Neoadjuvant chemotherapy should be reserved for those in whom optimal primary cytoreductive surgery is not feasible.

Methodology We retrospectively reviewed all of the patients who were diagnosed with advanced epithelial ovarian cancer and who presented with ascites. To maintain the quality of the study, only 92 patients with malignant cells in the ascites were included. Patients with clinically active infection in the time of paracentesis is excluded. If multiple times of paracentesis was done, we used initial result. Curves of DFS and OS were calculated using the Kaplan-Meier method, and univariate and multivariate analyses of various prognostic factors were performed using a Cox proportional hazard regression model.

Results In a univariate analysis, high serum NLR, malignant ascitic NLR were associated with shorter overall survival (p < 0.001, p < 0.001, respectively); moreover, age, Eastern Cooperative Oncology Group performance status (ECOG PS), histology, stage, hemoglobin level, albumin level, and calcium level were significant prognostic factors. A multivariable analysis confirmed that ECOG PS (p < 0.001), histology (p = 0.001), serum NLR (p = 0.007) and malignant ascitic NLR (p = 0.012) were independent predictors of overall survival.

Conclusion Our findings showed that an elevated preoperative NLR in serum and malignant ascites were associated with poor clinical outcome in ovarian cancer patients. Although further studies are required to generalize our results, this information will benefit clinicians and patients in determining the most appropriate therapy for patients with malignant ascites.