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Clinical Characteristics and Outcomes of CML in Adolescents and Young Adults: A single Center Experience

Kamal Alrabi, Waleed Da'ana, Tamer Al-Batsh, Fadwa Alqadi, Ali Hanoun, Abdallah Asha ,Omar Shahin ,Lina Marei, Mohammad Ma'koseh

Department of Medical Oncology King Hussein Cancer Center, Amman, Jordan

King Hussein Cancer Foundation
King Hussein Cancer Center

INTRODUCTION

- Chronic Myeloid Leukemia (CML) is a disease of older adults with a median age of 64 years.
- There is a growing number of adolescent and young adults (AYA) having CML that is not well studied.

AIM

To evaluate the clinical features and outcomes CML in AYA among Jordanian populations .

METHOD

- Files of adults with chronic phase CML treated at King Hussein Cancer Centre from 2011 till 2021 were retrospectively reviewed.
- Patients were grouped according to the age into two groups: AYA group (age: 18-39 years) and older-age group (age >39 years).
- Prognostic risk scores including Sokal, Hasford, EUTOS and ELTS scores were calculated.
- Response to tyrosine kinase inhibitors (TKIs) was evaluated by polymerase chain reaction (PCR) for BCR-ABL and stratified according to the last NCCN guidelines (version 1.2023).
- Comparisons were done using Fisher's exact and Student's T tests. Event-free survival (EFS) and overall survival (OS) were analysed using Kaplan Meier method.

RESULTS

- 165 patients were included, 80 (48.5%) were AYA. 95(57.6%) were males.
- Median age of the AYA group was 29 (range: 18-39) and 51 (40-79) in the older-age group.
- There was no significant difference in the clinical, laboratory, first line treatment (first or second generation TKIs) characteristics between the two groups.
- While the older age group had higher frequencies of intermediate Sokal (14.5% vs 46.3%, p= <0.001) and Hasford scores (14.5% vs 56.7%, p= <0.001), the younger-age group had higher frequencies of low sokal (80.6% vs 44.5%) and Hasford (83.9% vs 43.3%, p=<0.001) scores. Both groups had similar EUTOS (p=0.878) and ELTS (p=0.06) risk scores.
- Achievement of response milestones (TKI sensitive disease) at different time points was comparable in both groups.
- At a median follow-up of 46.5 (range: 9-223) months, there was no significant difference between both groups in EFS (5-year EFS 60.2% vs 64.7% p=0.565) or OS (5-year OS 90% vs 89.8%, p=0.619).

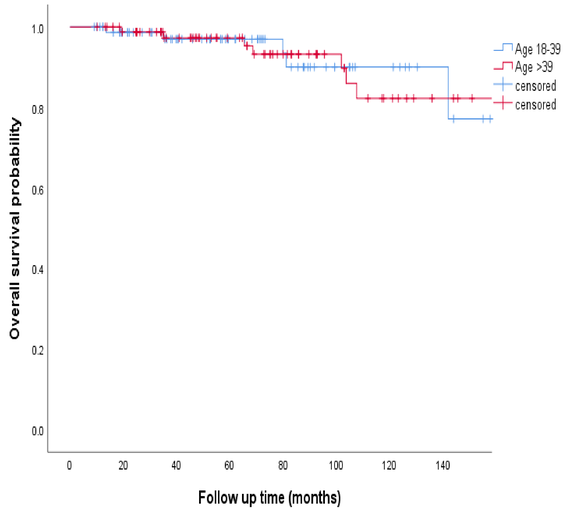


Figure (1): Overall survival curve

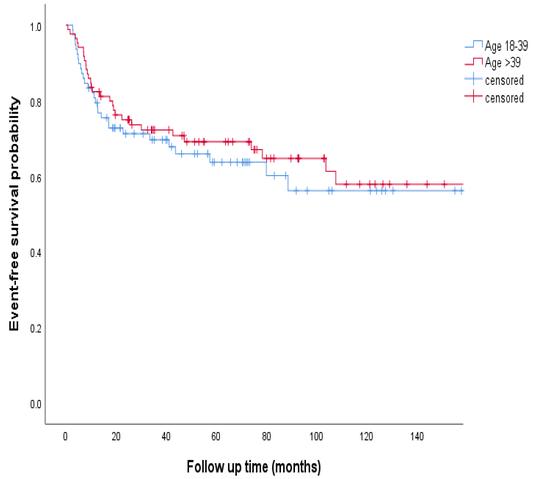


Figure (2):5-year EFS

CONCLUSIONS

CML patients tend to present at a younger age in our population.

Compared to older CML patients, AYA patients present with similar clinical and laboratory features but had lower risk disease.

EFS and OS were comparable between both groups.

CONTACT INFORMATION

Tamer AL-Batsh, MD E-mail: ta.11015@khcc.jo