

## **Platelet to Lymphocyte Ratio as a Predictive Tool for the Perioperative and Postoperative Outcomes in Advanced Stage Ovarian Cancer**

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### **Abstract**

*Background:* platelet to lymphocyte ratio remains a significant prognostic factor in different malignancies. The aim of the current paper is to study the correlation between the preoperative values of platelet to lymphocyte ratio (PLR) and the postoperative outcomes in ovarian cancer patients.

*Method:* we conducted a retrospective study on 57 patients submitted to cytoreductive surgery between 2014-2020. We determined the optimal cut off value of PLR for predicting survival outcomes by using the Receiver Operating Characteristic curve a value of 350 being obtained. The patients were further classified in two groups according to the PLR value.

*Results:* there were 37 patients with PLR<350 and respectively 20 patients with PLR>350. Patients in the second group were significantly older and presented significantly higher rates of perioperative complications, a significantly higher level of circulating platelets, of CA125 and respectively a significantly lower level of circulating lymphocytes and of preoperative hemoglobin level. Meanwhile, patients in the second group reported a significantly poorer disease free and overall survival.

*Conclusions:* ovarian cancer patients with higher preoperative levels of PLR trend to have a poorer early and long-term postoperative outcome. Therefore, in such cases more aggressive systemic therapies might be needed.

**Key words:** advanced stage ovarian cancer, platelet to lymphocyte ratio, mean overall survival rate, postoperative complications