## #1063 IL-10 POLYMORPHYSMS AS OVARIAN CANCER RISK FACTOR IN GEORGIAN WOMEN

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**Introduction/Background** Ovarian cancer (OC) is considered to demonstrate multifactorial causes including multiple genetic contributors. Variants of many genes are suspected to participate in increasing the risk for OC. Some of those are genes involved in tumor microenvironment formation, an example of which is Interleukin-10 (IL-10) gene. We tried to analyze the single nucleotide polymorphism (SNP) (rs1800896) in the IL-10 gene in relationship to OC risk and correlated it with the levels of IL-10 in the peripheral blood of OC patients.

**Methodology** A case-control study was performed on a total of 20 women, with histologically confirmed epithelial ovarian cancers and 20 age-matched controls. SNP genotyping was performed with TaqMan Assay with Real Time-PCR. Statistical analyses were performed by GraphPad Prism 9.3.1 for macOS. Statistical significance for differences in genotype frequencies was determined by Chi-square and Fisher's exact test.

**Results** The genotype distributions of IL-10 gene polymorphisms among cancer and control groups were all according to the expected Hardy–Weinberg equilibrium. There was no statistically significant difference in frequency of genotypes and alleles between the two study groups.

In another analysis, the samples were grouped according to the polymorphic variant IL 10 (– 1082) A/G. Subjects having the homozygous variant (AA) had lower IL-10 mRNA levels than those with the homozygous wild (GG) genotype in both, ovarian cancer patients and controls, $p < 0.05$.

mRNA levels on IL-10, IL-8 were different among cases and controls ($p < 0.05$). Patients with OC had higher level of mRNA for IL-10 and IL-8 than controls.

**Conclusion** This relatively small-scaled study demonstrated, that mRNA levels of IL-10 and IL-8 are high in patients with OC and this goes along with the serum levels of proteins. However this difference is not determined by allelic differences, which means that other factors - epigenetic and regulatory - up-regulate expression of IL-10 and IL-8 genes in patients with OC.

**Disclosures** The study was supported by Shota Rustaveli National Science Foundation (Grant N YS-21-1216).

## #1044 WHY WE REALLY NEED THE HUMAN EPIDIDYMIS PROTEIN 4 IN THE PREOPERATIVE ASSESSMENT OF PREMENOPAUSAL PATIENTS WITH PELVIC MASS

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**Introduction/Background** Human epididymis protein 4 (HE4) has been reported as a promising complement to CA125 in the assessment of the risk of malignancy in patients, diagnosed with pelvic mass. However, reference limits of HE4 do not provide clinically relevant discrimination between malignant and benign ovarian diseases. The clinical significance of well-known Risk of Ovarian Malignancy Algorithm (ROMA), which combines both HE4 and CA125, is still questionable. Recently, ESGO/ISUOG/IOTA/ESGE Consensus Statement on pre-operative diagnosis of ovarian tumors implied that neither HE4 nor ROMA improve the discrimination between benign and malignant masses compared with CA125 alone.

**Methodology** An external validation of the new algorithm, named Risk of Ovarian Cancer Kazan Index (ROCK-I), will be presented. A comprehensive analysis of the performance of ROCK-I will be presented with the focus on clinical utility of adding HE4 to CA125 and ultrasound evaluation.

**Results** A comprehensive analysis of the performance of ROCK-I will be presented with the focus on clinical utility of adding HE4 to CA125 and ultrasound evaluation.

**Conclusion** HE4 is a useful compliment to expert ultrasound and CA125

**Disclosures** Authors has nothing to disclosure

## #1120 DURVALUMAB WITH PACLITAXEL/CARBOPLATIN + BEVACIZUMAB THEN MAINTENANCE DURVALUMAB, BEVACIZUMAB + OLAPARIB IN PATIENTS WITH NEWLY DIAGNOSED ADVANCED OVARIAN CANCER WITHOUT A TUMOUR BRCA1/2 MUTATION: RESULTS FROM THE DUO-O/ENGOT-OV46/AGO-OVAR 23/GOG-3025 TRIAL

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**Introduction/Background** Olaparib maintenance improved outcomes in patients with newly diagnosed advanced ovarian cancer (AOC) and a BRCAm (DiSilvestro JCO 2023), or with bevacizumab in patients with homologous recombination deficiency (HRD+) tumours (Ray-Coquard ESMO 2022) in response to first-line treatment; however, an unmet need remains.

**Abstract #1120 Table 1**

| | Arm 1 PC + bev | Arm 2 PC + bev + durva | Arm 3 PC + bev + durva + ola |
|---|---|---|---|
| **HRD+* PFS events, n/N (%)** | 86/143 (60) | 69/148 (47) | 49/140 (35) |
| Median PFS, months | 23.0 | 24.4 | 37.3 |
| HR (95% CI)† | | 0.83 (0.60–1.14) | 0.49 (0.34–0.69); *P*<0.0001 |
| 18-month PFS, % | 69 | 76 | 84 |
| **ITT PFS events, n/N (%)** | 259/378 (69) | 226/374 (60) | 193/378 (51) |
| Median PFS, months | 19.3 | 20.6 | 24.2 |
| HR (95% CI)† | | 0.87 (0.73–1.04); *P*=0.1312 | 0.63 (0.52–0.76); *P*<0.0001 |
| 18-month PFS, % | 55 | 56 | 71 |

Prespecified interim analysis data cutoff: 5 December 2022. PFS assessed by investigator (modified RECIST v1.1).

*GIS ≥42, Myriad MyChoice CDx; †Vs Arm 1.

bev, bevacizumab; CI, confidence interval; durva, durvalumab; GIS, genomic instability score; HR, hazard ratio; ola, olaparib; PC, paclitaxel/carboplatin; RECIST, Response Evaluation Criteria in Solid Tumours.

**Methodology** In the randomised Phase III DUO-O trial (NCT03737643), patients had newly diagnosed high-grade epithelial non-tumour (t) BRCAm AOC; primary, or planned interval, debulking surgery; and one cycle of paclitaxel/carboplatin +/– bevacizumab. At Cycle 2, patients were randomised 1:1:1 to Arm 1: paclitaxel/carboplatin + bevacizumab + placebo (up to six cycles) then maintenance bevacizumab (total 15 months) + placebos (total 24 months); Arm 2: paclitaxel/carboplatin + bevacizumab + durvalumab then maintenance bevacizumab + durvalumab + placebo; or Arm 3: paclitaxel/carboplatin + bevacizumab + durvalumab then maintenance bevacizumab + durvalumab + olaparib. Progression free survival (PFS) in Arm 3 versus Arm 1 (primary endpoint) was tested in the non-tBRCAm HRD+ then the intent-to-treat (ITT) populations.

**Results** At a prespecified interim analysis, Arm 3 demonstrated a statistically significant PFS improvement versus Arm 1: HR 0.49 (95% CI 0.34–0.69; P<0.0001) and HR 0.63 (95% CI 0.52–0.76; P<0.0001) in the HRD+ and ITT populations, respectively; a PFS effect was observed in the HRD– subgroup (HR 0.68 [95% CI 0.54–0.86]). A numerical, but not statistically significant, PFS improvement was shown for Arm 2 versus Arm 1 (ITT population) (table 1). During the study, any serious AEs were reported in 34%, 43% and 39% of patients in Arms 1, 2 and 3, respectively.

**Conclusion** Paclitaxel/carboplatin + bevacizumab + durvalumab followed by maintenance bevacizumab + durvalumab + olaparib in patients with newly diagnosed non-tBRCAm AOC demonstrated a statistically significant and clinically meaningful improvement in PFS versus paclitaxel/carboplatin + bevacizumab followed by maintenance bevacizumab. Safety was generally consistent with the known profiles of each agent.



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# 08. Pathology

## #900 COMPARATIVE EVALUATION OF OVARIAN CARCINOMA SUBTYPING IN PRIMARY VERSUS INTERVAL DEBULKING SURGERY SPECIMEN WHOLE SLIDE IMAGES USING ARTIFICIAL INTELLIGENCE

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**Introduction/Background** Artificial intelligence (AI) approaches applied to digital pathology have shown promise in supporting morphological differentiation of ovarian carcinoma subtypes from resection specimen whole slide images (WSIs). However, no existing studies have compared the use of WSIs from primary versus interval debulking surgery (IDS), a clinically relevant parameter given that subtyping is not routinely performed for post-neoadjuvant chemotherapy cases, although their inclusion would help meet the demand for data-intensive modern AI approaches. This study applies an AI-based analysis to determine the appropriateness of including both of these specimen types.

**Methodology** We used a standard supervised classification technique (attention-based multiple instance learning) to classify the five commonest ovarian carcinoma subtypes. This was applied to compare performance on an independent test set of primary resections (100 WSIs, 30 patients), following training with a dataset comprising primary resections alone and a second dataset with the addition of IDS resections (1415 WSIs; 963 primary resections, 452 IDS from 338 patients; 201 primary resections, 137 IDS). Training and test data were from 368 patients with ovarian malignancies managed at Leeds Teaching Hospitals NHS Trust.