

Appendix 1: Participating countries, centers, and principal investigators

Country	Center	Principal investigator
Argentina		
	Buenos Aires, Hospital de Pediatria Garrahan, POH	Raquel Staciuk
Austria		
	Graz, Uniklinik Graz, POH	Wolfgang Schwinger
	Wien, St. Anna Kinderspital, POH	Herbert Pichler
Australia		
	Brisbane, Queensland Children's Hospital (formerly Lady Cilento), POH	Chris Fraser
	Randwick, Sydney Children's Hospital, POH	Richard Mitchell
	Westmead, Children's Hospital at Westmead, POH	Melissa Gabriel
Belgium		
	Brussels, Cliniques Universitaires Saint-Luc, POH	Benedicte Brichard
	Brussels, Hôpital Universitaire des Enfants Reine Fabiola, POH	Alina Ferster
	Leuven, University Hospital Gasthuisberg (UZ Leuven), POH	Marleen Renard
Belarus		
	Minsk, Belarusian Research Center, POH	Nina Minakovskaya; Dzmity Prudnikau
Canada		
	Calgary, Alberta Children's Hospital, POH	Tony Truong
	Toronto, Hospital for Sick Children, POH	Donna Wall
Switzerland		
	Basel, Universitäts-Kinderspital beider Basel , POH	Nicolas Von der Weid
	Genf, Universitätsklinik, POH	Marc Ansari
	Zürich, Universitäts-Kinderspital, POH	Tayfun Güngör
Czech Republic		
	Prague, University Hospital Motol, POH	Petr Sedalcek
Germany		
	Berlin, Charité CVK, POH	Hedwig Deubzer
	Düsseldorf, Uniklinik, POH	Roland Meisel
	Erlangen, Uniklinik, POH	Nora Naumann-Bartsch
	Essen, Uniklinik, POH	Dirk Reinhardt
	Frankfurt, Uniklinik, POH	Peter Bader
	Freiburg, Uniklinik, POH	Brigitte Strahm
	Gießen, Uniklinik, POH	Christine Mauz-Körholz
	Greifswald, Uniklinik, POH	Holger Lode

	Hamburg, Universitätsklinikum Hamburg-Eppendorf, POH	Johanna Schrum
	Hannover, Medizinische Hochschule, POH	Martin Sauer
	Jena, Uniklinik, POH	Bernd Gruhn
	Kiel, Universitätsklinikum Schleswig-Holstein, Campus Kiel, POH	Gunnar Cario
	München, Technische Universität München, Schwabing, POH	Irene Teichert-Lüttichau
	München, Klinikum der Universität München (LMU), Dr. von Haunersches Kinderspital, POH	Michael Albert
	Regensburg, Uniklinik, POH	Anja Tröger
	Tübingen, Uniklinik, POH	Peter Lang
	Ulm, Uniklinik, POH	Ansgar Schulz
	Würzburg, Uniklinik, POH	Paul Schlegel
Danmark		
	Copenhagen, Rigshospitalet, POH	Marianne Ifversen
Spain		
	Murcia, Hospital Clínico Universitario Virgen de La Arrixaca, POH	José Luis Fuster
France		
	Bordeaux, Centre Hospitalier Universitaire, POH	Charlotte Jubert
	Lille, Hôpital Jeanne de Flandre, POH	Bénédicte Bruno
	Lyon, Centre Hospitalier Universitaire Lyon, POH	Yves Bertrand
	Marseille, Centre Hospitalier Universitaire, POH	Gérard Michel
	Montpellier, Centre Hospitalier Universitaire, POH	Anne Sirvent
	Nancy, Centre Hospitalier Universitaire, POH	Cécile Pochon
	Nantes, Centre Hospitalier Universitaire, POH	Fanny Rialland
	Paris, Centre Hospitalier Universitaire Robert Debré, POH	Jean-Hugues Dalle
	Rennes, Centre Hospitalier Universitaire Hopital Sud, POH	Virginie Gandemer
	Rouen, Centre Hospitalier Universitaire, POH	Pascale Schneider
	Strasbourg, Les Hôpitaux Universitaire, POH	Catherine Paillard
Greece		
	Athens, Aghia Sophia Children's University Hospital, POH	Ioulia Peristeri
Croatia		
	Zagreb, University Hospital Centre Zagreb, POH	Ernest Bilic;Toni Matic
Hungary		
	Budapest, St. Istvan and St. Laszlo Hospital, POH	Gergely Krivan
Israel		
	Haifa, Rambam Health Care Campus, POH	Roni Gefen
	Petach Tikvah, Schneider Children's Medical Center, POH	Jerry Stein
Italy		

	Monza, Ospedale S. Gerardo, La Fondazione Monza e Brianza il Bambino e la sua Mamma (MBBM), POH	Adriana Balduzzi
	Roma, Ospedale Bambino Gesù, POH	Franco Locatelli
Norway		
	Oslo, Rikshospitalet, POH	Jochen Büchner
New Zealand		
	Auckland, Starship Children's Health, POH	Lochie Teague
Poland		
	Bydgoszcz, Nicolaus Copernicus University Collegium Medicum, POH	Mariusz Wysocki
	Poznan, University Hospital, POH	Jacek Wachowiak
	Wroclaw, Klinika Transplantacji Szpiku, POH	Krzysztof Kalwak
Romania		
	Bucharest, Institutul Clinic Fundeni, POH	Anca Colita
Saudi Arabia		
	Riyadh, King Abdullah Hospital, POH	Mohammed Essa
Sweden		
	Gothenburg, Queen Silvia Children's Hospital, POH	Cecilia Langenskiöld
Slovakia		
	Bratislava, University Children's Hospital, POH	Peter Svec
Turkey		
	Ankara, Ankara University School of Medicine, POH	Mehmet Ertem
	Ankara, Gazi University School of Medicine, POH	Ülker Kocak
	Antalya, Bahcesehir University School of Medicine, POH	Mehmet Akif Yeşilipek
	Istanbul, Acibadem University Atakent Hospital, POH	Gulyuz Ozturk
	Istanbul, Bahcelievler Medicalpark Hospital, POH	Tunc Fisgin
	Istanbul, Bahcesehir University School of Medicine, POH	Gülsün Karasu
	Istanbul, Medipol Mega Üniversite Hastanesi, POH	Sema Anak
	Izmir, Dokuzeylul University School of Medicine, POH	Hale Ören
	Izmir, Ege University School of Medicine, POH	Serap Aksoylar

Appendix 2: Supplemental data

Table A1: Adverse events according to conditioning regimen

	Flu/Thio/Bu								Flu/Thio/Treo								
	AE grade								AE grade								
	0	1	2	3	4	3/4			0	1	2	3	4	3/4			
	n	n	n	n	n	n	n	%	n	n	n	n	n	n	n	n	%
Hematological toxicities	98	12	2	2	4	78	82	84%	91	5	2	4	2	78	80	88%	
Reduced Granulocytes	96	15	2	4	4	71	75	78%	91	9	1	3	2	76	78	86%	
Reduced Hemoglobin	97	12	3	6	54	22	76	78%	89	6	1	11	54	17	71	80%	
Reduced Leukocytes	97	17	1	2	5	72	77	79%	91	7	6	1	1	76	77	85%	
Reduced Platelets	97	14	1	3	26	53	79	81%	89	7	1	4	37	40	77	87%	
Hemolysis	96	92	2	1	1	0	1	1%	85	84	0	0	1	0	1	1%	
Non-hematological toxicities	98	0	7	15	40	38	78	80%	91	0	6	22	26	37	63	69%	
Allergic reaction / hypersensitivity	97	81	7	7	2	0	2	2%	84	67	7	10	0	0	0	0%	
Cytokine release syndrome	97	94	0	3	0	0	0	0%	86	80	2	4	0	0	0	0%	
HLH	97	97	0	0	0	0	0	0%	85	85	0	0	0	0	0	0%	
PTLD	97	96	1	0	0	0	0	0%	86	86	0	0	0	0	0	0%	
Serum sickness	97	96	0	0	1	0	1	1%	84	83	1	0	0	0	0	0%	
Arrhythmia	97	94	2	1	0	0	0	0%	86	80	2	2	2	0	2	2%	
Reduced Cardiac function	89	87	1	0	0	1	1	1%	75	72	1	0	1	1	0	3%	
Disseminated intravascular coagulation	97	96	0	0	0	1	1	1%	86	85	0	1	0	0	1	0%	
Thrombotic microangiopathy	97	93	4	0	0	0	0	0%	85	84	0	0	1	0	1	1%	
Acute vascular leak syndrome	97	96	0	0	1	0	1	1%	86	82	1	2	1	0	0	1%	
Thrombosis / embolism	97	96	0	1	0	0	0	0%	86	84	2	0	0	0	5	0%	
Changes in the skin	98	38	32	24	4	0	4	4%	91	31	39	16	4	1	15	5%	
Diarrhea	97	28	26	29	7	7	14	14%	91	30	23	23	11	4	7	16%	
Vomiting	97	37	27	25	8	0	8	8%	91	31	31	22	7	0	37	8%	
Stomatitis	97	39	7	19	22	10	32	33%	91	26	19	9	12	25	23	41%	
Nausea	98	37	14	17	18	12	30	31%	89	36	13	17	7	16	1	26%	
Colitis	98	84	2	8	4	0	4	4%	85	78	3	3	1	0	0	1%	
Ileus, gastrointestinal	98	97	0	1	0	0	0	0%	85	85	0	0	0	0	1	0%	
CNS hemorrhage	98	98	0	0	0	0	0	0%	88	87	0	0	0	1	1	0%	
Gastrointestinal hemorrhage	98	91	1	4	1	1	2	2%	86	85	0	0	1	0	0	1%	
Pulmonary hemorrhage	98	97	0	0	0	1	1	1%	86	85	0	1	0	0	0	0%	
Bladder hemorrhage	98	97	1	0	0	0	0	0%	86	85	1	0	0	0	0	0%	
Other hemorrhage	98	94	2	2	0	0	0	0%	86	85	0	1	0	0	2	0%	
Bilirubin elevation	98	54	17	9	16	2	18	18%	91	65	16	8	2	0	20	2%	
SGOT / SGPT elevation	97	30	29	21	12	5	17	17%	91	22	33	16	16	4	0	22%	
Liver dysfunction / failure (clinical)	97	90	3	4	0	0	0	0%	86	85	1	0	0	0	0	0%	
Pancreatitis	96	94	2	0	0	0	0	0%	86	86	0	0	0	0	0	0%	
Veno-occlusive disease (VOD) severity	97	65	7	13	8	4	12	12%	87	84	1	2	0	0	9	0%	
Fever	98	18	44	28	7	1	8	8%	88	11	37	31	9	0	40	10%	
Infection	98	20	7	30	38	3	41	42%	91	7	11	33	37	3	0	44%	
Osteonecrosis (avascular necrosis)	96	96	0	0	0	0	0	0%	81	81	0	0	0	0	0	0%	
Peripheral neurotoxicity	98	94	4	0	0	0	0	0%	90	87	3	0	0	0	4	0%	
Central neurotoxicity	98	96	1	0	1	0	1	1%	91	83	4	0	1	3	1	4%	
Leukoencephalopathy	95	95	0	0	0	0	0	0%	78	77	0	0	1	0	2	1%	
Encephalopathy	97	97	0	0	0	0	0	0%	87	84	0	1	0	2	1	2%	
Seizure	98	97	0	1	0	0	0	0%	87	84	0	2	0	1	11	1%	
Hypoxia	93	74	0	2	9	8	17	18%	86	74	0	1	8	3	3	13%	
Pneumonitis, pulmonary infiltrates	94	79	5	2	5	3	10	11%	82	71	4	4	2	1	1	4%	

	Flu/Thio/Bu								Flu/Thio/Treo							
	AE grade								AE grade							
	0	1	2	3	4	3/4			0	1	2	3	4	3/4		
	n	n	n	n	n	n	n	%	n	n	n	n	n	n	n	%
ARDS	97	90	0	0	1	6	7	7%	84	83	0	0	0	1	1	1%
Aspiration	98	97	0	0	1	0	1	1%	85	84	0	0	1	0	0	1%
Atelectasis	98	94	3	1	0	0	0	0%	85	83	2	0	0	0	1	0%
Reduced Kidney function (Creatinine elevation)	98	69	21	6	2	0	2	2%	90	63	20	6	1	0	0	1%
Hematuria	95	83	10	2	0	0	0	0%	82	72	9	1	0	0	0	0%
Proteinuria	89	81	7	1	0	0	0	0%	81	76	5	0	0	0	0	0%

ARDS, acute respiratory distress syndrome; HLH, hemophagocytic lymphohistiocytosis; PTLN, post-transplant lymphoproliferative disorder; SGOT, serum glutamic oxaloacetic transaminase; SGPT, serum glutamate pyruvate transaminase. Grading according to Common Terminology Criteria for Adverse Events (CTCAE) Version 4.03

Table A2: Key outcomes according to age group

	<2 years old (n = 90)	≥2 years old (n = P 101)	
Death			
Deaths, n	26	30	
3-year OS (95% CI)	0.71 (0.59–0.80)	0.68 (0.57–0.76)	0.793
Event-free survival			
Events, n	44	43	
3-year EFS (95% CI)	0.48 (0.37–0.59)	0.55 (0.44–0.64)	0.328
Relapse			
Relapses, n	41	37	
3-year CIR (95% CI)	0.48 (0.37–0.59)	0.39 (0.29–0.49)	0.166
Non-leukemic death			
Death in CR, n	3	6	
3-year TRM (95% CI)	0.03 (0.01–0.09)	0.06 (0.02–0.12)	.402
Acute GvHD by Day 100			
Evaluable*, n	88	101	
Grade 0 or 1, n (%)	69 (78%)	76 (75%)	
Grade 2, n (%)	12 (14%)	14 (14%)	
Grade 3 or 4, n (%)	7 (8%)	11 (11%)	0.493
Chronic GvHD by 2 years			
cGvHD/death without cGvHD/patients, n/n/N	4/42/90	8/42/101	
3-year cumulative incidence of cGvHD (95% CI)	0.03 (0.01–0.09)	0.08 (0.04–0.15)	0.175
3-year cumulative incidence of death without cGvHD (95% CI)	0.50 (0.38–0.6)	0.44 (0.34–0.54)	0.374
GvHD and relapse			
Events/patients, n/N	48/91	56/103	
3-year GRFS (95% CI)	0.42 (0.31–0.52)	0.41 (0.31–0.51)	0.957
Non-hematologic adverse events of grade 3 or 4			
Evaluable, n	89	100	
Grade 3 or 4, n (%)	67 (75%)	72 (72%)	0.610

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Table A3: Univariable analysis of OS according to age group

		<2 years				≥2 years			
		n	Deaths	3-year OS	P	n	Deaths	3-year OS	P
Total		90	26	0.71 (0.59–0.80)		101	30	0.68 (0.57–0.76)	
Sex	Male	43	12	0.71 (0.52–0.84)	0.917	64	19	0.68 (0.54–0.79)	0.839
	Female	47	14	0.71 (0.55–0.82)		37	11	0.67 (0.48–0.80)	
Age at diagnosis	<1 year	75	22	0.69 (0.56–0.79)	0.660	17	8	0.42 (0.15–0.67)	0.024
	≥1 year	15	4	0.79 (0.49–0.93)		84	22	0.72 (0.60–0.81)	
Immunophenotype	BCP	76	24	0.68 (0.55–0.78)	0.366	80	26	0.64 (0.51–0.74)	0.454
	T-cell ALL	9	2	0.76 (0.33–0.94)		19	4	0.78 (0.51–0.91)	
	Other	5	0			1	0		
MRD pre HSCT	Low	51	16	0.69 (0.53–0.81)	0.471	54	16	0.68 (0.51–0.79)	0.513
	High	20	8	0.60 (0.32–0.79)		26	11	0.56 (0.35–0.73)	
Genetic aberration	<i>KMT2A-AFF1</i>	38	15	0.58 (0.40–0.73)	0.258	13	6	0.44 (0.14–0.70)	0.396
	<i>ETV6-RUNX1</i>	2	0	1.00 (1.00–1.00)		4	1	1.00 (1.00–1.00)	
	<i>BCR-ABL</i>	2	0	1.00 (1.00–1.00)		11	3	0.73 (0.37–0.90)	
	None of the above	43	11	0.75 (0.57–0.87)		65	18	0.68 (0.53–0.78)	
Hyperdiploidy	No	82	25	0.69 (0.57–0.79)	0.170	67	21	0.66 (0.52–0.77)	0.412
	Yes	5	0	1.00 (1.00–1.00)		18	4	0.74 (0.43–0.90)	
Donor	MSD	12	2	0.80 (0.41–0.95)	0.441	25	8	0.70 (0.47–0.84)	0.756
	MD	78	24	0.69 (0.57–0.79)		76	22	0.67 (0.54–0.77)	
Remission status	CR1	76	22	0.69 (0.56–0.79)	0.795	63	12	0.81 (0.67–0.89)	0.007
	CR2	13	4	0.77 (0.44–0.92)		37	17	0.50 (0.32–0.66)	
	CR3	1	0	1.00 (1.00–1.00)		.	1	1.00 (1.00–1.00)	
Stem cell source	BM	59	15	0.75 (0.60–0.85)	0.413	72	22	0.67 (0.54–0.77)	0.544
	PB	19	6	0.66 (0.39–0.84)		16	3	0.78 (0.46–0.92)	
	Cord blood	12	5	0.63 (0.27–0.85)		11	5	0.53 (0.21–0.77)	
	BM + PB					1	0	1.00 (1.00–1.00)	
Time of relapse, months	<18	11	4	0.73 (0.37–0.90)	0.489	21	9	0.52 (0.27–0.72)	0.499

		<2 years				≥2 years			
		n	Deaths	3-year OS	P	n	Deaths	3-year OS	P
	18–30	1	0	1.00 (1.00–1.00)		14	8	0.37 (0.12–0.62)	
	>30	0				1	0	1.00 (1.00–1.00)	
Type of relapse	BM	5	0	1.00 (1.00–1.00)	0.007	24	9	0.58 (0.34–0.76)	0.458
	CNS	5	1	0.80 (0.20–0.97)		5	3	0.27 (0.01–0.69)	
	Other	3	3	0.33 (0.01–0.77)		8	5	0.38 (0.09–0.67)	

18 BM, bone marrow; PB, peripheral blood.

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Table A4: Univariable analysis of EFS according to age group

		<2 years				≥2 years			
		n	Events	3-year EFS	P	n	Events	3-year EFS	P
Total		90	44	0.48 (0.37–0.59)		101	43	0.55 (0.44–0.64)	
Sex	Male	43	22	0.43 (0.27–0.59)	0.501	64	26	0.57 (0.43–0.68)	0.603
	Female	47	22	0.52 (0.37–0.66)		37	17	0.50 (0.32–0.66)	
Age at diagnosis	<1 year	75	40	0.43 (0.31–0.55)	0.091	17	12	0.22 (0.05–0.47)	0.001
	≥1 year	15	4	0.73 (0.44–0.89)		84	31	0.61 (0.49–0.71)	
Immunophenotype	BCP	76	41	0.43 (0.31–0.54)	0.091	80	38	0.50 (0.38–0.61)	0.418
	T-cell ALL	9	3	0.67 (0.28–0.88)		19	6	0.67 (0.41–0.84)	
	Other	5	0			1	0		
MRD pre HSCT	Low	51	25	0.49 (0.34–0.62)	0.300	54	24	0.52 (0.37–0.65)	0.326
	High	20	12	0.30 (0.09–0.55)		26	15	0.42 (0.23–0.60)	
Genetic aberration	<i>KMT2a-AFF1</i>	38	22	0.38 (0.21–0.54)	0.715	13	6	0.50 (0.20–0.74)	0.754
	<i>ETV6-RUNX1</i>	2	1	0.50 (0.01–0.91)		4	1	0.75 (0.13–0.96)	
	<i>BCR-ABL</i>	2	1	0.50 (0.01–0.91)		11	4	0.61 (0.25–0.83)	
	None of the above	43	18	0.57 (0.41–0.70)		65	28	0.54 (0.41–0.66)	
Hyperdiploidy	No	82	41	0.47 (0.36–0.58)	0.188	67	30	0.52 (0.39–0.64)	0.525
	Yes	5	1	0.80 (0.20–0.97)		18	7	0.60 (0.34–0.79)	
Donor	MSD	12	2	0.81 (0.44–0.95)	0.052	25	12	0.48 (0.27–0.67)	0.514
	MD	78	42	0.44 (0.32–0.55)		76	31	0.57 (0.44–0.68)	
Remission status	CR1	76	35	0.52 (0.39–0.63)	0.153	63	20	0.65 (0.51–0.76)	0.018
	CR2	13	9	0.28 (0.07–0.54)		37	22	0.39 (0.23–0.55)	
	CR3	1	0	1.00 (1.00–1.00)		.	1	1.00 (1.00–1.00)	
Stem cell source	BM	59	24	0.56 (0.41–0.68)	0.054	72	31	0.53 (0.40–0.65)	0.886
	PB	19	14	0.26 (0.10–0.47)		16	7	0.55 (0.28–0.76)	
	Cord blood	12	6	0.50 (0.21–0.74)		11	5	0.55 (0.23–0.78)	
	BM + PB					1	0	1.00 (1.00–1.00)	
Time of relapse, months	<18	11	8	0.23 (0.04–0.51)	0.252	21	13	0.34 (0.14–0.55)	0.517
	18–30	1	0	1.00 (1.00–1.00)		14	9	0.36 (0.13–0.59)	

		<2 years				≥2 years			
		n	Events	3-year EFS	P	n	Events	3-year EFS	P
Total		90	44	0.48 (0.37–0.59)		101	43	0.55 (0.44–0.64)	
	>30					1	0	1.00 (1.00–1.00)	
Type of relapse	BM	5	2	0.53 (0.07–0.86)	0.042	24	13	0.43 (0.23–0.62)	0.211
	CNS	5	4	0.20 (0.01–0.58)		5	3	0.40 (0.05–0.75)	
	other	3	3	0.33 (0.01–0.77)		8	6	0.25 (0.04–0.56)	

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Table A5: Adverse events according to age group

Adverse event	<2 years								≥2 years							
	n	AE grade							n	AE grade						
		0	1	2	3	4	3/4	%		0	1	2	3	4	3/4	%
Hematological toxicities	89	6	3	2	2	76	78	88%	100	11	1	4	4	80	84	84%
Reduced Granulocytes	88	10	0	2	3	73	76	86%	99	14	3	5	3	74	77	78%
Reduced Hemoglobin	87	6	3	6	49	23	72	83%	99	12	1	11	59	16	75	76%
Reduced Leukocytes	88	8	3	1	2	74	76	86%	100	16	4	2	4	74	78	78%
Reduced Platelets	87	8	2	2	28	47	75	86%	99	13	0	5	35	46	81	82%
Hemolysis	84	81	2	0	1	0	1	1%	97	95	0	1	1	0	1	1%
Non-hematological toxicities	89	0	5	17	32	35	67	75%	100	0	8	20	34	38	72	72%
Allergic reaction / hypersensitivity	86	71	8	6	1	0	1	1%	95	77	6	11	1	0	1	1%
Cytokine release syndrome	86	84	0	2	0	0	0	0%	97	90	2	5	0	0	0	0%
HLH	85	85	0	0	0	0	0	0%	97	97	0	0	0	0	0	0%
PTLD	86	86	0	0	0	0	0	0%	97	96	1	0	0	0	0	0%
Serum sickness	86	84	1	0	1	0	1	1%	95	95	0	0	0	0	0	0%
Arrhythmia	84	81	1	0	2	0	2	2%	99	93	3	3	0	0	0	0%
Reduced cardiac function	63	63	0	0	0	0	0	0%	68	68	0	0	0	0	0	0%
Cardiac function	79	77	0	0	0	2	2	3%	85	82	2	0	1	0	1	1%
Disseminated intravascular coagulation	86	86	0	0	0	0	0	0%	97	95	0	1	0	1	1	1%
Thrombotic microangiopathy	85	82	3	0	0	0	0	0%	97	95	1	0	1	0	1	1%
Acute vascular leak syndrome	85	82	1	1	1	0	1	1%	98	96	0	1	1	0	1	1%
Thrombosis / embolism	85	84	1	0	0	0	0	0%	98	96	1	1	0	0	0	0%
Changes in the skin	89	31	36	18	3	1	4	4%	100	38	35	22	5	0	5	5%
Diarrhea	88	29	18	23	11	7	18	20%	100	29	31	29	7	4	11	11%
Vomiting	88	30	30	23	5	0	5	6%	100	38	28	24	10	0	10	10%
Stomatitis	88	32	12	12	16	16	32	36%	100	33	14	16	18	19	37	37%
Nausea	87	35	10	17	10	15	25	29%	100	38	17	17	15	13	28	28%
Colitis	86	77	0	5	4	0	4	5%	97	85	5	6	1	0	1	1%
Ileus, gastrointestinal	86	85	0	1	0	0	0	0%	97	97	0	0	0	0	0	0%
CNS hemorrhage	88	88	0	0	0	0	0	0%	98	97	0	0	0	1	1	1%
Gastrointestinal hemorrhage	86	82	0	3	1	0	1	1%	98	94	1	1	1	1	2	2%

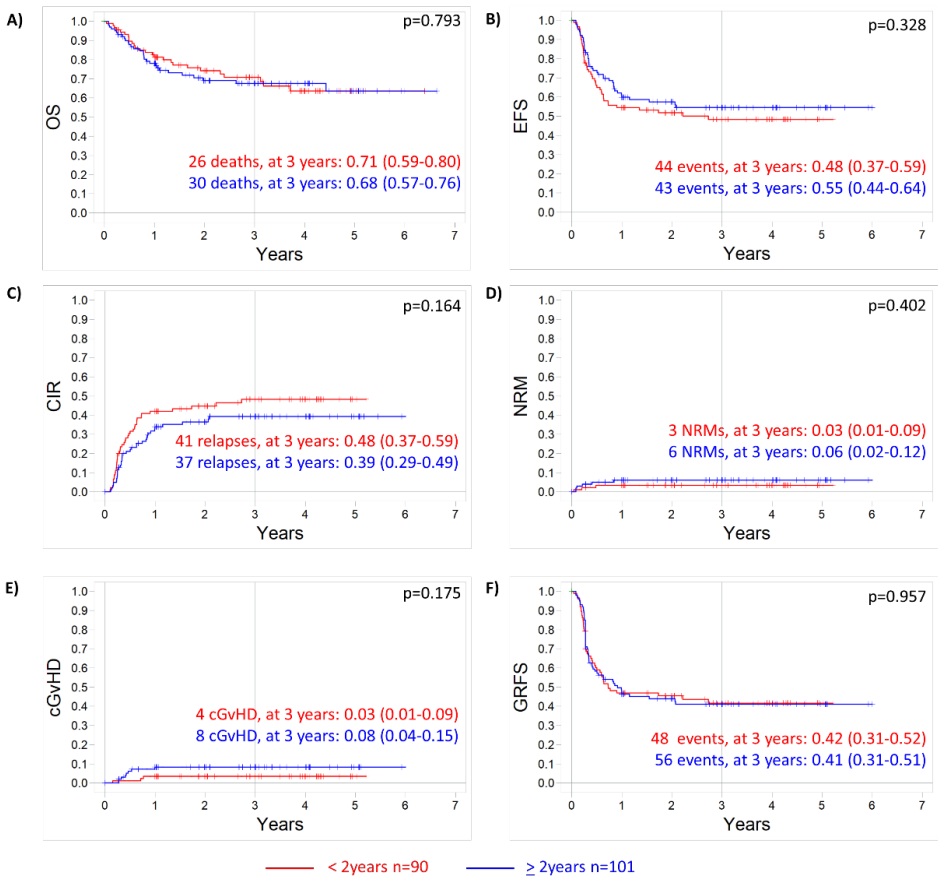
Adverse event	<2 years								≥2 years							
	n	AE grade							n	AE grade						
		0	1	2	3	4	3/4	0		1	2	3	4	3/4		
n	n	n	n	n	n	n	%	n	n	n	n	n	n	%		
Pulmonary hemorrhage	86	86	0	0	0	0	0	0%	98	96	0	1	0	1	1	1%
Bladder hemorrhage	86	85	1	0	0	0	0	0%	98	97	1	0	0	0	0	0%
Other hemorrhage	86	84	0	2	0	0	0	0%	98	95	2	1	0	0	0	0%
Bilirubin	89	57	16	8	8	0	8	9%	100	62	17	9	10	2	12	12%
SGOT / SGPT elevation	88	26	33	14	12	3	15	17%	100	26	29	23	16	6	22	22%
Liver dysfunction / failure (clinical)	85	82	2	1	0	0	0	0%	98	93	2	3	0	0	0	0%
Pancreatitis	85	85	0	0	0	0	0	0%	97	95	2	0	0	0	0	0%
VOD severity	88	0	69	19	0	0	0	0%	97	0	80	17	0	0	0	0%
Fever	18	0	5	9	2	2	4	22%	17	0	3	6	6	2	8	47%
Infection	89	12	8	29	36	4	40	45%	100	15	10	34	39	2	41	41%
Osteonecrosis (avascular necrosis)	86	86	0	0	0	0	0	0%	91	91	0	0	0	0	0	0%
Peripheral neurotoxicity	88	87	1	0	0	0	0	0%	100	94	6	0	0	0	0	0%
Central neurotoxicity	89	85	1	0	1	2	3	3%	100	94	4	0	1	1	2	2%
Leukoencephalopathy	82	82	0	0	0	0	0	0%	91	90	0	0	1	0	1	1%
Encephalopathy	87	85	0	1	0	1	1	1%	97	96	0	0	0	1	1	1%
Seizure	87	84	0	2	0	1	1	1%	98	97	0	1	0	0	0	0%
Hypoxia	83	69	0	2	6	6	12	14%	96	79	0	1	11	5	16	17%
Pneumonitis, pulmonary infiltrates	81	70	1	3	3	4	7	9%	95	80	8	3	4	0	4	4%
ARDS	83	78	0	0	1	4	5	6%	98	95	0	0	0	3	3	3%
Aspiration	85	84	0	0	1	0	1	1%	98	97	0	0	1	0	1	1%
Atelectasis	85	82	2	1	0	0	0	0%	98	95	3	0	0	0	0	0%
Creatinine elevation	89	65	16	6	2	0	2	2%	99	67	25	6	1	0	1	1%
Hematuria	84	77	7	0	0	0	0	0%	93	78	12	3	0	0	0	0%
Proteinuria	79	77	2	0	0	0	0	0%	91	80	10	1	0	0	0	0%

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ARDS, acute respiratory distress syndrome; HLH, hemophagocytic lymphohistiocytosis; PTLN, post-transplant lymphoproliferative disorder; SGOT, serum glutamic oxaloacetic transaminase; SGPT, serum glutamate pyruvate transaminase; VOD, veno-occlusive disease. Grading according to Common Terminology Criteria for Adverse Events (CTCAE) Version 4.03

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Figure A1: Key outcomes according to age group



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