NEW BIOMARKERS IN THE DIAGNOSIS OF OVARIAN PATHOLOGY

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Aims

This project on new diagnostic biomarkers focusses on three pillars: proteins, cfDNA (cellfree DNA resulting from apoptotic tumor cells) and immune profiles.

Method

Serum, plasma and peripheral blood mononuclear cells (PBMC) were collected of 269 women. In 157 of them (68 benign cysts, 13 borderline tumors, 43 invasive ovarian cancers, 33 healthy controls) an immune profile analyses based on the presence of CD4, CD8, MDSC (myeloid derived suppressor cells) and Treg (regulatory T cells) was performed. In 39 invasive ovarian cancer patients, immune profile was monitored during disease progression.

Results

Most striking were the differences in monocytic MDSC (mMDSC), as their presence increased with growing malignancy potential (benign vs borderline vs invasive) (Fig 1). This graded difference remained ($p=0.006$), but rendered the invasive cancers more pronounced as a separate group, if mMDSC were PDL1 positive. The presence of these cells resulted in poor overall survival (Fig 2) and their increase after neoadjuvant platin-based chemotherapy (NACT) and interval debulking surgery (IDS) resulted in an increased chance of relapse