

## PS6

### PREVALENCE OF SOME PIK3CA MUTATIONS IN PATIENTS WITH CERVICAL SQUAMOUS CARCINOMA FROM THE REPUBLIC OF MOLDOVA

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**Introduction.** Cervical Squamous Cell Carcinoma (CSCC) is a significant health issue and results in high mortality when it metastasizes or recurs after primary local treatment, thus requiring new molecular classification models directed toward precision therapies. Genes involved in the PI3K signaling pathway, such as *PIK3CA*, represent a prospective target and biomarker for targeted treatment. The *PIK3CA* protein, which belongs to the PI3K family, is involved in many cellular functions and is

often overactive in cancer cells, leading to uncontrolled proliferation of cancer cells. **Research aim.** The study aimed to determine the prevalence of mutations in the *PIK3CA* gene in a cohort of CSCC patients from the Republic of Moldova. **Materials and Methods.** Ninety-two freshly collected tumor tissue samples from patients primarily diagnosed with CSCC were analysed. DNA was isolated using the GeneJET Genomic DNA Purification Kit and the PureLink Genomic DNA Mini Kit and subsequently tested for three mutations in the *PIK3CA* gene: c.1624G>A, c.1633G>A, and c.3140A>G by the castPCR method. **Results.** The prevalence of *PIK3CA* mutations in our study group was 29.35% (27/92), of which 27.17% (25/92) were positive for a single mutation, but 2.17% (2/92) showed double mutations. Among these, 17.39% of patients were positive for the c.1624G>A mutation, 9.78% for the c.1633G>A mutation, and 2.17% for the c.3140A>G mutation. **Conclusion.** The tested prevalence of the *PIK3CA* mutations was 29.35%. Testing revealed that 25 patients were positive for a single mutation, and two tested positive for a double mutation. Since many patients have these mutations, there is a chance that CSCC patients from the Republic of Moldova will benefit from the development of anti-PI3K targeted therapy.

**Keywords:** cervical squamous cell carcinoma, mutation, *PIK3CA*.

### References:

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