

Analysis of Prognostic Factors Affecting Response to Treatment and Survival in Chronic Myeloid Leukemia Patients

Soheir Adam MD, MRCPath* Galila Zaher MRCPath* Fares Chedid MD**
Mohammed Abdulaal FRCPath*

Objective: To evaluate the prognostic significance of the disease features at presentation in chronic myeloid leukemia (CML) patients.

Design: This is a retrospective study of sixty patients of CML and their follow up over 20 years. Ten clinical and laboratory features of the disease were evaluated for their prognostic significance. All patients received cytoreductive therapy.

Setting: All patients were seen at King Abdul Aziz University Hospital and the National Guard Hospital in Jeddah, Saudi Arabia.

Method: The prognostic value of sex, age, white cell, basophils, promyelocytes and platelet counts, splenomegaly, bone marrow (BM) blast count, BM fibrosis and the presence of the Philadelphia chromosome, was assessed using log-rank tests. All variables significantly associated with survival univariately were included in a Cox regression. The time to either death or transformation from date of diagnosis was analyzed using a Kaplan-Meier survival curve.

Results: Splenomegaly greater than or equal to 13 cm and a bone marrow blast count of greater than 10% at diagnosis, were both found to be significantly associated with a high-risk of transformation or death in this population. Other presenting features studied, did not have a statistically-significant prognostic impact.

Conclusion: The median duration of the chronic phase in the studied group of patients was 120 months. Splenomegaly and a high BM blast count were both associated with a risk of transformation or death in this population.