**SET oncogene is upregulated in pediatric acute lymphoblastic leukemia**

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**ABSTRACT**

**Aims and background.** The SET gene is a target of chromosomal translocations in acute leukemia and encodes a widely expressed multifunctional phosphoprotein. It has been shown that SET is upregulated in BCR-ABL1-positive cell lines, patient-derived chronic myeloid leukemia CD34-positive cells, and some solid tumors.

**Methods and study design.** We determined the expression level of SET in 59 pediatric acute lymphoblastic leukemia patients who were BCR-ABL-negative using quantitative real-time reverse-transcriptase-polymerase chain reaction.

**Results.** We showed that SET expression was significantly upregulated in 96.5% of B-acute lymphoblastic leukemia (28 of 29; 16.6 fold) and 93% of T-acute lymphoblastic leukemia (28 of 30; 47.6 fold) patients. This upregulation was not associated with any clinical features or overall and relapse-free survival.

**Conclusions.** Our results showed that SET is significantly overexpressed in pediatric acute lymphoblastic leukemia samples, and an increased level of SET might contribute to leukemic process.

**Key words:** acute lymphoblastic leukemia, pediatric ALL, SET, SET overexpression.

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