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# POSTER ABSTRACTS

# 612.ACUTE LYMPHOBLASTIC LEUKEMIAS: CLINICAL AND EPIDEMIOLOGICAL

The Pediatric-Inspired Regimen Improved Quality and Quantity of Life for Patients with Acute Lymphoblastic Leukemia, Beyond Age, Risk Stratification, and Hematopoietic Stem Cell Transplantation

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## Abstract

## Purpose

Patients in the Nanfang hospital with acute lymphoblastic leukemia (ALL) have had continuous survival improvement since the 2000s. To examine the main factors affecting prognosis, we conducted a retrospective analysis at a single center.

## **Patients and Methods**

1023 evaluable patients were in this analysis (median age, 26, with a range of 14 to 73 years). The pediatric-inspired regimen, PDT-ALL-2016 regimen, was introduced in 2016, since then all patients received this treatment (N=414). While all patients between 2000 and 2015 received adult regimens (N=612). The median follow-up time for the PDT-ALL-2016 cohort was 44.7 months, and that for the adult regimen cohort was 92.9 months.

#### Results

For the whole series, the 5-year overall survival (OS5y) was  $57.8\pm5.3\%$  in PDT-ALL-2016 cohort and  $31.3\pm5.4\%$ in the adult regimen cohort (P<0.001). There was no significant difference in treatment-related mortality (TRM) between the two cohorts, with rates of 11.9% and 10.6%, respectively (P=0.652). The PDT-ALL-2016 cohort showed a lower cumulative incidence of relapse (CIR) at 5-year (38.1%) compared to the adult regimen (61.1%, P<0.001). Subgroup analysis revealed that all age groups, except for patients aged 41-50 years (HR=0.77, 95% CI, 0.48-1.21, P=0.251), can benefited from the PDT-ALL-2016 regimen. Notably, the older patients subgroup (50-73 years old) showed a significant improved outcome within the PDT-ALL-2016 cohort, compared with adult regimen cohort (HR=0.3, 95% CI, 0.17-0.54, P<0.001). Within this subgroup, CIR and TRM were 44.9% vs. 75.1% (P<0.001) and 4.3% vs. 12.1% (P=0.196), in PDT-ALL-2016 cohort and adult regimen cohort, respectively. Furthermore, subgroup analysis indicated that both high-risk and standard-risk patients had better outcome in the pediatric-inspired regimen cohort. For the HR group, OS5y were  $25.1\pm6.3\%$  vs.  $55.5\pm6.1\%$  (P<0.001), and EFS5y were  $18.8\pm5.8\%$  vs.  $43.1\pm5.9\%$  (P<0.001) in two cohorts. Patients who underwent allo-HSCT could also benefit from PDT-ALL-2016 regimen. For this subgroup, OS5y were  $47.7\pm7.1\%$  vs.  $67.7\pm6.1\%$  (P<0.001), and EFS5y were  $37.2\pm6.7\%$  vs.  $53.9\pm6.7\%$  (P<0.001) in adult regimen cohort, respectively.

## Conclusion

For adult ALL patients, compared with adult regimen, pediatric-inspired regimen resulted in significant improved outcome in all age and risk groups, as well as in patients who underwent allo-HSCT.

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**Disclosures** No relevant conflicts of interest to declare.

#### Session 612

# Figure

Subgroup	PDT-ALL-2016 Regimen	Adult Regimen	Event-free Survival	HR (95% CI)	P value
All patients	<b>41</b> 1	612		0.58 (0.49-0.68)	***
Age			1		
14-20	97	205		0.65 (0.46-0.90)	***
21-30	138	179	- <b></b> -	0.54 (0.40-0.74)	***
31-40	86	110	- <b></b>	0.54 (0.37-0.79)	***
41-50	44	75	ما <b>ل م</b>	0.71 (0.46-1.10)	NS
51-73	46	43 •		0.32 (0.19-0.55)	***
Immunotype			1		
Com/Pre B	232	412		0.65 (0.52-0.80)	***
Pro B	48	54		0.43 (0.26-0.71)	***
T	115	122	• <b>•••</b> •	0.45 (0.32-0.64)	***
<b>Clinical Feature</b>	36		1		
CNSL+	24	33	•••••••	0.51 (0.27-0.93)	•
High WBC	130	203		0.58 (0.44-0.76)	***
Cytogenetic			1		
Ph+	78	127		0.56 (0.39-0.79)	***
MLLr	12	27		0.46 (0.19-1.09)	
E2Ar	38	16 •		0.34 (0.17-0.67)	**
CK	34	36	•	0.58 (0.32-1.05)	
Other	267	421	1		***
PDT risk			1		
SR	99	239	- <b></b> 1	0.53 (0.37-0.75)	***
HR	312	373	+ <b></b> +	0.54 (0.45-0.66)	***
NCCN risk			1		
SR	228	421		0.50 (0.44-0.62)	***
HR	183	191	•• <b>••</b> •	0.68 (0.53-0.88)	***
Allo-HSCT			1		
without	163	330	H 1	0.63 (0.50-0.79)	***
with	248	282	H	0.64 (0.50-0.81)	***
			0.5 1 1.5	2	

Pediatric-inspired Regimen Better Adult Regimen Better

# Figure 1

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