

Evaluation of dendritic cells and RANTES in patients suffering from ovarian cancer

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The study was undertaken to evaluate Regulated on Activation, Normal T-cell Expressed and Secreted (RANTES) levels in the peritoneal fluid (PF) and plasma of patients with different stage, grade and histological type of ovarian cancer (n=73) or serous cystadenoma (n=32) in relation to PF and peripheral blood (PB) myeloid and lymphoid dendritic cells (DCs). The PF and plasma level of RANTES was detected using ELISA assay. DCs were estimated using flow cytometry. The following directly conjugated mAbs were used: anti-BDCA-1 (CD1c) FITC, anti-BDCA-2 (CD303) FITC and anti-CD19 CyChrome, anti-CD123 PE.

The percentage of myeloid DCs was significantly lower in the PF of patients with ovarian cancer (0.64%) than in women with benign tumors (7.76%). In contrary, the percentage of lymphoid DCs was higher in the PF of patients with malignant disease (0.66%) than in the reference group (0.20%).

The PF and plasma RANTES concentrations were significantly elevated in the ovarian cancer patients compared to the group of non-malignant ovarian tumors.

There were no significant differences in the plasma RANTES levels based on tumor stage, grade or histology.

Women with serous cystadenocarcinoma, clear cell carcinoma and endometrioid cystadenocarcinoma had significantly higher PF RANTES levels than patients with undifferentiated carcinoma. Women with clear cell carcinoma and patients with endometrioid cystadenocarcinoma had higher PF RANTES levels than women with mucinous cystadenocarcinoma.

We concluded that RANTES production in the peritoneal cavities of ovarian cancer patients depends on the histological type of the tumor cells.

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Biography

Professor Jan Kotarski since 1999 is the Head of the 1st Department of Oncological Gynaecology and Gynaecology, Medical University of Lublin. He is one of the world's leading experts in gynaecologic oncology. He served as a President of Polish Gynaecological Society from 2006 to 2009. Currently he is a member of New York Academy of Science, European Society of Gynaecologic Endoscopy, European Society of Gynaecologic Oncology, Professor Kotarski's latest interests and research focus on clinical and experimental immunology and immunotherapy of gynaecological malignancies. He is one of the pioneers of dendritic cell vaccination use in the treatment of ovarian cancer.