

Conclusion The overall five-year survival of patients with OC with BMs was 35.7%. Median time of brain metastases development was 31 months.

Disclosures The authors have nothing to disclose.

#584 PATIENTS WITH BRAIN METASTASES FROM OVARIAN CANCER

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Introduction/Background Brain metastases (BM) from ovarian cancer (OC) are extremely rare and have a very poor prognosis. Studies on brain metastatic OC are limited by low number of participants.

Methodology We aimed to analyze patients with brain metastases from ovarian cancer (OC), fallopian tube carcinoma (FTC) and primary peritoneal carcinoma (PPC) in a single center experience.

Methods: All women with OC, FTC and PPC with BMs, who were treated in Oncogynecological Department of N.N. Alexandrov National Cancer Centre of Belarus between January 1980 and December 2022 were retrospectively identified. The main criteria were serous carcinoma, endometrioid carcinoma and clear cell carcinoma and brain metastases.

Results At the initial analysis, 125 patients were selected, but during the final and detailed processing, 106 patients with BMs met the inclusion criteria (the final histological diagnosis of 20 patients did not meet the inclusion criteria). A total of 106 patients were analyzed: all patients with OC. The mean was 61.42 ± 9.94 (95% CI [59.52; 63.32]) years. In most cases, the patients were urban residents (83%). Most often, stage III of the disease was established (58%), serous carcinoma prevailed (97%). Specific anticancer treatment was not provided at 12%.

A multimodal approach (surgery combined with radiotherapy and chemotherapy) used in 21% of patients with BMs. Surgical treatment or radiotherapy or chemotherapy were used only in 24% of patients, chemoradiotherapy was used in 34%. 18% of patients survived

Conclusion BMs from OC remain a rare event, and the overall quality of current evidence is limited, and more studies with homogeneous groups are needed to determine the best treatment actions.

Disclosures The authors have nothing to disclose.

#588 BEYOND THE BINARY: EXPLAINING THE ELUSIVE NATURE OF BLOOD TRANSFUSION THRESHOLDS IN ADVANCED OVARIAN CANCER CYTOREDUCTIVE SURGERY

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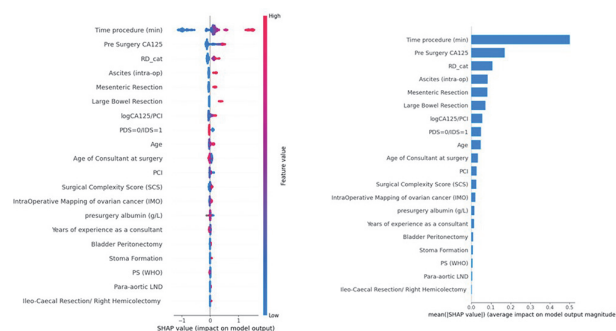
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Introduction/Background Institutional transfusion protocols are not universal, and a variety of transfusion policies may exist

across participating institutions. As a result, there is no well-defined threshold for intraoperative blood transfusion (BT) in advanced epithelial ovarian cancer (EOC) surgery. According to a recent ESGO consensus guidance, many patients need chemotherapy, thus more liberal transfusion thresholds may be used. We developed a Machine Learning (ML)-prediction that could trigger a BT communication alert based on the extent of surgical cytoreduction.

Methodology We analyzed prospectively collected data from 560 patients with advanced epithelial ovarian cancer (EOC) who underwent cytoreductive surgery at a UK tertiary center between 2014 and 2019. We excluded those with pre-operative anaemia and non-intact anticoagulation system, totaling 464 patients. We employed the eXtreme Gradient Boosting (XGBoost) algorithm to model pre-operative, intra-operative, and human factors. We calculated the estimated blood volume (EBV) using the formula $EBV = \text{weight} \times 80$ and set off 10% EBV as threshold for individual intervention. Based on the known estimated blood loss (EBL) we identified two groups. Receiver operating characteristic (ROC) curves were used for performance comparison. We used The SHapley Additive exPlanations (SHAP) framework to explain the predictive model.

Results The model performance for the above threshold prediction was satisfactory (AUC 0.723, 95% CI 0.69–0.75). The top feature commonly shared between both interrogators was operative time (OT) (figure 1). Intra-operative blood loss of at least 20%EBV was associated with $OT > 130$ minutes, primary surgery, peritoneal carcinomatosis index > 8 , surgical complexity score > 3 , age of consultant surgeon < 48 years, and ascites.



Abstract #588 Figure 1

Conclusion Based on the EBV and EBL, we identified a threshold for potential individual intervention, regardless of BT policies. Precise prediction of blood requirements is not possible unless a rough estimate of OT is known in advance.

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#592 MALIGNANT TRANSFORMATION OF THE MATURE CYSTIC TERATOMA INTO OVARIAN ADENOCARCINOMA

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Introduction/Background Mature cystic teratomas are the most common type of benign ovarian tumors. However, their malignant transformation is uncommon and occurs in 1.5–2%