

Acute lymphoblastic leukemia in adolescents and young adults in Finland

Anu Usvasalo,¹ Riikka Rätty,² Sakari Knuutila,³ Kim Vettenranta,¹ Arja Harila-Saari,⁴ Esa Jantunen,⁶ Marjut Kauppila,⁸ Pirjo Koistinen,⁵ Katriina Parto,¹⁰ Pekka Riikonen,⁷ Toivo T. Salmi,⁹ Raija Silvennoinen,¹¹ Erkki Elonen,² and Ulla M. Saarinen-Pihkala¹

¹Hospital for Children and Adolescents, Helsinki University Central Hospital, Helsinki; ²Department of Hematology, Helsinki University Central Hospital, Helsinki; ³Department of Pathology, Haartman Institute and HUSLAB, University of Helsinki and Helsinki University Central Hospital, Helsinki; Departments of ⁴Pediatrics and ⁵Internal Medicine, Oulu University Hospital, Oulu; Departments of ⁶Medicine and ⁷Pediatrics, Kuopio University Hospital, Kuopio; Departments of ⁸Medicine and ⁹Pediatrics, Turku University Central Hospital, Turku; Departments of ¹⁰Pediatrics and ¹¹Internal Medicine, Tampere University Hospital, Tampere, Finland

Citation: Usvasalo A, Rätty R, Knuutila S, Vettenranta K, Harila-Saari A, Jantunen E, Kauppila M, Koistinen P, Parto K, Riikonen P, Salmi TT, Silvennoinen R, Elonen E and Saarinen-Pihkala UM. Acute lymphoblastic leukemia in adolescents and young adults in Finland. *Haematologica* 2008. doi: 10.3324/haematol.12466

Supplementary Table S1. Cumulative doses (mg/m²) of cytostatic drugs in the different pediatric and adult protocols.

	Pediatric protocols				Adult protocols			
	BMF-83 IR	NOPHO-92 IR-ALL	NOPHO-2000 IR-ALL	Nalle-90 HR	NOPHO-2000 HR-ALL	ALL-90	ALL-94	ALL-2000
INTENSIVE TREATMENT								
Prednisolone	1680	2160	2160	2560	2160	1320	1320	
Dexamethasone	290	220	90	210	210	1280	1280	780/620
Prednisone equivalents	3623	3634	2763	3967	3567	9896	9896	5226/4154
Vincristine ¹	16	20	20	24	24	25,2	21,2	23.6/19.6
Doxorubicin	120	120	80	250	210	140	140	190/140
Daunorubicin	120	120	120			180	180	180
Mitoxantrone						48	48	48
Anthracycline equivalents	240	240	200	250	210	560	560	610/560
Cyclophosphamide IV	3000	3000	2000	3000	3000	3350	3350	4600/2800
Cytarabine	1800	1800	2400	25800	49800	8600	8600	12600/20600
L-asparaginase	12000	42000	52000	42000	52000	60000	60000	30000
Teniposide						325	325	
Etoposide						400	400	400
Methotrexate IV	2000	20000	15000	16000	32000	18000	15000	7000
Methotrexate PO				160	160			
6-mercaptopurine PO	3080	3200	1400	7095	5520	1080	1140	1080
6-thioguanine	840		1800	660	660			840
Carmustine						160	160	
Methotrexate IT (doses)	9	12	10	11	11	8	9	7
Cytarabine IT (doses)						10	11	4
CNS XRT prophylaxis				12 Gy	12 Gy ²	24 Gy ²	24 Gy ²	
MAINTENANCE								
Prednisolone		1920		400		8160	8160	3600
Dexamethasone			390/150		240			
Prednisone equivalents		1920	2613/335	400	1608	8160	8160	3600
Vincristine ¹		8	26/10	16	20			24
Vindesine						68	68	
Daunorubicin				120	60			
Cyclophosphamide IV				3600	1200			
Cytarabine				3600	600			
Methotrexate IV		25000	25000					
Methotrexate PO	1980	1460	2200	240	700	3060	3180	2120
6-mercaptopurine PO	34650	38325	57750		16800	7650	47700	44520
6-thioguanine PO				7200	2400			
Carmustine				180	300			
Hydroxyurea PO				38400	19200			
Methotrexate IT (doses)		5	6	6	2	4	4	3

IV, intra venous; PO, per oral; IT intra thecal. The equipotent doses for steroids are calculated as dexamethasone 1 mg = prednisolone 6.7 mg. The equipotent doses for anthracyclines are calculated as mitoxantrone 1 mg = doxorubicin 5 mg = daunorubicin 5 mg. CNS XRT, central nervous system radiation therapy. *Italic: Total dose depends on the randomization group.*

¹Max. dose² mg/dose. 210 % of patients

Supplementary Table S2. Key characteristics of the study groups.

	<i>Pediatric</i>	<i>Adult</i>	<i>Total</i>	<i>p</i>
n	128	97	225	
Gender (male/female)	79/49 (62%/38%)	58/39 (60%/40%)	137/88 (61%/39%)	0,77
Age, yrs (median, range)	12.9 (10.0-17.7)	18.9 (15.7-25.5)	15,4	<0.001
WBC, E9/l (median, range)	10.0 (0.7-524.5)	7.94 (0.5-480.0)	9,2	0,62
FAB (%)				
L1	68 (54%)	33 (34%)	101 (45%)	0,004
L2	25 (20%)	40 (41%)	65 (29%)	<0.001
Unknown	35 (27%)	24 (25%)	59 (26%)	0,66
Phenotype (%)				
T	20 (16%)	18 (19%)	38 (17%)	0,56
Precursor B	102 (80%)	57 (59%)	155 (71%)	0,001
Mixed lineage	4 (3%)	11 (11%)	15 (7%)	0,01
Unknown	2 (2%)	11 (11%)	11 (6%)	0,002
Initial risk category				
Intermediate risk	56 (44%)			
High risk	72 (56%)			
Follow-up, yrs (median, range)	5.8 (0-16.4)	3.7 (0-13.6)	4,9	
Remission rate	123 (96%)	94 (97%)	217 (96%)	0,74
Relapse rate	33 (26%)	30 (31%)	63 (28%)	0,40