

## 3p abnormalities in peripheral lymphocytes in small cell lung cancer

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### ABSTRACT

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3p abnormalities are the most frequent chromosome abnormalities in small cell lung cancer (SCLC). To date these abnormalities have only been observed in cells derived from tumor tissues. It is thought that cancer-related chromosome abnormalities in peripheral lymphocytes could help to predict cancer development, prognosis, and future metastasis. We report clonal and nonclonal 3p abnormalities in the peripheral lymphocytes of two patients with SCLC. A standard T-lymphocyte culture method and GTL banding technique were applied to the samples, and various clonal and nonclonal chromosome 3 abnormalities, i.e., -3, del(3)(p24), del(3)(p21), del(3)(p11), del(3)(q22), inv(3)(p14q29), and inv(3)(q21q29) were observed. Efforts have been made to understand if there are cancer-related chromosome abnormalities in lymphocytes and the suitability of these abnormalities to predict cancer development or metastases. As far as we know, this is the first report on chromosome 3 abnormalities in lymphocytes. Since 3p abnormalities are specific for SCLC, it is important to show that these cancer-related abnormalities can be found in blood cells.

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**Key words:** lung cancer, small cell lung cancer, cancer cytogenetics, chromosome 3, lymphocytes, metastasis.

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