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 (HRD−, score <42), 81 HRN positive (HRD+, score ≥42) and 29 NA (14%). HRD+ 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 germinel 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.

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IS NEOADJUVANT CHEMOTHERAPY EFFECTIVE AS PREHABILITATION PROGRAM IN ADVANCED EPITHELIAL OVARIAN CANCER?

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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 complications, as defined by the Mayo Clinic Algorithm

Methodology In this retrospective single center observational study, FIGO stage III-IV AOC pts undergoing NACT from 01/2016 to 12/2019 were collected and triaged as low risk(LR) and HR according to Mayo Clinic Algorithm. HR group included women with at least one of the following criteria:(i) Albumin <3.5 g/dL,(ii) age ≥80 years,(iii) age 75–79 with ECOG performance status >1, stage IV disease, or complex surgery required and (iv) ASA score ≥ 3. Pre-NACT and post-NACT characteristics were compared in the HR group.

Results 177 patients were included, 144(81%) and 33(19%) were classified as HR and LR respectively before NACT. A median number of 4 cycles (range 2–6) of carboplatinum-paclitaxel NACT was administered in HR patients, with bevacizumab addition in 53% of cases. 115 out of 144 (80%) HR women showed a significant difference in pre-NACT ECOG (p=0.007), ASA score (p=0.001), albumin level (p=0.001) compared to post-NACT setting, taking on LR features. All patients underwent interval surgery and complete cytoreduction was achieved in 97 (84%) cases. Among 42 (35%) post-operative complications, 7(16%) were classified as G3-G4. Median progression free survival was 18 months (CI 95% 14 -21), median overall survival was 54 months (CI 95% 34–73) (figure 1).

Conclusion NACT appeared to improve pre-treatment patient’s characteristics that may account for an increase 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.

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