

**GRANZYME-B EXPRESSION AS A  
PREDICTOR OF IMMUNE SURVEILLANCE  
(CORRELATION STUDY IN PATIENT WITH UTERINE  
CERVICAL SQUAMOUS CELL CARCINOMA AND DYSPLASIA)**

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**ABSTRACT**

**Background:** The most common histological type of uterine cervical cancer is squamous cell carcinoma (SCC), with the risk of recurrency depends on immune surveillance with granzyme-B markers, and tumor infiltrating lymphocytes (TILs) is one of immunological determinant associated with a better prognosis. Granzyme-B is produced by TILs.

**Objective:** To compare Granzyme-B expression on cervical epithelial cells between SCC and dysplastic precancerous lesion as a predictor of immune surveillance.

**Methods:** Correlation analytic study using cross-sectional design on paraffin blocks of SCC and dysplastic precancerous lesion at the Laboratory of Anatomical Pathology, Dr.Kariadi general hospital, Semarang, during 2018 and 2019, using the granzyme-B examination, to evaluate TIL activation.

**Result:** Based on the age, most cases of uterine cervical SCC were at 40 years, 50% of cases were at stage IIIB, where as many as 20% experienced is died in the final condition at observation 1 year after the initial diagnosis was made. This study showed that the SCC group expressed granzyme-B with a mean score of  $5.81 \pm 1.17$  ( $p=0.001$ ) and the dysplasia group  $6.83 \pm 0.95$  ( $p=0.022$ ), Mann-Whitney shows the value  $p=0.009$ , so that the test results are significant. Whereas in the study of the distribution of TIL, the result was 0.706, so it can be said that there was no significant difference between the area of TIL in SCC and dysplasia.

**Conclusion:** Granzyme-B expression in dysplasia is higher than uterine cervical SCC. The scattered of TIL showed almost the same distribution in moderately differentiated uterine cervical SCC and mild dysplastic precancerous lesion.

**Keywords:** Granzyme-B, immune surveillance, squamous cell carcinoma, tumor infiltrating lymphocytes