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# EXPRESSION OF SURVIVIN, KI-67, BCL-2 AND P53 PROTEINS IN PATIENTS WITH PULMONARY CARCINOMA

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Apoptosis is the fundamental process necessary for eliminating damaged or mutated cells. Alterations in the apoptotic pathway appear to be key events in cancer development and progression. Bcl-2 is the founding member of the Bcl-2 family of apoptosis regulator proteins with anti-apoptotic effect. Survivin acts as an inhibitor of apoptosis as well and has been implicated in both the inhibition of apoptosis and mitosis regulation. P 53 is one of the tumour suppressor proteins; prevents tumour formation through cell cycle blocking and eliminates damaged cells via activation of apoptosis. The Ki-67 protein is a cellular marker for proliferation. To investigate the possible interactions of mentioned proteins, we examined their expression in 76 patients with diagnosed lung cancer using immuno-histochemical visualisation. Ki-67 protein was expressed in the cancer cells of all patients with small cell lung cancer type. We found negative correlation between survivin and p53 expression. Decreased intensity of expression and less number of positive cells for survivin (66.66%) in small cell lung cancer in comparison to other lung cancer types (97.98%) was detected. Reversely, expression of Bcl-2 was found in more than 90% of cases with small cell lung cancer. We hypothetise, that high expression and intensity of Bcl-2 protein could probably influence worse biological behaviour of this clinical-pathological entity.

Key words: lung cancer, ki-67, bcl-2, surviving, p53, immunohistochemistry