

MOLECULAR RESPONSE IN PATIENTS WITH CHRONIC MYELOID LEUKEMIA TREATED WITH IMATINIB ACCORDING TO THE BCR-ABL TRANSCRIPT TYPE

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Chronic myeloid leukemia is characterized by the presence of the BCR-ABL fusion gene in the hematopoietic stem cells. Two main types of transcripts participate in the creation of BCR-ABL p210 fusion product: b2a2 and b3a2. In this study we used molecular methods to detect and quantify b2a2 and b3a2 transcripts in patients with CML during therapy with Imatinib and we have proposed to notice their differential expression during therapy. In this study have been selected 70 patients of the total number of patients monitorized in the Fundeni Molecular Biology Laboratory. Have been taken into account the patients monitorized for a period of more than 24 months after the beginning therapy with Imatinib. Molecular evaluation of response has been achieved through Real Time Quantitative PCR by Hybridization Probes detection method on LightCycler platform (Roche). In these patients the prevalent transcript is b3a2 - 67% and b2a2 transcript is present in 30% of cases and both transcripts in 3% of patients. In the evaluation of BCR-ABL expression it is necessary to take into account the various types of transcripts, mutations and a differential kinetics between transcripts may influence the response to Imatinib. Median level of expression at diagnosis was the same - 32% in both types of transcripts and only slightly increased - 33% in patients with both types of transcripts. In this study has been found a slight difference in the median expression of b2a2 and b3a2 at 6 months of treatment. Clinical significance of the various types of BCR-ABL transcripts in patients with CML remains still unsolved.

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