

## **PRAME and WT1 Genes expression in Chronic Myeloid Leukemia Patients: Clinical importance and future prospects**

*Taysir K. Eyada<sup>1</sup>, Mennat Allah Kamal El Din<sup>2</sup>, Mervat M. Khorshied<sup>3</sup>, Rania A. Zayed<sup>3</sup>, Amal Soliman<sup>3</sup>, Dalia O Darnish<sup>3</sup>*

*(1) Professor of clinical pathology, Faculty of Medicine, Cairo University*

*(2) Assistant Professor of clinical pathology, Faculty of Medicine, Cairo University*

*(3) Lecturer of clinical pathology, Faculty of Medicine, Cairo University*

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### **Abstract**

**Objectives:** This study was designed to declare the frequency of expression of PRAME and WT-1 genes in Egyptian patients with chronic myeloid leukemia during chronic phase and accelerated/blastic transformation phase of the disease.

**Patients and methods:** RT-PCR technique was used to detect the expression of PRAME and WT-1 genes as well as BCR-ABL (p210) and ABL transcripts in peripheral blood samples of 30 CML patients. The BCR-ABL/ABL ratio was estimated by densitometric analysis. Twenty healthy volunteers were subjected to the same analysis as a control group.

**Results:** The control subjects were negative for PRAME, WT-1 and BCR-ABL. mRNA expression of PRAME gene was detected in 22/30 (73.3%), while WT-1 gene was expressed in 15/30 (50%) of CML patients. PRAME expression was significantly higher in patients in blastic transformation, while there was no significant difference in the expression of WT-1 between CML patients in the chronic or the blastic transformation phase. BCR-ABL/ABL ratio was significantly higher in CML patients in the blastic transformation phase which reflects the disease progression.

**Conclusion:** PRAME and WT-1 are tumor associated antigens that could be relevant for follow up of CML patients as well as being promising targets for future cancer immunotherapy.