

SUMY STATE UNIVERSITY  
MEDICAL INSTITUTE



«**BIOMEDICAL  
PERSPECTIVES**»

**ABSTRACT BOOK**

International Scientific and Practical Conference  
of Students, Postgraduates and Young Scientists

(Sumy, October 16-18, 2019)

Sumy  
Sumy State University  
2019

MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE  
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## PROLIFERATIVE ACTIVITY OF CERVICAL SQUAMOUS CANCER IN HIV INFECTION

*Lytvynenko M.V.*

*Odessa National Medical University*

**Introduction.** Mucosal surfaces are the primary sites of most human immunodeficiency virus (HIV) transmission, and thus these tissues are a focus of attention for efforts to prevent HIV infection that is important for future consequences of HIV with neoplastic processes including.

**Aim.** The aim of our work was detection of proliferative activity in cervical epithelium in women with cervical cancer and HIV infection.

**Materials and methods.** Materials for the study have been selected with histologically confirmed cervical cancer in patients with HIV (investigated group) and patients without HIV infection (group of comparison). Age of women in two groups ranged from 27 to 63 years and averaged 36.5 years. Histological and immunohistochemical examination (IHC) with ki67 was performed. Evaluation of expression was performed using a quantitative scale.

**Results.** As a result of IHC it was detected that positive Ki67 expression have been revealed in 100%, but percentage of cell with positive staining was uneven in investigated groups. So, percentage of cell with positive staining Ki67 was ranged from 11.32 to 85.4 % (averaging 48.8%) in group without HIV. But it was ranged from 27.41 to 93.4 (averaging 62.5%) in HIV group. It should be noted that dysplastic cells have been revealed with positively responding nuclei to Ki-67 in all cases, mostly outside, layers of the epithelium, the intensity of the reaction was moderate and high in peritumoral tissue. In some cases of group without HIV, the cells of the basal layer were Ki-67-negative. At the same time, as we move into the tumor, cells with positive nuclear reaction for Ki-67 detected as primarily high intensity in all layers of the cervical epithelial layer. Almost all cell nuclei were Ki-67-positive reactions with high intensity in areas that are suspicious as microinvasion in both groups.

**Conclusion.** Proliferative activity in cervical squamous cancer in women with HIV infection is characterized higher level of Ki-67 with averaging level for all histological types of squamous cell carcinoma  $62.5 \pm 5.6\%$  that one and half more than in group without HIV. Depend of histological type, expression of Ki-67 increased from  $4.7 \pm 3.8\%$  in well-differentiated squamous cell carcinoma till  $89.2 \pm 5.1\%$  in poor differentiated squamous cell carcinoma for group with HIV ( $21.3 \pm 2.4\%$  till  $79.4 \pm 3.7$  in group without HIV accordingly).

E-mail for correspondence: [prozektor777@gmail.com](mailto:prozektor777@gmail.com)