

A. Color Intensity: the average intensity of the brown color for the selected objects depending on the expression of antigens in the cells.

B. Fractional area stained: which equals to $[(\text{mean area} * \text{Number of objects}) / \text{area of a single image field}] * 100$

C. Digital Labeling Index: for better estimation of the immunohistochemical expression of the

WT1, CD31, we used an arithmetic tool named as Digital Labeling Index. This tool is calculated according to the following formula: (Fractional area * reverse Intensity). This parameter combines both the Fractional area and the Intensity⁽⁹⁾.

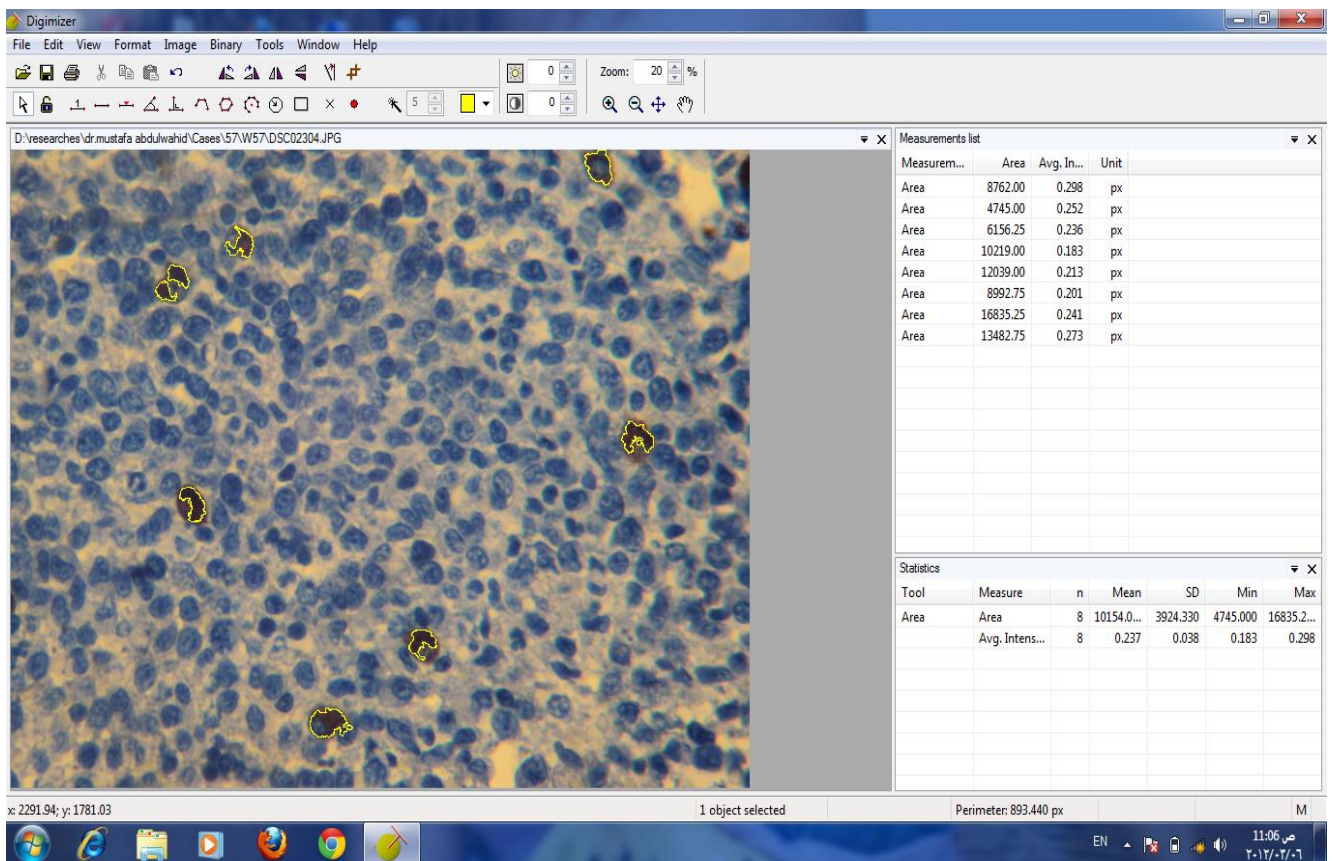


Fig. 1. Image analysis in Digimizer software

Statistical Analysis

Data were analyzed using SPSS program (Statistical Package for Social Sciences) version 16 and Microsoft Office Excel 2007. Numeric data were expressed as mean \pm SEM, frequency was used to express discrete data. ANOVA was used to analyze numeric data while Chi-square was used to analyze discrete data, and benferroni test was used for multiple comparisons. Spearman rank correlation was used to determine relation between various markers. *P* Value of < 0.05 was considered significant.

Results

This study included 16 cases of CML, divided into 10 cases in chronic phase, 3 cases in accelerated phase, and 3 cases in blastic phase, in addition to 20 control cases; in CML. Eleven of the patients were males (69%) and 5 of them were females (31%) with a male to female ratio of 2.2:1; on the other hand, 12 of 20 control persons were males (60%), while 9 were females (40%) with a male to female ratio of 1.3:1. The age range of patients with CML was between 32-57 years with a mean of 46.5 ± 7.4 years, by dividing the patients according to 10 year intervals, the largest number of patients (7) fall