

which goes with Sadek et al ⁽¹⁾, Karakas et al ⁽¹⁵⁾, Gu Wy et al ⁽¹⁶⁾; on the other hand, it was positively correlated with Blasts % in bone marrow aspirate. Interestingly, Cao et al ⁽¹⁷⁾ found that WT1 expression levels in CML patients in accelerate phase or blast crisis were strikingly higher than those in non-leukemic patients or CML patients in chronic phase; thus, it appears that WT1 gene expression is associated with immature cells from which leukemic cells in CML originate.

In CML, CD31 DLI was significantly higher than in controls; which also goes with Alvaro et al ⁽¹⁸⁾ and Hans et al ⁽¹⁹⁾, which have found a significant increase in angiogenesis in CML compared with healthy control cases.

In this study, there was no significant correlation between WT1 protein expression and CD31 in CML, this does not go in line with Wagner et al ⁽⁶⁾, who found that WT1 might be involved in tumour angiogenesis, in which endothelial WT1 expression was detected in 95% of 113 AML cases of different origin and that transcriptional activation of ETS-1 by the Wilms' tumour suppressor WT1 is a crucial step in tumour vascularization via regulation of endothelial cell proliferation and migration; moreover Trka et al ⁽²⁰⁾, have suggested that WT1 expression can be stimulated by hypoxia, which involves activation of the WT1 promoter by HIF-1. The discrepancy between our finding and other studies may be due to the fact that others have used more sensitive methods (PCR) for evaluating WT1 than Immunohistochemical staining procedure we used in addition to the smaller sample size.

There are several controversies surrounding reported data on the prognostic significance of WT1 expression, which is mainly because of the limited number of patients and the diversity of methods used; while some groups have shown that high levels of WT1 coincide with worse prognosis ⁽²¹⁻²⁴⁾, suggesting that WT1 levels could be useful for predicting prognosis in such patients, no evidence was found that the level of WT1 at diagnosis was an independent prognostic factor for survival, just as some studies failed to show any correlation between initial WT1 levels

and outcome of the disease at all ^(25,26). These discrepancies may be due to differing methodologies, for example, real-time PCR versus end-point analysis or due to patient selection. Moreover, based on results similar to those found above, it is strongly believed that WT1 can become a target for immunotherapeutic approaches as suggested by Rosenfeld et al ⁽¹¹⁾, upcoming data support this hypothesis, as sera from many AML, CML, and MDS patients have anti-WT1 antibodies ⁽¹¹⁾.

In conclusion, this study showed that WT1 was overexpressed in 68.75% of CML patients; taken together with longitudinal analyses of WT1 expression in healthy donors, which was undetectable. CD 31 expression (as a marker of angiogenesis) was significantly higher in CML in comparison with control cases but there was no significant correlation between its expression and WT1 expression.

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