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612.ACUTE LYMPHOBLASTIC LEUKEMIA: CLINICAL STUDIES | NOVEMBER 13, 2019

Turkish Acute Lymphoblastic Leukemia Registry, Retrospective Phase Data

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Background and Aim: Significant developments have occurred in clinical management of acute lymphoblastic leukemia (ALL) in adults over recent decades. However, treatment results are still not satisfactory especially in routine practice. The aim of the study was to evaluate the general clinical

features, treatment details and outcomes of a large group of patients followed up in multiple centers in Turkey with a diagnosis of ALL.

Materials and Methods: A retrospective analysis of the data of patients with ALL was made, which are diagnosed and treated between January 2003 and June 2017 by different protocols in hematology clinics of ten different centers. A total of 288 patients, aged between 17 and 76 years old were included in the study. In this retrospective, multicenter analysis of patients with ALL, classification of patients was done by treatment period, Philadelphia chromosome positivity, treatment regimen and receiving allogeneic hematopoietic stem cell transplantation (alloHSCT).

Results: The majority of cases were B-cell in origin, 224 patients were B-ALL and 64 of the patients were T-ALL (Table 1).

Median follow-up duration for all patients was 18.2 months (range, 0.03-161.0 months). After induction chemotherapy, 219 patients (76.0%) achieved complete remission, 32 patients were evaluated as treatment refractory (11.2%), and 37 patients (12.8%) deceased. Median OS was 47.7 months (95% CI: 36.1-59.2) and median DFS was 23.4 months (95% CI: 6.7-40.0) for all patients. The 3-year OS and DFS rates were 56% and 45%, respectively. The 5-year OS and DFS rates were 43% and 35%, respectively.

Median OS was 33.9 months (95% CI: 17.4-50.3) in Ph+ ALL patients and 73.7 months (95% CI: 33.9-113.5) in Ph chromosome-negative (Ph-) ALL patients (p=0.48). Median DFS was 7.1 months (95% CI: 5.0-9.3) in Ph+ ALL patients and 34.6 months (95% CI: 16.0-53.2) in Ph-ALL patients. DFS was statistically significant longer in Ph- patients than Ph+ patients, (p=0.008). The 5-year OS was 50% in Ph- patients and 16% in Ph+ patients, respectively. The 5-year DFS was 35% in Ph- patients and 11% in Ph+ patients, respectively (Figure 1).

Median OS was 53.4 months (95% CI: 37.9-63.5) in patients receiving the pediatric regimen and 42.9 months (95% CI: 19.9-66.6) in patients receiving other intensive regimens (p=0.05). Median DFS was 16.9 months (95% CI: 3.9-23.6) in patients receiving the pediatric regimen and 13.3 months (95% CI: 6.5-20) in patients receiving other intensive regimens (p=0.78). The 5-year OS was 45% in patients who received the pediatric regimen and 43% in patients who received other intensive regimens. The 5-year DFS was 23% in patients who received the pediatric regimen and 25% in patients who received other intensive regimens (Figure 2).

The 2-year periods between 2003 and 2017 for treatment regimens are shown in (Figure 3). From 2003 to 2017, the usage of pediatric regimens increased in ALL patients. The count of patients diagnosed with ALL and the treatment protocols used were observed to vary over time. While adult intensive regimens were used more common in the past, there is a tendency to use pediatric regimens in present time.

Conclusion: In conclusion, multicenter studies are of great importance for defining the specific clinical features of a particular disease. The results of this study will make a significant contribution to the literature as they reflect real life data providing valuable information about the Turkish ALL patient profile.

Table 1. Baseline characteristics of ALL patients

	N (range or percentage)
Age (years)	34 (17-95)
Gender (F/M)	115/173
Follow-up duration for all and surviving patients (months)	18.3 (0.03-161) and 23.3 (0.03-161)
T-/B-ALL	64 (22.2%) / 224 (77.8%)
Ph positive (Ph+) ALL (among B-ALL)	49 (21.9%)
Intensive-non-intensive treatment	275 (95.4%) / 13 (4.5%)
Treatment protocols*	
Pediatric regimen	86 (29.9%)
Pediatric inspired chemotherapy	84 (29.1%)
Adult intensive chemotherapy	105 (36.5%)
Non-intensive (POMP or EWALL)	13 (4.5%)
*Tyrosine kinase inhibitor	47 patients (95.9%)
AlloHSCT	54 (18.75%)

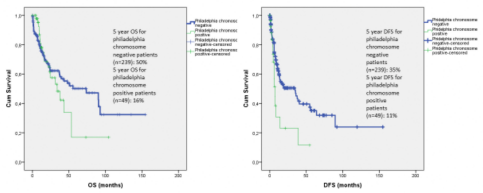

Figure 1. Overall survival (p=0.48) and Disease-free survival (p=0.008) for ALL patients according to Philadelphia chromosome

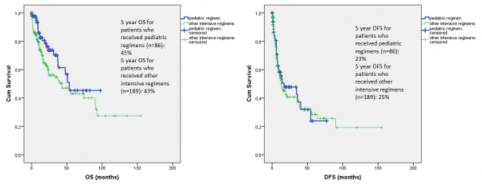

Figure 2. Overall survival (p=0.05) and Disease-free survival for ALL patients according to pediatric regimens and other intensive regimens (p=0.78)

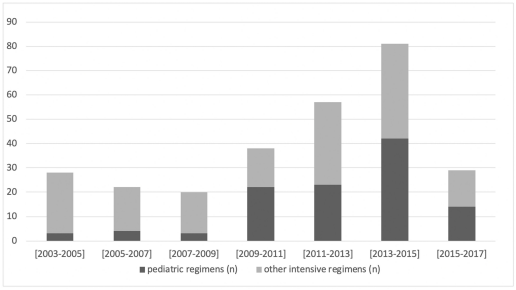

Figure 3. Two-year periods between 2003 and 2017 for treatment regimen

Disclosures

No relevant conflicts of interest to declare.

Author notes

*Asterisk with author names denotes non-ASH members.