Archipelago of Ovarian Cancer Research: Soluble HLA-E and TNF-$\alpha$ in Epithelial Ovarian Carcinoma

**EP309/#952**

**ARCHIPELAGO OF OVARIAN CANCER RESEARCH: A DUTCH NATIONWIDE, INTERDISCIPLINARY OVARIAN CANCER RESEARCH INFRASTRUCTURE**

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**Objectives**

High-impact fundamental and translational research is urgently needed to improve survival of ovarian cancer patients. Therefore, we established the Dutch nationwide Archipelago of Ovarian Cancer Research (AOCR). This multicenter, interdisciplinary infrastructure and biobank is a collaboration between all 19 Dutch hospitals in which ovarian cancer surgery takes place, and is aimed at facilitating large-scale, high-quality fundamental and translational ovarian cancer research.

**Methods**

Adult patients with (suspected) ovarian cancer are eligible for inclusion in the AOCR. Preoperative and follow-up blood samples, ascites, biopsies, and tissue from primary and metastatic tumor sites are collected and stored in a uniform matter for future (genetic) research. One representative histological hematoxylin and eosin stained slide per participant is digitized and reassessed by a gynecological pathologist. The AOCR ensures a large collection of samples to be used for research. It enhances interdisciplinary and multicenter collaboration at a national, and, hopefully in the future, international level. The AOCR facilitates large-scale, high-quality fundamental and translational ovarian cancer research with the ultimate aim to improve diagnostics, treatment, and survival of ovarian cancer patients.

**Conclusions**

Nearly half of BRCA1 c.5470_5477del mutation carriers had no family history of ovarian or breast cancer, and no personal history of breast cancer. Most patients tended to be associated with aggressive phenotype.

**EP310/#1033**

**SOLUBLE HLA-E AND TNF-$\alpha$ PHA EXPRESSION ASSOCIATION IN EPITHELIAL OVARIAN CARCINOMA ASCITES**

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**Objectives**

Most patients with ovarian carcinoma are diagnosed at an advanced stage, and therapeutic options for these patients still limited. The present study aims to investigate soluble Human leukocyte antigen-€ (sHLA-E) and TNF-$\alpha$ inflammatory cytokine expression in ascites of patients with epithelial ovarian carcinoma (EOC).

**Methods**

Thirty ascites specimens from EOC patients were collected. We optimized a direct sandwich enzyme-linked immunosorbent assay (ELISA) method to simultaneously determine the total antibody levels of sHLA-E and TNF-$\alpha$.

**Results**

Ascites from EOC patients showed increased sHLA-E levels (Mean: 1403pg/ml) and TNF-$\alpha$ levels (Mean: 40.4pg/ml). Interestingly, sHLA-E was positively correlated to TNF-$\alpha$ expression (Spearman $\tau=0.37$, $p=0.05$). Both soluble molecules were decreased in ascites of EOC patients with high CA-125 without significance (CA-125 <35U vs CA-125 $\geq$35U: sHLA-E: 1914 pg/ml vs 1307pg/ml and TNF-$\alpha$: 154.2pg/ml vs 24.85pg/ml).

**Conclusions**

Our preliminary data demonstrated that sHLA-E and TNF-$\alpha$ are increased in EOC patients’ ascites but decreased in those with high CA-125 tumor marker. sHLA-E might be highly secreted to decrease local inflammation and inhibit tumor progression. Further studies could shed light on the potential immune tolerance role of HLA-E in EOC.

**EP311/#1038**

**SECRETED HLA-G PROFILING IN EPITHELIAL OVARIAN CARCINOMA ASCITES**

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**Objectives**

Human leukocyte antigen (HLA)-G expression has been correlated with disease status and cancer patients’ outcome. In this study, we aimed to investigate the expression levels of both free soluble molecules (sHLA-G) and via extracellular vesicles as a membrane anchored molecule (HLA-GEV) in ascites from epithelial ovarian carcinoma (EOC) patients. We also explored their correlation with CA-125 tumor marker levels and histological subtypes.

**Methods**

sHLA-G and HLA-GEV levels were measured using Enzyme-Linked Immunosorbent Assay (ELISA) method in 30 ascites from EOC patients.

**Results**

Secreted HLA-G was detected in most of the ascites of EOC patients (sHLA-G 93%; HLA-GEV 70%) with increased