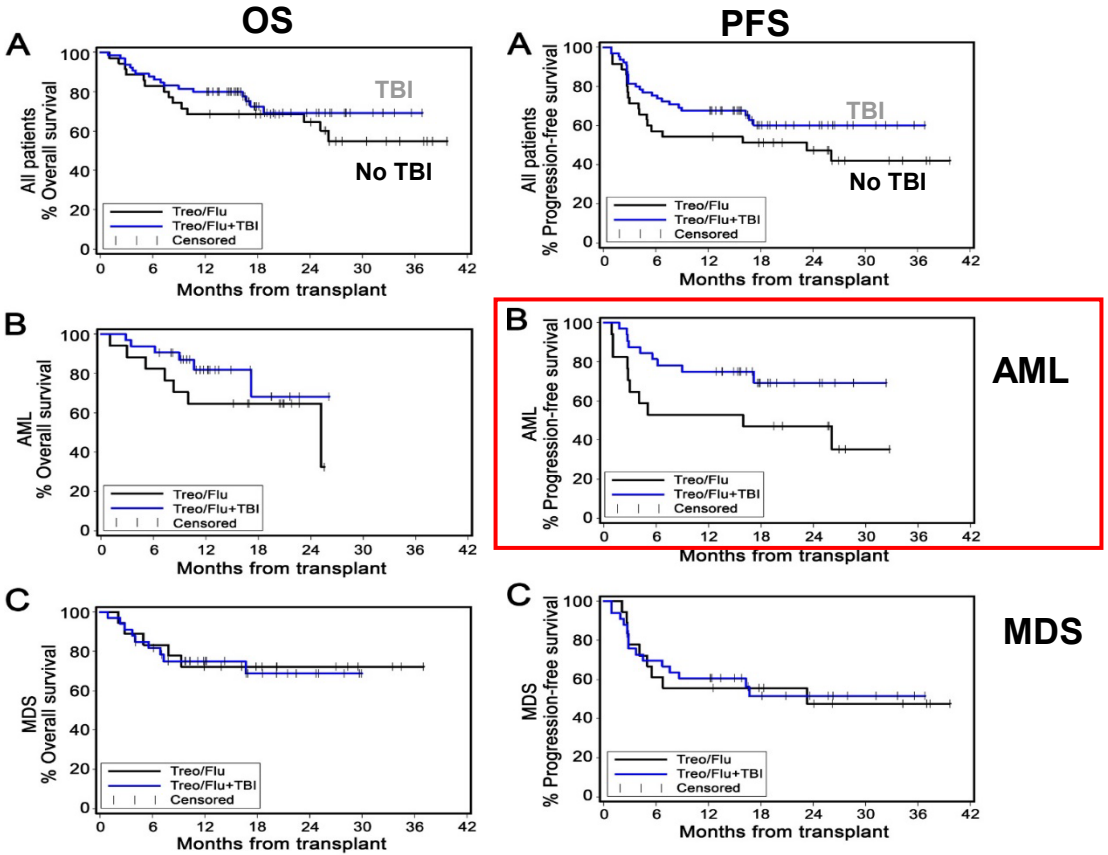
F. Milano et al. Blood Adv. 2025 Feb 19

Treosulfan-Based Conditioning Regimen: TBI vs no-TBI



- Deeg J, et al. Biol Blood Marrow Transplant. 2018 May;24(5):956-963

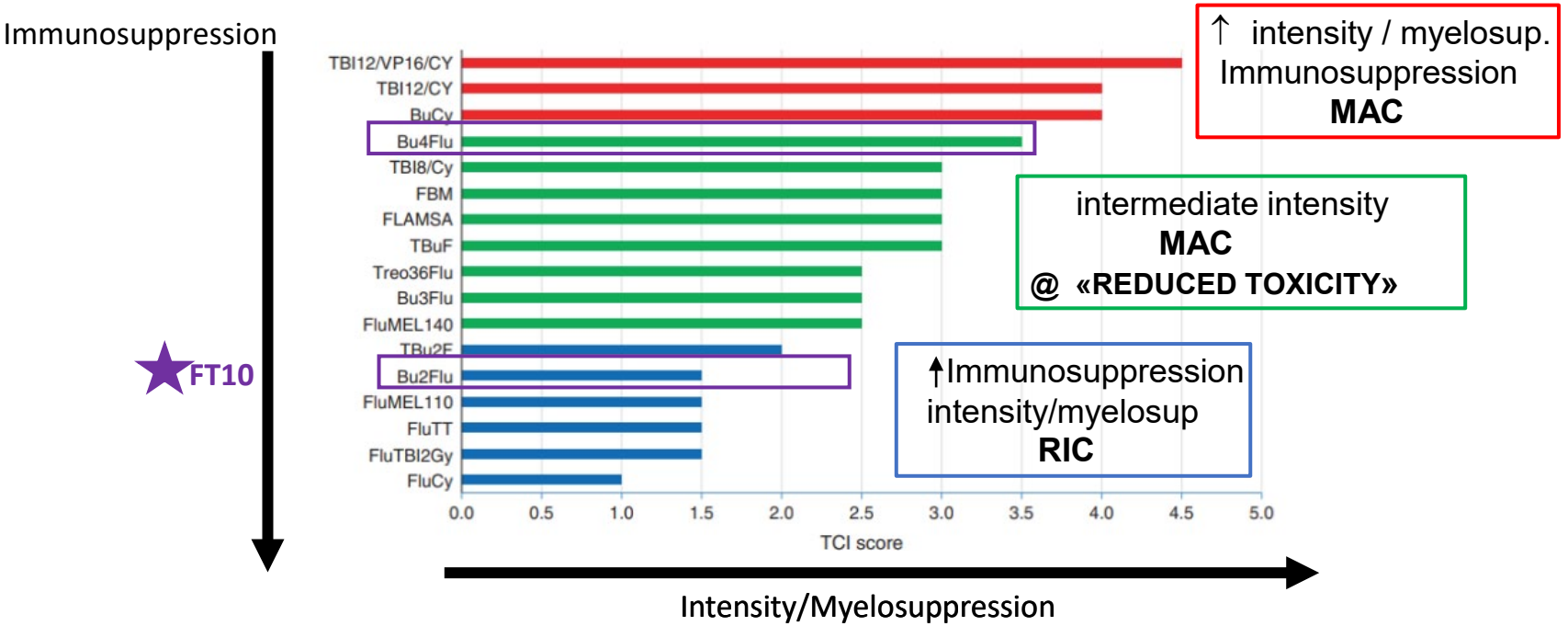
Clinical Outcomes



- Deeg J, et al. Biol Blood Marrow Transplant. 2018 May;24(5):956-963

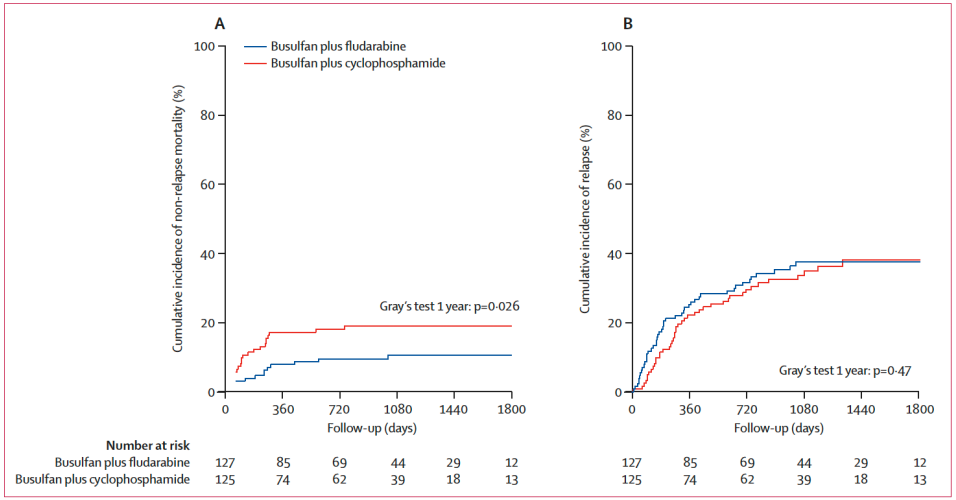
Tailored Conditioning.Regimen

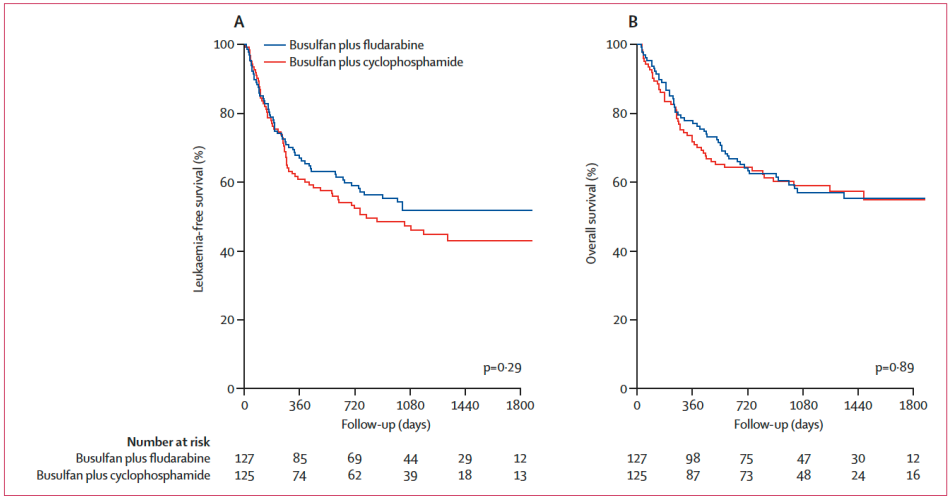
Max Efficacy vs Min Toxicity



Spyridonidis A, et al. *Bone Marrow Transplant.* 2020;55(6):1114-1125.

FB4 is the standard MAC for young AML patients



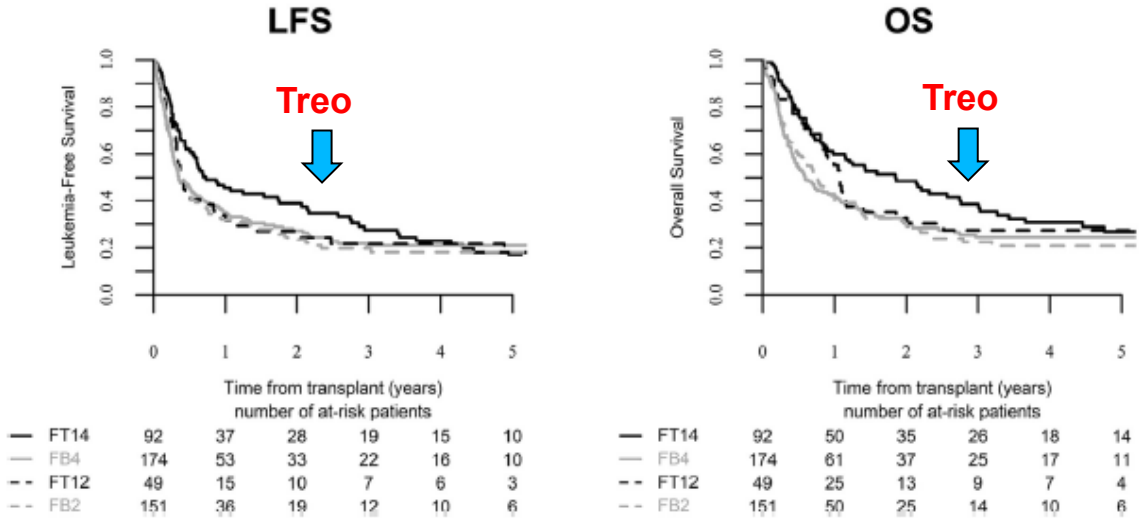


FB4 is safer than BuCy

» Rambaldi A. et al, . Lancet Oncol. 2015 Nov;16(15):1525-1536. doi: 10.1016/S1470-2045(15)00200-4. Epub 2015 Sep 28. PMID: 26429297.

EBMT Experience: Bu-based vs Treo-based regimens

Role of FT14 in patients with advanced disease at SCT



•**In patients with active disease at HSCT the 2-year OS rate was 49% after FT14**, **compared to 31%** of patients who received FB4 (**p = 0.004**).

•In Multivariate analysis patients reciving FT14 subset confirmed **a better OS for FT14 compared with FB4 (HR, .60; p = 0.008)**

Shimoni et al., 2018

FT14 study

Prospective Phase II study on Safety and Efficacy of Fludarabine plus Treosulfan (14 g) (FT14) conditioning regimen for allogeneic Stem Cell Transplantation (allo-SCT) in Acute Myeloid Leukemia (AML) patients (≥40 <65 years)

FT14 – Study

Start-November 2022

FT14 study design

Inclusion criteria (the same as FB4)

- Patients ≥40 <65 years of age
- Diagnosis of AML in first CR/CRi/MLFS
- Eligible for allo-SCT from HLA-identical matched related or unrelated donor as defined by molecular high-resolution typing (4 digits), as evaluated at the following four HLA gene loci (HLA-A, B, C, and DRB1)
- Adequate hepatic function (bilirubin ≤2 UNL; ALT/AST ≤2,5 UNL)
- Adequate renal function (creatinine clearance ≥50 ml/min)
- ECOG Performance Status ≤ 2
- Willing and able to comply with all of the requirements and visits in the protocol.
- Written and signed informed consent

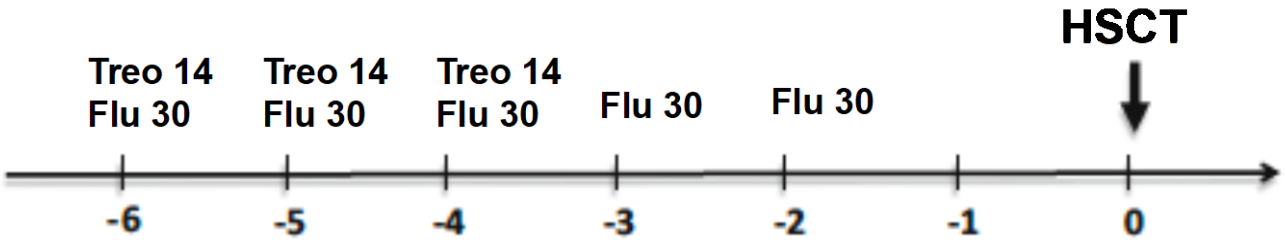
FT14 Study design

Primary Objective

To prospectively evaluate the safety and efficacy of the FT14 conditioning regimen for allo-SCT in AML pts (≥40 <65years).

Primary endpoint is :

- **1 year Leukemia-free survival (LFS) after allo-SCT**



FT14 : Fludarabine (*30 mg/m² x 5 days*) + Treosulfan (*14g/m2 x 3 days*)

CSA +MTX +ATG T/F: GVHD Prophylaxis

FT14 study design

Sample size: 82 patients

*This sample size has been calculated on the basis of expected LFS after allo-HCT with **FB4** conditioning regimen in AML patients in complete hematological remission **(LFS 65% at 1y)** compared to that expected after a regimen including treosulfan, an agent associated to lower toxicity and higher anti-leukemic activity compared to busulfan.*

→A sample size of 82 patients achieve a power of 80% to detect a non inferiority of 5% using a one-sided exact one binomial test with a significance level alpha of 0.05. These results assume a 1-year LFS of 65% (FB4) and the difference in the 1-year LFS under the alternative hypothesis is +8%. Null hypothesis will be rejected if 57 or more patients will be alive and disease-free at 1y after transplant.

→If more than 61 patients will be alive and leukemia-free at 1y FT14 superiority will be demonstrated (power 44%).

FT14 Study Overview @ 27th March -2025

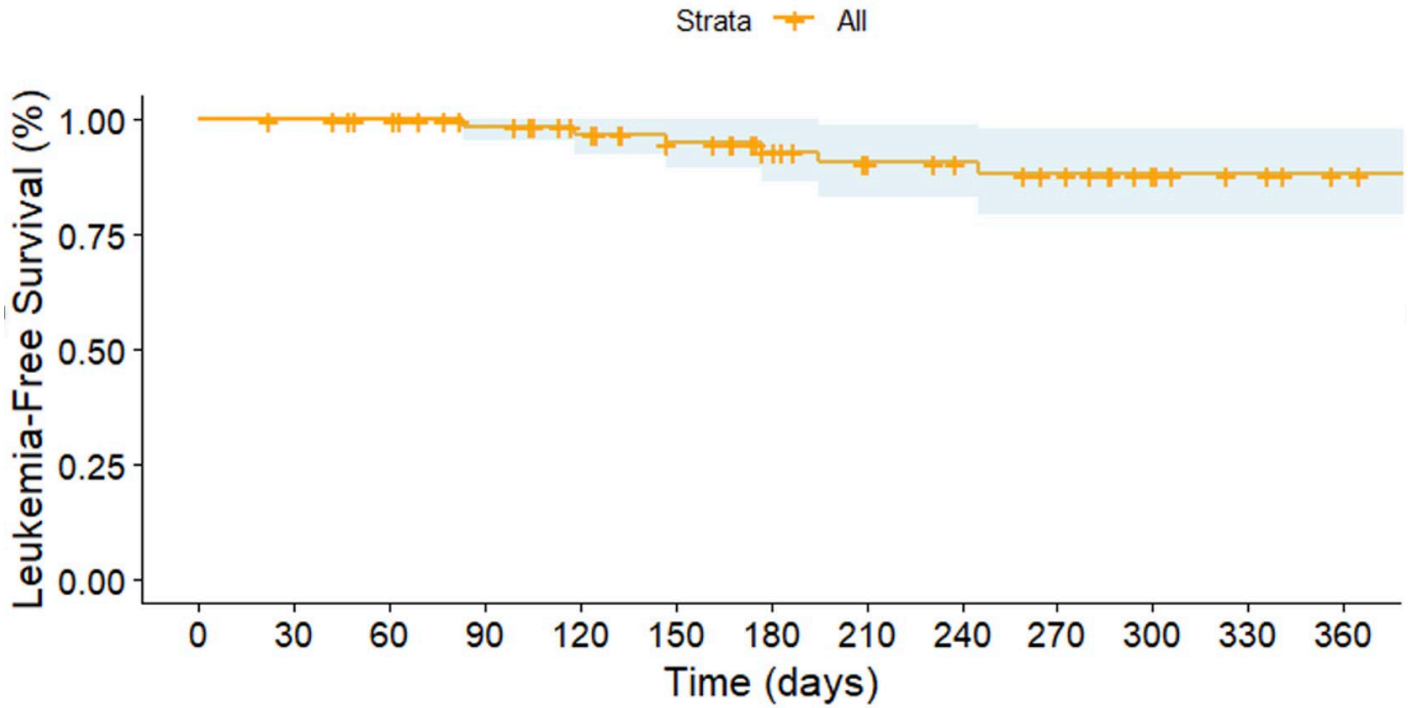
Features	
Start Enrolment	10th November 2022
Participating Centers-GITMO N° pts to be enrolled N° pts enrolled (last 24-3-25) Screen Failure N° Pts Transplanted **Interim analysis @ 27-March-25 on 75 pts**	13 82 82 3 75
Median Age pts MUD, n (%) Sibling, n (%)	56 yy (51-60) 55 (73%) 20 (27%)
 Bone Marrow, n (%) Peripheral Blood, n (%)	 5 (7%) 70 (93%)

Radici et al., Oral presentation, EBMT 2025

FT14 Transplant Outcomes @ 27th March 2025

Features	Pts Transplanted (n=75)
Hemat. recovery PMN > 1x10^9/L, median days PLT > 50x10^9/L, median days **Graft Failure (primary / secondary), n (%)**	 16.5 (13 – 21) 17.0 (14 – 27) 0 (0%)
Acute GVHD, n (%) Grade I Grade II Grade III Grade IV	24 (32%) 11 (21%) 6 3 1 13%
Chronic GVHD, n (%) Mild Moderate	6 (8%) 4 2
Relapse after allo-HSCT, n (%) @ day 180, n @ day 365 >, n	7 (9%) 4 3
Transplant Related Mortality , n (%) 0 -100 n 180 – 365 n	3 (4%) 1 2
Survival Outcomes **1year-LFS** 1- OS	 **89%** 91%

Radici et al., Oral presentation, EBMT 2025



According to the predefined statistical design, the observed 1-year leukaemia-free survival (LFS) rate of 89% with FT14 suggests superiority over FB4, as it markedly exceeds the threshold of 61 patients alive and leukaemia-free at 1 year required to demonstrate superiority (power 44%).

Radici et al., Oral presentation, EBMT 2025

FT14 Study
Many Thanks!

Participating Centers 13	
Brescia PI (13)	Modena (1)
Ancona (7)	Reggio Calabria (10)
Ascoli Piceno (1)	Napoli (5)
Cuneo (11)	Udine (4)
Firenze (1)	Venezia (13)
Milano-Policlin (4)	Verona (5)
Milano-HSR (7)	

Fluda-Treo (FT) Platform: Flexible – Effective – Low Toxic

FT10: Treosulfan 10 g/m² x 3 days (total dose: 30 g/m²)
+ Fludarabine 30 mg/m² x 5 days

FT12: Treosulfan 12 g/m² x 3 days (total dose: 36 g/m²)
+ Fludarabine 30 mg/m² x 5 days

FT14: Treosulfan 14 g/m² x 3 days (total dose: 42 g/m²)
+ Fludarabine 30 mg/m² x 5 days

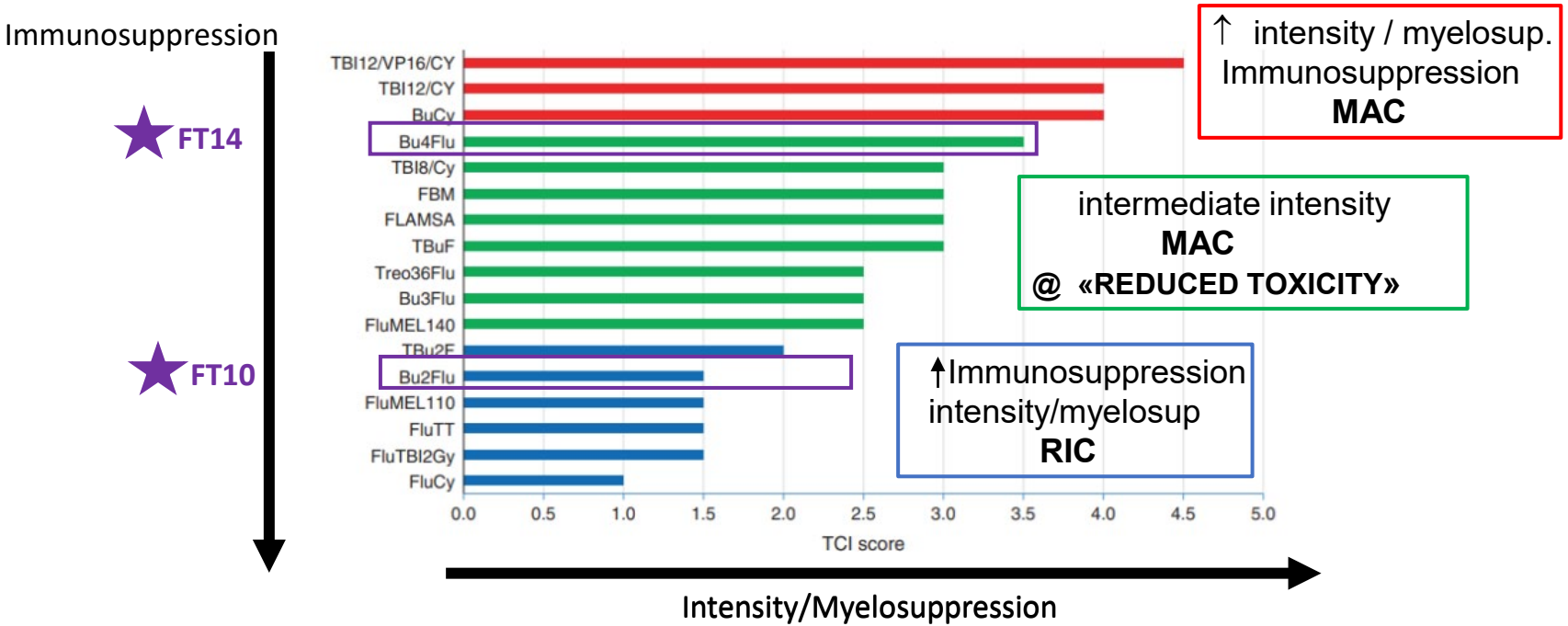
TCI = 1.5 - RIC

TCI = 2.5 - Tox

TCI = 3.5 – Tox

Tailored Conditioning Regimen

Max Efficacy vs Min Toxicity



Spyridonidis A, et al. *Bone Marrow Transplant.* 2020;55(6):1114-1125.

Thanks for Your attention

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