Table S1. Baseline characteristics

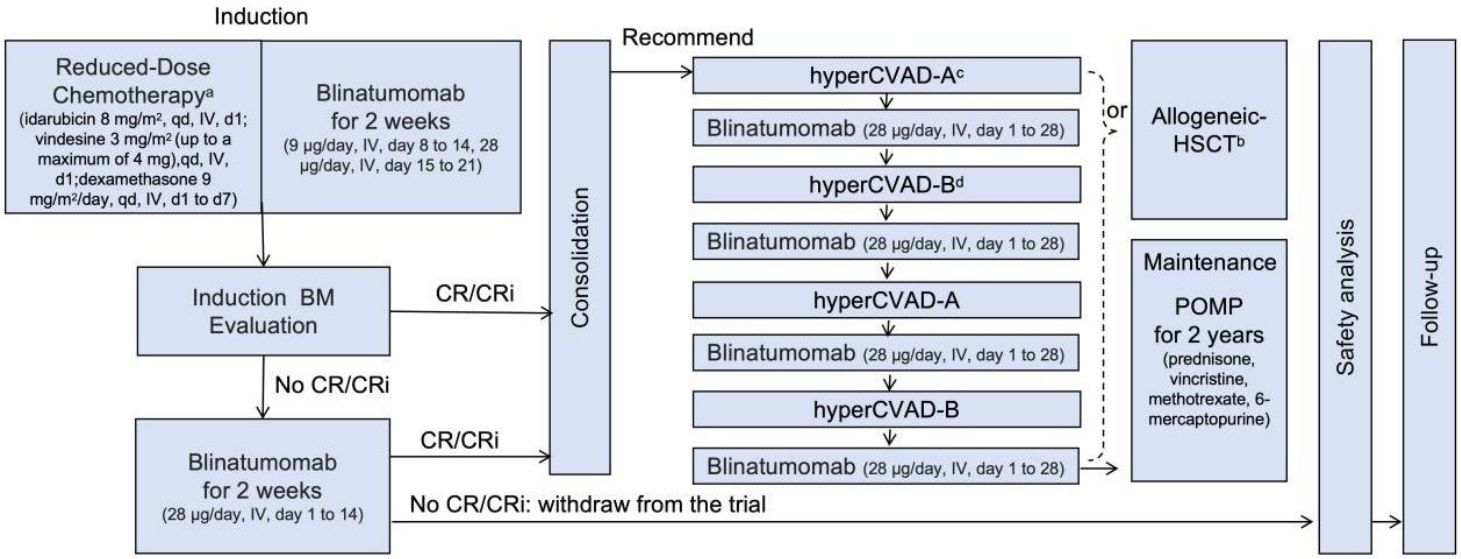
	Patients (N=35)
Age, years	42 (28–47)
15–39	16 (46%)
40–65	19 (54%)
Sex	
Male	13 (37%)
Female	22 (63%)
Bone marrow blasts proportion	86 (72–94)
Peripheral blood cell count at diagnosis	
White blood cell ($\times 10^9$/L)	8.9 (2.7–40.1)
≤30	26 (74%)
>30	9 (26%)
Hemoglobin (g/L)	84 (66–121)
Platelet ($\times 10^9$/L)	84 (31–135)
NCCN-2023 cytogenetic / molecular risk stratification	
Standard risk	18 (51%)
Poor risk	17 (49%)
Poor cytogenetic / molecular risk	
Complex karyotype	3 (9%)
Hypodiploidy	3 (9%)
ZNF384 rearrangement	3 (9%)
KMT2A rearrangement	3 (9%)
TP53 mutation	3 (9%)
BCR::ABL1 like	5 (14%)
P2RY8::CRLF2 rearrangement	3 (9%)
JAK2 mutation	2 (5%)
Alterations of *IKZF1*	1 (3%)
MEF2D rearrangements	1 (3%)

Data are n (%) or median (IQR). N, number, NCCN, national comprehensive cancer network.

Table S2. List of sites from which patients were recruited

No.	Site	Location	Name of Principle investigator	No of recruited patients
1	The First Affiliated Hospital of Soochow University	Suzhou	Su-ning Chen	24
2	The First Affiliated Hospital of Nanjing Medical University, Jiangsu Province Hospital	Nanjing	Yu Zhu	3
3	The Affiliated Wuxi People's Hospital of Nanjing Medical University	Wuxi	Xin Zhou	3
4	Soochow Hopes Hematonosis Hospital	Suzhou	Bin Gu, Jun Wang	3
5	Affiliated Changzhou Second Hospital of Nanjing Medical University	Changzhou	Xuzhang Lu	2

Figure S1. Reduced-dose chemotherapy followed by blinatumomab trial scheme



BM, bone marrow; CR, complete response; CRi, complete response with incomplete recovery; HSCT, Haematopoietic stem cell transplantation; IV, intravenous.

[a] Per protocol, prephase treatment with dexamethasone 9 mg/m^2/day (up to 5 days before the reduced-dose chemotherapy) was required for patients with peripheral white blood cell ≥30,000/µL. A repeat bone marrow assessment performed after reduced-dose chemotherapy prephase and before blinatumomab treatment was recommended to assess bone marrow blasts.

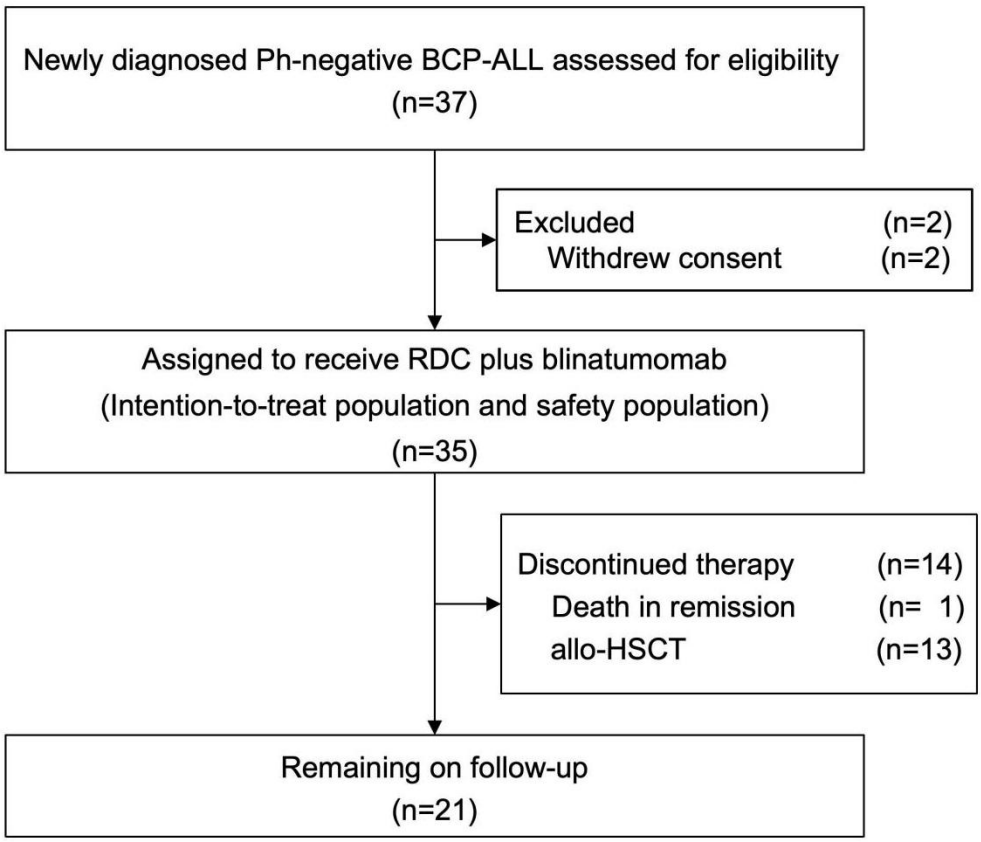
[b] The choice to undergo allogeneic hematopoietic stem cell transplantation (Allogeneic-HSCT) was based on the patient's status of measurable residual disease and donor availability.

[c] hyper-CVAD-A regimen: hyperfractionated cyclophosphamide, vincristine, doxorubicin, and dexamethasone

[d] hyper-CVAD-B regimen: high-dose methotrexate and cytarabine.

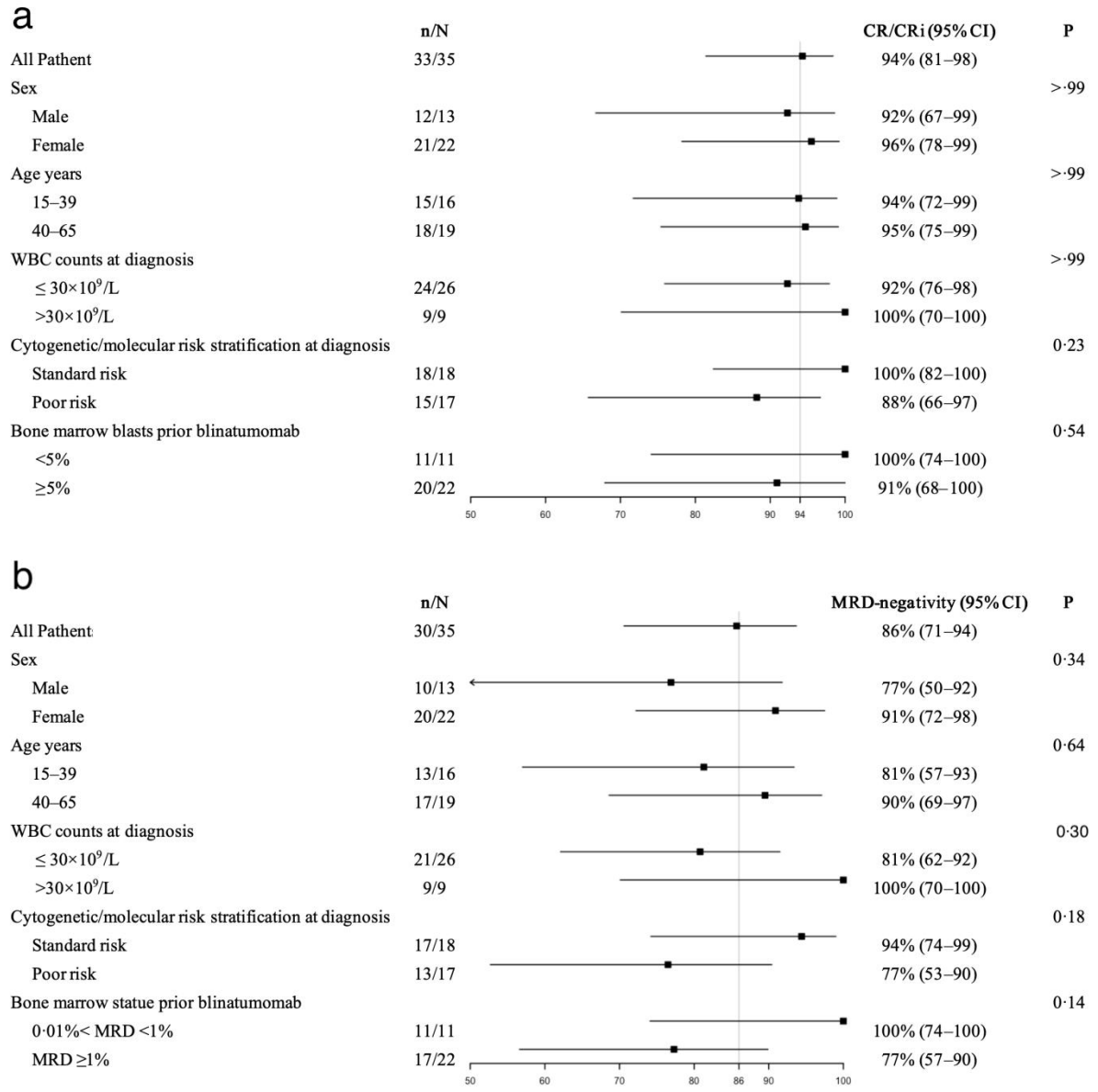
[e] Central nervous system prophylaxis, consisting of an intrathecal injection of methotrexate, cytarabine and dexamethasone on day 22 of the induction therapy and on the first day of each consolidation therapy cycle for a total of 8-12 doses.

Figure S2. Study flowchart



Ph-negative BCP-ALL, philadelphia chromosome-negative B-cell precursor acute lymphoblastic leukemia; RDC, reduced-dose chemotherapy; allo-HSCT, allogeneic hematopoietic stem cell transplantation.

Figure S3. Treatment response in subgroups after reduced-dose chemotherapy followed by 2 weeks of blinatumomab therapy. a.CR/CRi b. MRD-negative



The gray line represents the point estimate for the response across the entire patient population. CR, complete response; CRi, complete response with incomplete recovery; WBC, white blood cell; MRD, measurable residual disease.

Figure S4. Survival by Risk Stratification. a. Overall survival. b. Progression-free survival.