(n=26) received a single dose of local therapy with 85% TCA while the second group (n=27) was treated on two separate occasions with a two-week interval. Two participants (one in each group) were lost to follow-up. At the two-month follow-up after, a colposcopy-guided biopsy was performed for all patients and the pathological specimens were studied by a single experienced pathologist to determine the post-intervention grading of CIN

Results Two groups were comparable in terms of age and base-line lesion grading, as CIN 1 lesions comprised the majority of cases (54%), followed by CIN 2(37%). While our sample was a poor representative of CIN3 lesions (7%), no significant difference was noticed between the single and twice TCA treated groups with a response rate of 52% and 54% respectively (either complete remission to normal histology or regression to any low-grade lesion). Either separate analysis (with respect to the base-line grading within each treatment group) or combined analysis (regardless of CIN sub-group) could not generate any statistical significance. The second dose of TCA did not increase the frequency of reported adverse events

Conclusion The second dose of topical 85% TCA does not seem to increase the CIN response rate more so than its single dose. However, further controlled clinical trials with larger samples are warranted to verify current findings. The use of TCA was not limited by any major side effect, therefore, the potential to achieve an increased efficacy with more frequent TCA applications is appealing

2022-RA-260-ESGO UM-6 INDUCES AUTOPHAGY AND APOPTOSIS VIA THE HIPPO-YAP SIGNALING PATHWAY IN CERVICAL CANCER

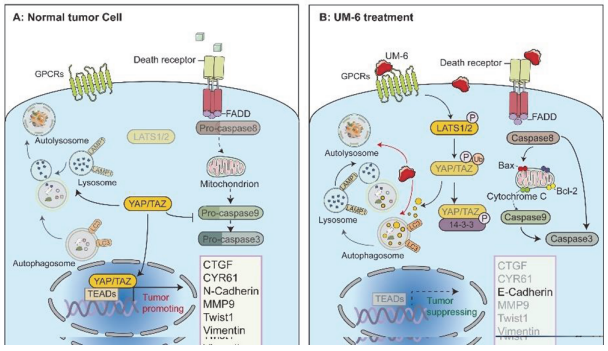
Tianmin Xu. *Jilin University, Changchun, China*

10.1136/ijgc-2022-ESGO.15

Introduction/Background The clinical application of Melittin is limited by its non-specific cytotoxicity and hemolytic activity. Here, we synthesized a novel antineoplastic peptide UM-6 based on melittin and explored the mechanism related to its anti-proliferation and metastasis on cervical cancer.

Methodology The function of UM-6 on proliferation, invasion, and migration was assessed by MTT assay, colony formation assay, transwell assay, and 3D invasion assay. To identify the anti-tumor molecular mechanism of UM-6,we used flow cytometry, immunoprecipitation, real-time quantitative PCR, dual-luciferase reporter assay, Western Blot, immunofluorescence, and immunohistochemistry. Finally, mouse xenograft models were constructed to further investigate the role of UM-6 in inhibiting cervical cancer proliferation and metastasis in vivo.

Results Firstly, UM-6 inhibits the proliferation of cervical cancer cells and less cytotoxic to normal epithelial cells in vitro; Secondly, UM-6 inhibits the invasion and migration of cervical cancer cells in vitro; Thirdly, UM-6 induces apoptosis and autophagosome accumulation in cervical cancer cells; Concretely, UM-6 promotes autophagic flux by promoting autophagosome degradation, and blocking autophagy reverses UM-6-induced cell death. Thus, we discovered that UM-6 inhibited cervical cancer cell viability while also inducing apoptosis (type I cell death) and autophagy-dependent cell death (type II cell death). UM-6 triggers the Hippo signaling pathway and promotes cytoplasmic retention and phosphorylation-dependent degradation of YAP; inhibits YAP-TEAD binding and reduces transcriptional activity, thereby suppressing the expression of downstream target genes. Injection of UM-6 in mice can significantly inhibit the growth of xenograft tumors without significant toxicity, and greatly reduce the number, volume, and burden of abdominal tumors in the metastasis model driven by cervical cancer cell lines.



Abstract 2022-RA-260-ESGO Figure 1

Conclusion UM-6 has the potential to serve as a new anticancer drug candidate. As a regulator of apoptosis and autophagy, UM-6 also regulates the Hippo/YAP pathway, providing a new avenue for efficient anti-cervical cancer therapy.

2022-RA-262-ESGO PREDICTORS OF ONCOLOGIC OUTCOME IN RECURRENT CERVICAL CANCER PATIENTS RECEIVING PHASE 1 CANCER THERAPY

[1]Ji Son, [2]Heather Y Lin, [3]Siqing Fu, [3]Ecaterina E Dumbrava, [3]Daniel D Karp, [3]Aung Naing, [3]Shubham Pant, [3]Sarina A Piha-Paul, [3]Jordi Rodon, [3]Vivek Subbiah, [3]Apostolia M Tsimberidou, [3]Timothy A Yap, [1]Michael M Frumovitz, [1]Amir A Jazaeri, [1]Pedro T Ramirez, [1]Shannon N Westin, [2]Ying Yuan, [3]Funda Meric-Bernstam, [3]David S Hong. *[1]Gynecologic Oncology and Reproductive Medicine, MD Anderson Cancer Center, Houston, TX; [2]Department of Biostatistics, MD Anderson Cancer Center, Houston, TX; [3]Department of Investigational Cancer Therapeutics, MD Anderson Cancer Center, Houston, TX*

10.1136/ijgc-2022-ESGO.16

Introduction/Background Few treatment options exist in recurrent cervical cancer, which makes phase 1 clinical trials a compelling option. In order to identify candidates for referral, we analyzed factors predictive of response and survival in cervical cancer patients referred to phase 1 trials.

Methodology Cervical cancer patients who received at least 1 cycle of a phase 1 agent between 2014–2022 were retrospectively reviewed. Clinical and pathologic data were abstracted, Log-rank test was used to test the difference in progression-free survival (PFS) and overall survival (OS). Multivariable regression analysis was performed for predictors of response and survival.

Results 65 patients met eligibility. At trial entry, patient characteristics included the following median (range) values: age 41 years (20,74), 3 prior therapies (1,7), and 5-month progression-free interval before trial (1,32). 67.7% had squamous carcinoma, 27.7% adenocarcinoma, 4.5% other. The rate of distant metastasis was 84.6%. The most common alterations included *PIK3CA* (46.5%), PDL1+ (46.2%), EPH (30.0%),