



**Fund “Nauka” Project № 21013 Resume – Competitive-based Session 2021:**

**“Study on the expression levels of immunohistochemical markers for apoptosis and necroptosis in basal cell and squamous cell carcinoma”**

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The aim of the present study is to make immunohistochemical analysis of the marker of apoptosis Caspase 3 (CASP3) and the necroptosis marker Receptor-interacting protein kinase 3 (RIPK3) in patients with squamous cell and basal cell carcinoma, and to determine their prognostic and predictive value.

The following tasks are formulated to achieve the set goals:

1. To study the clinical and morphological characteristics of patients with squamous cell and basal cell carcinoma.
2. To assess semi-quantitatively the immunohistochemical expression of CASP3 and RIPK3 in tumor tissue of squamous cell and basal cell carcinoma and to compare with adjacent non-tumor tissue.
3. To study the immunohistochemical expression of CASP3 and RIPK3 in relation to the clinical and pathological characteristics of patients with squamous cell and basal cell carcinoma: tumor stage, histological type, grade of differentiation, tumor necrosis.
4. To perform a complex analysis of apoptosis and necroptosis in connection with clinical and morphological indicators and to determine their prognostic and predictive role in patients with squamous cell and basal cell carcinoma.

To perform the set tasks, suitable paraffin blocks will be selected from patients with squamous cell and basal cell carcinoma. The cases will be divided into three groups based on the histological type, as follows: squamous cell carcinoma, basal cell carcinoma and control group. The level of CASP3 and RIPK3 expression will be determined in all patients by H-score. Various staining methods will be used, as well as statistical methods for evaluation of the indicators and the obtained results will be published.