A total of 246 medical records have been analyzed, out of which 29 (11.79%) patients had LSIL, 194 (78.86%) had HSIL and 23 (9.34%) patients suffered micro-invasive/invasive cancer, out of which 29 (11.79%) patients had LSIL, 194 (78.86%) had HSIL and 23 (9.34%) patients suffered micro-invasive/invasive cancer.

### Methodology

The effect of PIK3CA mutation on PD-L1 expression and CD8+ T cells differentiation was determined in cervical cancer tissues. Luciferase and ChIP-PCR assays were used to determine the transcriptional regulation of PD-L1 by PIK3CA-E545K. The effects of PI3K inhibitor treatment on immune tumor environment in vitro and in vivo were evaluated by RNA sequencing (RNA-seq) and flow cytometry. The efficacy of PI3K inhibitor and anti-PD-1 therapy was assessed in cell-derived xenografts (CDX) and patients-derived xenografts (PDX).

### Results

PD-L1 overexpression is more frequently observed in older women with squamous cervical carcinoma. It predicts longer progression-free survival and overall survival. PIK3CA mutation results in increased mRNA and protein levels of PD-L1, the repression of CD8+ T cell differentiation in cervical cancer. Here, we report a case that continuous pembrolizumab monotherapy treatment induced a complete remission of a recurrent cervical cancer patient with systemic metastasis and PIK3CA-E545K mutation, implying that PIK3CA mutation is potentially a biomarker for pembrolizumab treatment in cervical cancer. Specifically, this mutation promotes the expression of PD-L1 by upregulating the transcription factor IRF1. PI3Kδ-specific inhibitors markedly activate immune microenvironment by regulating the PD-1/PD-L1-related pathways and promotes CD8+ T cell differentiation, proliferation in Caski-CDXs with PIK3CA-E545K mutation. PI3Kδ inhibitor significantly enhances the anti-tumor efficacy of PD-1 blockade in CDXs and PDXs.

### Conclusion

The efficacy of PI3K inhibitors combined with PD-1 antibodies is promising in cervical cancer and warrants additional clinical investigations.

### Disclosures

No.

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# Abstracts

## #31 TARGETING PI3K INCREASES THE EFFICACY OF ANTI-PD-1 ANTIBODY IN CERVICAL CANCER

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### Introduction/Background

Targeting programmed death 1 (PD-1) has been approved for relapsed cervical cancer with unsatisfactory clinical efficacy. This study aims to analyze the impact of PI3K pathway activation on tumor immune microenvironment and evaluate the immune sensitization effect by PI3K inhibitors in cervical cancer.

### Methodology

PI3K pathway activation on tumor immune microenvironment in vitro and in vivo were evaluated by RNA sequencing (RNA-seq) and flow cytometry. The efficacy of PI3K inhibitor and anti-PD-1 therapy was assessed in cell-derived xenografts (CDX) and patients-derived xenografts (PDX).

### Results

PI3Kδ-specific inhibitors markedly activate immune microenvironment by regulating the PD-1/PD-L1-related pathways and promotes CD8+ T cell differentiation, proliferation in Caski-CDXs with PIK3CA-E545K mutation. PI3Kδ inhibitor significantly enhances the anti-tumor efficacy of PD-1 blockade in CDXs and PDXs.

### Conclusion

The efficacy of PI3K inhibitors combined with PD-1 antibodies is promising in cervical cancer and warrants additional clinical investigations.

### Disclosures

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# Abstracts

## #54 FACTORS THAT INFLUENCE SURGICAL MARGIN STATE IN PATIENTS UNDERGOING COLD KNIFE CONIZATION – A SINGLE CENTER EXPERIENCE

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### Introduction/Background

To evaluate the factors that influence the surgical margin state in patients undergoing cold knife conization at the University Clinic of Gynecology and Obstetrics in Skopje, Republic of Macedonia

### Methodology

Materials and methods: We have retrospectively analyzed the medical records of all patients that underwent a cold knife conization at our Clinic in 2015. We cross-referenced the surgical margin state with the histopathological diagnosis (LSIL, HSIL or micro-invasive/invasive cancer), menopausal status of the patients, number of pregnancies, surgeon experience, operating time and cone depth. The data was analyzed with the Chi square test, Fisher’s exact test for categorical data and Student’s T test for continuous data and univariate and multivariate logistical regressions were performed.

### Results

A total of 246 medical records have been analyzed, out of which 29 (11.79%) patients had LSIL, 194 (78.86%) had HSIL and 23 (9.34%) patients suffered micro-invasive/invasive...