model, GG against AG+AA: OR=3.2, 95%CI:1.7–6.2, p<0.01). Also patients with GG genotype versus AA genotype had an high risk of developing CC (OR=5.9 : 2.4.14, p<0.01).

Disclosures We demonstrated the association of a genetic variant in ABCB1 gene with cervical cancer, indicating further investigation in a multi-center setting to assess the value of marker as a risk stratification marker in cervical cancer.

#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 evaluates the immune sensitization effect by PI3K inhibition in cervical cancer.

Abstract Figure 1  A. PD-L1 mRNA expression in cervical cancer tissues with wild-type PIK3CA (n=870) and mutant PIK3CA (n=145). B. PD-L1 expression in cervical cancer tissues with wild-type PIK3CA (n=133) and mutant PIK3CA (n=24), the representative image of PD-L1 expression with score 0–3+ was shown on the left, 1+ to 3+ was identified as PD-L1 positive. C. Schematic diagram of SiHa- and Caski-CDXs administration. D. E. Proliferation curve of tumor volumes after treatments with different drugs for 28 days in PDXs with wild-type PIK3CA(F) and PIK3CA-E545K mutation(G).

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 elder 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. PI3K-specific inhibitors markedly activate immune microenvironment by regulating the PD-1/PD-1-related pathways and promotes CD8+ T cell differentiation, proliferation in Caski-CDXs with PIK3CA-E545K mutation. PI3K 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.

#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 in 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 cervical cancer. The surgical margins were positive in 78 (31.7%) of the patients. The average age of the patients was 41.13 and 35 (14.23%) of the patients were menopausal. The multivariate logistic regression identified preoperative focial biopsy of micro-invasive SCC, HSIL or higher cone specimen histology and shorter cone depth as independent predictors of surgical margin involvement in patients undergoing cold knife conization.

Conclusion In the current study, we have found no association between the inherent characteristics of the patient and the surgeon and the surgical margin state after a CKC. The most important predictors for positive margins were the severity of the lesion and the cone depth.

Conclusion In the current study, we have found no association between the inherent characteristics of the patient and the surgeon and the surgical margin state after a CKC. The most important predictors for positive margins were the severity of the lesion and the cone depth.

Disclosures I have nothing to disclose.

#85 CLINICOPATHOLOGICAL CHARACTERISTICS AND ONCOLOGICAL OUTCOMES OF THREE SUBTYPES OF NEUROENDOCRINE CARCINOMA OF THE CERVIX: A MULTICENTER RETROSPECTIVE STUDY OF 288 PATIENTS

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Introduction/Background Neuroendocrine carcinoma of the cervix (NECC) is a rare type of cervical cancer, and is divided into small cell neuroendocrine carcinoma (SCNEC), large cell neuroendocrine carcinoma (LCNEC) and mixed neuroendocrine-non-neuroendocrine neoplasm (MiNEN). Present literature on NECC mainly focus on SCNEC, and the clinical features of LCNEC, especially MiNEN, are not well understood.

Methodology The multicenter, retrospective study enrolled 288 patients. The primary outcomes were progression-free survival (PFS) and overall survival (OS). The Kaplan-Meier method and Cox proportional hazard analysis were performed.

Results With a median follow up of 25 months, the 5-year PFS of NECC, SCNEC, LCNEC and MiNEN was 40.2%, 40.4%, 30.3%, and 41.6%; and the 5-year OS was 45.4%, 32.3%, and 50.3%. In the whole cohort, it showed that adjuvant chemoradiotherapy was an independent protective factor of OS (HR=0.175, 95%CI: 0.079–0.388, p<0.001).

Abstract #85 Figure 1 The flow diagram of the study. Center1: Shengjing hospital of China medical university; Center2: Sichuan province Cancer Hospital; Center3: Peking union medical college hospital; SCNEC: small cell neuroendocrine carcinoma; LCNEC: large cell neuroendocrine carcinoma; MiNEN: mixed neuroendocrine-non-neuroendocrine neoplasm; NED: no evidence of disease; AWD: alive with disease.

Conclusion This multicenter retrospective study first focused on three pathological subtypes of NECC. SCNEC has a worse biological behavior than the other two types. Patients with MiNEN did not show better prognosis than the other two. LVSI and >2/3 stromal invasion and adjuvant chemoradiotherapy are prognostic factors for PFS; age, LVSI, and >2/3 stromal invasion and adjuvant chemoradiotherapy are prognostic factors for OS in patients with NECC.

Disclosures There was no conflicts of interests, and I have nothing to disclose.

#97 INCIDENCE OF CERVICAL CANCER AFTER PRIMARY TREATMENT OF CERVICAL INTRAEPITHELIAL NEOPLASIA

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Introduction/Background The aim of this study was the evaluation of the incidence of cervical cancer after primary treatment for high-grade squamous intraepithelial lesions of the cervix (HSIL) and the identification of risk factors of cervical pathology recurrence after surgical treatment.

Methodology This was a retrospective study of patients with cervical pathology (CIN 2+) during the period 2014–2020. The Chi-square test (γ 2) and the multivariate regression analysis were used to identify the risk factors of recurrence and the Kaplan-Meier survival analysis for the study of the recurrence of the lesions was conducted as well.