



# CLINICAL, MORPHOLOGICAL AND PROGNOSTIC SIGNIFICANCE OF KI-67 AND PD-L1 EXPRESSION IN EPITHELIAL OVARIAN CANCER

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## KEYWORDS

*To study morphological features of the ovaries in normal conditions and in malignant tumors, and to evaluate the association of Ki-67 and PD-L1 expression with histotype, tumor grade, stage, and their prognostic significance for recurrence-free survival in patients with ovarian cancer*

## ABSTRACT

*Ovarian cancer is characterized by high mortality and frequent recurrence, which is largely due to late diagnosis and pronounced morphological heterogeneity of tumors. In this regard, the search for morphological and immunohistochemical markers capable of predicting disease course and recurrence-free survival is of particular importance. The study of Ki-67 and PD-L1 expression in combination with tumor morphological features may improve prognostic accuracy and help individualize patient management.*

**Background.** Ovarian cancer is characterized by high mortality and frequent recurrence, which is largely due to late diagnosis and pronounced morphological heterogeneity of tumors. In this regard, the search for morphological and immunohistochemical markers capable of predicting disease course and recurrence-free survival is of particular importance. The study of Ki-67 and PD-L1 expression in combination with tumor morphological features may improve prognostic accuracy and help individualize patient management.

**Objective.** To study morphological features of the ovaries in normal conditions and in malignant tumors, and to evaluate the association of Ki-67 and PD-L1 expression with histotype, tumor grade, stage, and their prognostic significance for recurrence-free survival in patients with ovarian cancer.

**Methods.** A total of 131 women were examined and divided into a control group (55 patients without oncopathology, 110 ovarian samples) and a main group (76 patients with epithelial ovarian cancer). Morphological, morphometric, immunohistochemical, and statistical analyses were performed. The expression of Ki-67 and PD-L1 was assessed and correlated with clinicopathological characteristics and recurrence-free survival.

**Results.** Malignant ovarian tumors demonstrated pronounced morphological changes including stromal sclerosis, architectural disruption, cellular and nuclear atypia, and desmoplastic reaction. Differences in Ki-67 and PD-L1 expression were identified depending on histological type and tumor grade. The highest levels of Ki-67 and PD-L1 were observed in

serous carcinomas, moderate expression in mucinous and endometrioid tumors, and low expression in normal ovarian tissue. A statistically significant association was found between Ki-67 and PD-L1 expression levels and histotype, tumor grade, and FIGO stage, as well as their impact on recurrence-free survival.

**Conclusion.** Ki-67 and PD-L1 expression is associated with morphological characteristics of epithelial ovarian cancer and may be considered additional prognostic factors. A comprehensive assessment of clinicomorphological and immunohistochemical parameters improves prediction of recurrence-free survival and enhances risk stratification of patients with ovarian cancer..

