**Introduction/Background** We recently developed an anatomico-surgical classification for ovarian cancer (OC) metastases in the liver area consisting in 5 different types (Type-1:Glisson’s, Type-2:Ligamentous, Type-3:Gallbladder, Type-4:Hepatic hilum, Type-5:Liver parenchymal). This study aims to evaluate whether this classification is able to identify patients at greater risk of intra and postoperative complications and with increased surgical complexity.

**Methodology** All epithelial advanced-OC patients who underwent primary or secondary surgery with perihepatic liver involvement were retrospectively retrieved. Patients were classified according to our published anatomo-surgical classification and further clustered into four major Classes: Class-I or Peritoneal (including Type-1,2,3), Class-II or ‘Hepatoceliac lymph-nodes’ (Type-4), Class-III or ‘Parenchymal’ (Type-5) and Class IV or Mixed (≥2 classes).

**Results** 615 patients were identified, and Class I resulted as the most commonly represented (337 cases, 54.8%). The distribution of surgical complexity score (SCS) was superimposable among classes (p=0.239) while operative time and estimated blood loss were significantly longer/higher in Class IV (p<0.001). Intraoperative transusions were more frequent in Class IV (30.4%) and less reported in Class-III (11.9%) (p=0.004); vascular injuries were significantly grouped in Class II (8%) (p=0.009). Class II and IV were more frequently associated to severe postoperative complications (p=0.008). Moreover, specific complications were found in each Class: perihepatic collection and intrahepatic hematoma/abscess in Class-III (respectively: p=0.003, p>0.001); pleural effusion, sepsis, anemia and ‘other complications’ in Class IV (respectively: p=0.002, p=0.004, p=0.03, p=0.03). At Multivariate analysis SCS 3 and macroscopic residual tumor were identified as risk factors for severe postoperative complications (respectively: OR: 3.922, p=0.03, p=0.03). Conversely, Class-I and III resulted at decreased risk for severe postoperative complications compared to Class IV.

**Conclusion** Our classification represents a useful and reliable tool, able to stratify patients with OC metastases in the liver area in Classes with different surgical outcomes and different postoperative complication profile.

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**Abstract 2022-RA-1456-ESGO Figure 1**

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**Conclusion** Our classification represents a useful and reliable tool, able to stratify patients with OC metastases in the liver area in Classes with different surgical outcomes and different postoperative complication profile.
validated assays to assess HRD are BRCA-mutation (BRCAmut) analysis and genomic instability scores (GIS) designed to detect genomic ‘scars’ in tumor DNA. However, these tests require large samples and yield non-contributive (NA) in 15% of cases. Bevacizumab and PARPi are approved as maintenance therapy regardless HRD status and the optimal maintenance strategy in case of non-contributive HRD test is a major unmet medical need. We aim to report the clinical characteristics and behavior under chemotherapy of NA HGOC pts.

Methodology This is a retrospective analysis of all pts tested for GIS by myChoice HRD Plus assay (Myriad Genetic Laboratories). Pts included presented HGOC with advanced FIGO III/IV diseases and treated according to guidelines. GIS was performed on baseline pretreatment samples, preferably. Platinum-free interval (PFI) was calculated from the date of last platinum-based chemotherapy to the date of relapse.

Results 210 patients were recruited: 100 were classified HR negative (HR–, score <42), 81 HR positive (HR+, score ≥42) and 29 NA (14%). HR+ cohort was significantly enriched with BRCAmut pts (21/81 = 27%) compared to HRD- and NA. In the NA cohort, median age was 64 years, 86% had an high-grade serious tumor and 10% presented germinal BRCAmut. With a median follow-up of 39 months, median PFI in the overall population was 19.8 months (95% CI 16.7–24.4). In the HRD+, HRD- and NA cohorts (excluding BRCAmut), median PFI were 34.0 (95% CI 16.7–64.4), 14.6 (95% CI 12.0–20.9) and 37.3 months (95% CI 21.0–NA) respectively (P=0.004).

Conclusion Our results suggest that patients with NA GIS results behave like HRD+ tumors harboring high platinum-sensitivity and therefore may benefit from PARPi maintenance. The reason for non-contributivity in the first place is unknown and may explain these observations.

Abstract 2022-RA-1470-ESGO Figure 1 Progression-free survival and overall survival in HR patients

Introduction/Background Poly(ADP-ribose)-polymerase inhibitors (PARPi) have changed the treatment landscape for high grade serous ovarian cancer. The CLIO trial (NCT02822157) evaluated olaparib (OLA) single-agent therapy versus physician’s choice chemotherapy (CT) in recurrent epithelial ovarian cancer. Current available tests for homologous recombination deficiency (HRD) have been able to identify possible responders to PARPi, but improvements to these tests are necessary and validation in clinical trials is key.

Methodology With Leuven HRD test we provide an academic laboratory-developed method for HRD testing in ovarian cancer research, Leuven, Belgium; Lab of translational genetics, KU Leuven – VIB center for cancer research, Leuven, Belgium; Department of gynecology, AZ Delta, Roeselare, Belgium.

Abstract 2022-RA-1473-ESGO RANDOMIZED PHASE II CLIO STUDY ON OLAPARIB MONOTHERAPY VERSUS CHEMOTHERAPY IN RECURRENT OVARIAN CANCER – RESULTS OF THE LEUVEN HRD TEST

Introduction/Background A consistent number of advanced ovarian cancer (AOC) patients present with poor performance status. We sought to determine whether neo-adjuvant chemotherapy (NACT) can modify pre-operative characteristics used to identify patients at high risk (HR) of peri-operative morbidity. A comparison between the analyzed population and a statistically matched group of HR and LR patients undergoing primary debulking surgery is in due course.