

Supplementary Information

Reduced intensity of induction does not increase the risk of relapse in childhood acute lymphoblastic leukemia - A multi-centric clinical study of GD-2008-ALL protocol

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SI 1.

Immunity classification criteria

T lymphoblast (T-ALL) was identified by the positive T lymphocyte immune symbol: CD1, CD2, CD3, CD4, CD5, CD7, CD8 and TdT.

B lymphoblast (B-ALL) was identified by: ①early pre-B-ALL: HLA-DR positive or HLA-DR and CD19 both positive; ②common B lymphoblast: CD10 positive, HLA-DR, CD19 and CD22 positive, CyIg and SmIg negative, and divided into two subtypes: CD20 negative and CD20 positive; ③pre-B-lymphoblast: CyIg was positive, and most of the other B markers, like HLA-DR, CD19, CD22, CD10 and CD20 were positive; ④ mature B lymphocyte type: SmIg positive, CyIg positive/negative, CD19, CD22, CD20 and HLA-DR of other B immune markers were usually positive, with CD10 positive or negative.

SI 2.

Criteria for CNS involvement and CNS relapse

(1) Suspected CNSL (CNSL2)

Lymphoblasts are found in CSF, while cell count is no more than 5/ μ L, and RBC:WBC ratio is no more than 100:1, which indicates that the lumbar puncture is not traumatic, meaning that CSF contains no blood.

Lymphoblasts are found in CSF, while cell count is no more than 5/ μ L, and RBC:WBC ratio is over 100:1, which indicates that the lumbar puncture is traumatic, meaning that CSF contains blood.

The first lumbar puncture is bloody CSF without lymphoblast found, but the synchronous peripheral blood WBC is no less than $50 \times 10^9/L$.

(2) Diagnosed CNSL (CNSL3)

CT/MRI shows massive brain lesions or meningeal infiltration.

Present of cranial nerve paralysis without other causes, even if CSF is negative or CT/MRI of the brain shows no abnormalities.

Retinopathy presents alone, even if no CSF lymphoblast or no MRI/CT brain lesion.

Lymphoblasts are found in CSF while WBC is no more than 5/ μ L and lumbar puncture is non-traumatic.

Massive lymphoblast is found in CSF, while WBC is more than 5/ μ L and RBC:WBC ratio is no more than 100:1.

Lymphoblast ratio in CSF is higher than peripheral blood, while WBC is more than 5/ μ L.

SI 3.

Details of intrathecal injection dose at different ages

Table S1 Intrathecal injection dose at different ages

Age(months)	MTX (mg)	Ara-C (mg)	Dex (mg)
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<12	6	12	2
~23	8	15	2
~35	10	25	5
≥36	12	30	5

Note: for HR, T-ALL and central nervous system leukemia patients, MTX+Ara-C+Dex intrathecal injection was used. SR and IR BCP-ALL were intrathecal injected with MTX+Dex.

Abbreviations: MTX, methotrexate; Ara-C, cytarabine; DEX, dexamethasone.

SI 4.

Detail of cumulated dose of medicine in induction and reinduction therapy

Table S2 Cumulated dose of medicine in induction and reinduction therapy

	SR	IR	HR
VCR[1.5 mg/(m ² ·d)]	8	8	8
DNR[30 mg/(m ² ·d)]	2	4	4
DOX[30mg/(m ² ·d)]	4	4	25mg/(m ² ·d) X 4
CTX [1000 mg/(m ² ·d)]	2	3	3
6-MP[60 mg/(m ² ·d)]	28	52	52
Ara-C[75 mg/(m ² ·d)]	16	24	24

Abbreviations: VCR, Vincristine; DNR, Daunorubicin; DOX, Adriamycin; CTX, cyclophosphamide; 6-MP, 6-mercaptopurine; Ara-C, cytarabine.