

## Supplementary information

Commented [EJ1]: CE: Please capture supplementary information accordingly.

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Supplementary Table 1: Names and locations of participating sites

Name	Location
Alberta Children's Hospital	Calgary, Alberta, Canada
British Columbia Children's Hospital	Vancouver, British Columbia, Canada
Hadassah Medical Center	Jerusalem, Israel
The Hospital for Sick Children	Toronto, Ontario, Canada
Medical College of Wisconsin	Milwaukee, Wisconsin, USA
Prinses Maxima Center for Pediatric Oncology	Utrecht, Netherlands
Sister Maria Ludovica Children's Hospital	Buenos Aires, Argentina

Supplementary Table 2. Sensitivity analysis: Descriptive statistics for baseline variables used to develop propensity score before and after weighting

	Unweighted	Weighted
	Dexamethasone Group	Dexamethasone Group

	All patients (N=232)	Exposed (N=137)	Unexposed (N=95)	SMD	Exposed	Unexposed	SMD
<b>Patient Characteristics</b>							
History of IFD (N (%))	25 (11)	14 (10.0)	11 (12)	0.04	11%	10%	0.01
Mean EBMT Score (SD)	1.82 (1.24)	1.99 (1.27)	1.63 (1.18)	0.32	1.87 (1.23)	1.91 (1.16)	0.03
<b>Diagnosis (N (%))</b>							
Acute lymphoblastic leukemia	99 (43)	60 (44)	39 (41)	0.06	42%	38%	0.08
Acute myelogenous leukemia	96 (41)	49 (36)	47 (50)	0.28	42%	41%	0.01
Myelodysplastic syndrome	21 (9)	16 (12)	5 (5)	0.23	19%	11%	0.03
Non-Hodgkin lymphoma	12 (5)	10 (7)	2 (2)	0.35	5%	9%	0.13
<b>Hematopoietic Cell Transplant Characteristics</b>							
<b>Year of HCT (N (%))</b>							
2012	28 (12)	27 (20)	14 (15)	0.13	18%	19%	0.02
2013	49 (21)	31 (23)	18 (19)	0.09	21%	21%	0.00
2014	41 (18)	27 (20)	14 (15)	0.13	18%	15%	0.08
2015	38 (16)	29 (21)	9 (10)	0.33	16%	18%	0.05
2016	35 (15)	14 (10)	21 (22)	0.33	14%	16%	0.07
2017	41 (18)	9 (7)	19 (20)	0.40	14%	12%	0.06

Highly emetic chemotherapy (N (%))	217 (94)	134 (98)	83 (87.4)	0.41	96%	94%	0.11
Stem Cell Source (N (%))	149(64)	90 (66)	59 (62)	0.08	62%	66%	0.07
Bone Marrow	35 (15)	28 (20)	7 (7)	0.39	16%	16%	0.00
Cord Blood	48 (21)	19 (14)	29 (31)	0.41	22%	19%	0.08
Peripheral Blood							

N, number; IFD, invasive fungal disease; SD, standard deviation; EBMT, European Group for Bone Marrow Transplantation; HCT, hematopoietic stem cell transplant

Supplementary Table 3. Primary and secondary study endpoints of sensitivity analysis where diagnosis and year of transplant were added, palonosetron was omitted and 10 patients with low-frequency diagnoses (i.e. other) were removed: unadjusted and adjusted by inverse probability of treatment weighting

Outcome	Outcomes in the entire sample*		Unadjusted Difference (95% CI) p-value	IPTW-Adjusted Difference (% , 95% CI) p-value
	Dexamethasone-Exposed	Dexamethasone-Unexposed		
Treatment-related mortality (proportion, %)	10/137 (7.3)	5/94 (5.3)	2.0% (-5.2 to 9.2) P=0.743	2.7% (-6.2 to 10.0) P=0.568
1-year Event free survival (proportion, %)	89/137 (65)	57/93 (61.3)	3.7% (-10 to 17.3) P=0.669	3.5% (-15.3 to 22.1) P=0.687
Mean time to neutrophil engraftment in days	22.8 (7.8)	21.9 (16)	0.9 days (-3 to 4)	-1.4 days (-6.4 to 3.3)

(SD)			P=0.629	P=0.613
aGVHD Grade $\geq$ 1 (vs Grade 0) (proportion, %)	77/134 (57)	40/91 (44)	13.5% (-0.6 to 27.6) P=0.064	4.6% (-14 to 23.5) P=0.529
Proven, probably, possible invasive fungal disease (proportion, %)	23/134 (17)	7/94 (7)	9.7% (0.5 to 18.9) P=0.053	10.0% (-1.3 to 20.8) P=0.078

N, number; CI, 95% confidence interval; IPTW, inverse probability of treatment weighting

\*Denominators reflect missing or censored data.