

## Minimal residual disease in peripheral blood at day 15 identifies a subgroup of childhood B-cell precursor acute lymphoblastic leukemia with superior prognosis

Jana Volejnikova,<sup>1</sup> Ester Mejstrikova,<sup>1</sup> Tatana Valova,<sup>1</sup> Leona Reznickova,<sup>1</sup> Ladislava Hodonska,<sup>1</sup> Vladimir Mihal,<sup>2</sup> Jaroslav Sterba,<sup>3</sup> Yahia Jabali,<sup>4</sup> Daniela Prochazkova,<sup>5</sup> Bohumir Blazek,<sup>6</sup> Jiri Hak,<sup>7</sup> Zdenka Cerna,<sup>8</sup> Ondrej Hrusak,<sup>1</sup> Jan Stary,<sup>1</sup> Jan Trka,<sup>1</sup> and Eva Fronkova<sup>1</sup>

<sup>1</sup>Department of Pediatric Hematology and Oncology, 2<sup>nd</sup> Faculty of Medicine, Charles University and University Hospital Motol, Prague; CLIP - Childhood Leukemia Investigation Prague; <sup>2</sup>Department of Pediatrics, Palacky University and University Hospital Olomouc; <sup>3</sup>Department of Pediatric Oncology, Masaryk University and University Hospital Brno; <sup>4</sup>Department of Pediatrics, Regional Hospital Ceske Budejovice; <sup>5</sup>Department of Pediatrics, Masaryk Hospital Usti nad Labem; <sup>6</sup>Department of Pediatrics, University Hospital Ostrava; <sup>7</sup>Department of Pediatrics, University Hospital Hradec Kralove, and <sup>8</sup>Department of Pediatrics, University Hospital Plzen, Czech Republic

Citation: Volejnikova J, Mejstrikova E, Valova T, Reznickova L, Hodonska L, Mihal V, Sterba J, Jabali Y, Prochazkova D, Blazek B, Hak J, Cerna Z, Hrusak O, Stary J, Trka J, and Fronkova E. Minimal residual disease in peripheral blood at day 15 identifies a subgroup of childhood B-cell precursor acute lymphoblastic leukemia with superior prognosis. *Haematologica* 2011;96(12):1815-1821. doi:10.3324/haematol.2011.042937

Online Supplementary Table S1. Representativeness of the study cohort.

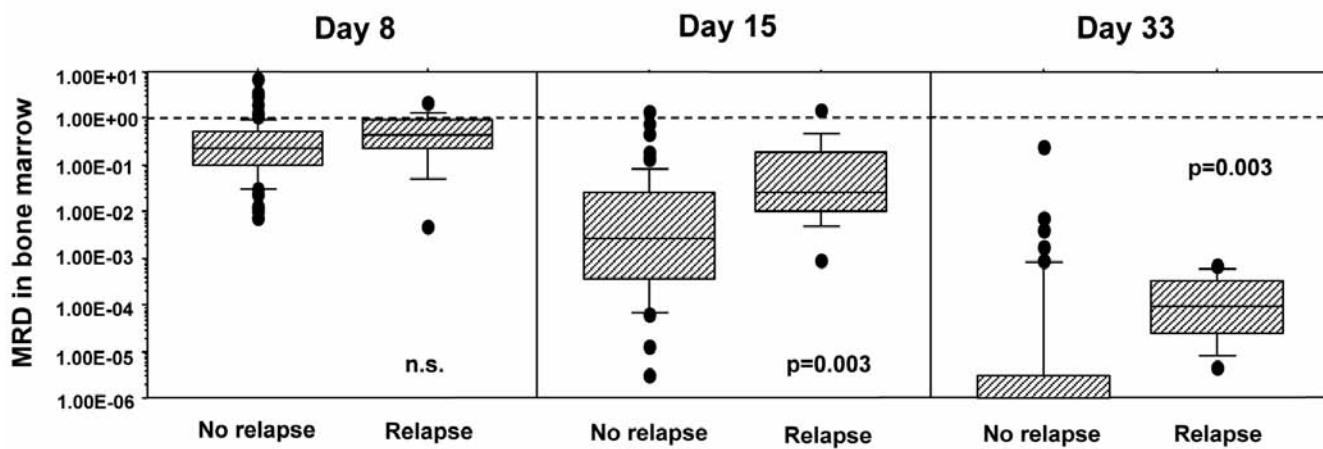
	Total cohort (n=166)	Study cohort (n=95)		p
<b>Immunophenotype</b>				
CALL	118	71 %	67	71 %
PreB	42	25 %	24	25 %
ProB	6	4 %	4	4 %
				p=0.97
<b>Genetics</b>				
TEL/AML1	54	33 %	31	33 %
Hyperdiploid	45	27 %	28	29 %
Other	67	40 %	36	38 %
				p=0.90
<b>Age</b>				
<6 years	104	63 %	62	65 %
>6 years	62	37 %	33	35 %
				p=0.67
<b>White blood cell count</b>				
<20,000	117	70 %	71	75 %
>20,000	49	30 %	24	25 %
				p=0.46
<b>Gender</b>				
Male	86	52 %	48	51 %
Female	80	48 %	47	49 %
				p=0.84
<b>ALL- IC risk group</b>				
SR	69	42 %	45	47 %
IR	86	52 %	46	48 %
HR	11	7 %	4	4 %
				p=0.54
<b>BM morphology at day 15</b>				
M1	110	66 %	67	71 %
M2	41	25 %	24	25 %
M3	15	9 %	4	4 %
				p=0.35
<b>Ikaros alteration</b>				
Yes	11	8 %	6	7 %
No	126	92 %	77	93 %
				p=0.83
<b>Relapse</b>				
No	147	89 %	81	85 %
Yes	19	11 %	14	15 %
				p=0.44

SR: standard risk; IR: intermediate risk; HR: high risk.

**Online Supplementary Table S2.** Representativeness of the cohort with information available on minimal residual disease on day 15.

Immunophenotype	Total cohort (n=166)		Day 15 cohort (n=78)		p
cALL	118	71 %	58	74 %	
PreB	42	25 %	18	23 %	p=0.83
ProB	6	4 %	2	3 %	
<b>Genetics</b>					
TEL/AML1	54	33 %	28	36 %	
Hyperdiploid	45	27 %	21	27 %	p=0.85
Other	67	40 %	29	37 %	
<b>Age</b>					
<6 years	104	63 %	50	64 %	
>6 years	62	37 %	28	36 %	p=0.83
<b>WBC</b>					
<20,000	117	70 %	61	78 %	
>20,000	49	30 %	17	22 %	p=0.21
<b>Gender</b>					
Male	86	52 %	39	50 %	
Female	80	48 %	39	50 %	p=0.79
<b>ALL- IC risk group</b>					
SR	69	42 %	36	46 %	
IR	86	52 %	39	50 %	p=0.60
HR	11	7 %	3	4 %	
<b>BM morphology at day 15</b>					
M1	110	66 %	54	69 %	
M2	41	25 %	21	27 %	p=0.35
M3	15	9 %	3	4 %	
<b>Ikaros alteration</b>					
Yes	11	8 %	5	6 %	
No	126	92 %	73	94 %	p=0.66
<b>Relapse</b>					
No	147	89 %	65	83 %	
Yes	19	11 %	13	17 %	p=0.26

SR: standard risk; IR: intermediate risk; HR: high risk



**Online Supplementary Figure S1.** Relationship between minimal residual disease (MRD) in bone marrow and the occurrence of relapse. Quantitative MRD levels (logarithmic scale) in bone marrow at days 8, 15, and 33. n.s.: non-significant.