

Additional file 1:

CED and DIE calculation

Cyclophosphamide Equivalent Dose (CED) was calculated using the following equation:

$$\text{CED (mg/m}^2\text{)} = 1.0 \text{ (cumulative cyclophosphamide dose (mg/m}^2\text{))} + 0.244 \text{ (cumulative ifosfamide dose (mg/m}^2\text{))} + 0.857 \text{ (cumulative procarbazine dose (mg/m}^2\text{))} + 14.286 \text{ (cumulative chlorambucil dose (mg/m}^2\text{))} + 15.0 \text{ (cumulative BCNU dose (mg/m}^2\text{))} + 16.0 \text{ (cumulative CCNU dose (mg/m}^2\text{))} + 40 \text{ (cumulative melphalan dose (mg/m}^2\text{))} + 50 \text{ (cumulative Thio-TEPA dose (mg/m}^2\text{))} + 100 \text{ (cumulative nitrogen mustard dose (mg/m}^2\text{))} + 8.823 \text{ (cumulative busulfan dose (mg/m}^2\text{))}$$
 according to Green and colleagues¹.

Doxorubicin Isotoxic Equivalent (DIE) was calculated using the following formula:

$$\text{DIE (mg/m}^2\text{)} = 1.0 \text{ (cumulative doxorubicin dose (mg/m}^2\text{))} + 0.833 \text{ (cumulative daunorubicin dose (mg/m}^2\text{))} + 5.0 \text{ (cumulative idarubicin dose (mg/m}^2\text{))} + 0.67 \text{ (cumulative epirubicin dose (mg/m}^2\text{))} + 4.0 \text{ (cumulative mitoxantrone dose (mg/m}^2\text{))}$$
 according to Shankar and colleagues².

References:

1. Green D. M., Liu W., Kutteh W. H., et al. Cumulative alkylating agent exposure and semen parameters in adult survivors of childhood cancer: a report from the St Jude Lifetime Cohort Study. *Lancet Oncol.* 2014;15(11):1215-1223.
2. Shankar S. M., Marina N., Hudson M. M., et al. Monitoring for cardiovascular disease in survivors of childhood cancer: report from the Cardiovascular Disease Task Force of the Children's Oncology Group. *Pediatrics.* 2008;121(2):e387-396.

Table : Markers selection for MRD detection by MFC in ovarian tissue.

Patient no.	LAIP identify in the blood or bone marrow at diagnosis	Markers selection for MRD detection in cortical tissue					
		V450/BV421	BV510	PE	PE-Cy7	APC	APC-H7
1	CD10 (100%), CD19 (100%), CD20 (87%), CD22 (100%), CD34 (78%), CD38 (100%), CD58 (100%), CD200 (62%), CD304 (78%), cMPO (81%), cCD22 (99%), cTDT (73%), cCD79a (99%)	CD20 L27 (BD)	/	CD22 S-HCL-1 (BD)	CD19 J3.119 (BC)	CD10 HI10a (BD)	/
2	CD19 (100%), CD22 (96%), cyCD22 (94%), CD34 (100%), CD38 (99%), CD44 (98%), CD58 (99%), CD123 (99%), cyTDT (90%), cyCD79a (94%)	CD34 581 (BD)	/	CD24 ML5 (BD)	CD19 J3.119 (BC)	CD123 AC145 (MB)	/
3	CD19 (91%), CD34 (87%), negative for CD10 and myeloid markers	/	/	CD24 ML5 (BD)	CD19 J3.119 (BC)	CD34 581 (BD)	/
4	CD45 (88%), HLA DR11 (88%), CD10 (78%), CD19 (78%), CD22 (82%), CD33 (35%)	/	/	CD22 S-HCL-1 (BD)	CD19 J3.119 (BC)	CD10 HI10a (BD)	HLA-DR G46-6 (BD)
5	CD19 (86%), CD10 (98%), CD22 (90%), CD38 (99%)	/	/	CD22 S-HCL-1 (BD)	CD19 J3.119 (BC)	CD10 HI10a (BD)	CD38 HB7 (BD)
6	CD45 (12%), CD10 (87%), CD19 (79%), CD22 (86%), CD34 (70%) HLA-DR11 (81%)	/	/	CD22 S-HCL-1 (BD)	CD19 J3.119 (BC)	CD10 HI10a (BD)	CD38 HB7 (BD)
7	CD2 (89%), cyCD3 (94%), CD5 (93%), CD7 (98%), CD10 (49%), CD33 (81%), CD34 (89%), CD45RA (99%), CD123 (56%)	CD7 M-T701 (BD)	/	CD5 BL1a (BC)	cyCD3 UCHT1 (BC)	CD34 581 (BD)	sCD3 SK7 (BD)
8	CD2 (76%), CD7 (94%), CD13 (98%), CD10 (80%), cyCD3 (83%), cyCD79 (80%)	CD7 M-T701 (BD)	/	CD13 L138 (BD)	cyCD3 UCHT1 (BC)	CD10 HI10a (BD)	sCD3 SK7 (BD)
9	CD13 (100%), cyCD13 (100%), CD15 (55%), CD33 (100%), CD34 (100%), CD38 (100%), CD117 (100%), cMPO (100%)	/	/	CD361 MEM-216 (Exbio)	CD34 581 (BC)	CD117 104D2 (BD)	CD43 1G10 (BD)
10	CD34 (96%), CD33 (98%), CD13 (54,5%), CD117 (47%), CD38 (40,5%)	/	/	CD33 P67.6 (BD)	CD11b Bear1 (BC)	CD117 104D2 (BD)	CD43 1G10 (BD)
11	CD7 (80%), CD11b (83%), CD13 (96%), cCD13 (66%), CD19 (51%), CD33 (96%), CD34 (100%), CD38 (100%), CD71 (93%), CD117 (100%), cyMPO (100%), HLA DR (92%)	/	/	CD33 P67.6 (BD)	CD11b Bear1 (BC)	CD15 HI98 (BD)	CD43 1G10 (BD)
12	CD13 (90%), CD33 (99%), CD117 (99%), CD65 (86%), CD7 (99%), HLA DR2 (97%), CD34 (98%), CD38 (98%)	/	/	CD33 P67.6 (BD)	CD34 581 (BC)	CD117 104D2 (BD)	CD43 1G10 (BD)
13	CD13 (100%), CD33 (100%), CD65 (100%), CD117 (100%) et CD11c (100%)	/	/	CD33 P67.6 (BD)	CD11b Bear1 (BC)	CD117 104D2 (BD)	CD43 1G10 (BD)
14	CD13 (100%), CD33 (100%), CD117 (100%), CD34 (100%), CD38 (100%), CD123 (89%), cyMPO (100%), cyCD13 (100%)	/	/	CD33 P67.6 (BD)	CD34 581 (BC)	CD117 104D2 (BD)	CD43 1G10 (BD)
15	CD34 (100%), CD33 (50%), CD38 (100%), HLA DR (100%), CD99 (50%)	/	CD43 1G10 (BD)	CD33 P67.6 (BD)	CD34 581 (BD)	HLA-DR REA805 (MB)	/

BC, Beckman Coulter; BD, Becton Dickinson; MB, Miltenyi Biotec.