

Frequency of Anaplastic Lymphoma Kinase (ALK) Rearrangement in Turkish Patients with Non-small Cell Lung Carcinoma

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ABSTRACT This paper aimed to document anaplastic lymphoma kinase (*ALK*) rearrangements in non-small cell lung carcinoma (NSCLC) patients retrospectively and to determine the frequency of this mutation in a population of Turkish patients. Samples of 503 patients referred to a regional reference laboratory with NSCLC diagnosis were included. Fluorescence in situ hybridisation (FISH) with a multicolour break-apart *ALK* probe was used to screen for *ALK* gene rearrangements. Overall, 45 (9%) of the 503 tumour samples were positive for *ALK* rearrangements. The frequency of *ALK* positivity was 9.89 percent (38/384) in male patients and 5.88 percent (7/119) in female patients ($p=0.361$). The frequency of *ALK* gene rearrangement detected by FISH was nine percent. This study is first to demonstrate the frequency of *ALK* rearrangements in NSCLC patients in Turkey. Given that *ALK* rearrangements provide a target for NSCLC therapy, molecular profiling should be performed for all NSCLC patients.