

ABSTRACT

The immunotherapeutic drug DCVAC/OvCa is being tested in the treatment of ovarian cancer patients within the SOV02 clinical trial (Eudra CT number: 2013-001323-38). Ovarian cancer belongs to gynaecological malignancies with the highest mortality rate. Around 60% of patients are diagnosed at advanced stages. Despite the initial successful treatment, relapses occur in most cases, and the disease often becomes resistant to chemotherapy. Effective therapy for relapsed or metastatic patients is still missing. The solution could be immunotherapeutic treatment. DCVAC is an active cellular immunotherapy based on autologous dendritic cells. The aim of this diploma thesis was monitoring of immune parameters in samples from clinical trial SOV02 patients during the time period defined in the study protocol. We have monitored the presence of antigen specific T lymphocytes, tumor specific antibodies, immunosuppressive populations of regulatory T cells and MDSC cells, and also the expression of inhibitory molecules on the surface of T lymphocytes. We observed higher levels of Her-2, Muc-1 and MAGE-A1 antibodies in the DCVAC/OvCa treated group of patients versus the control group. Significant differences in the other monitored parameters were not observed. However, a large amount of data have been obtained that will be further statistically analysed and correlated with clinical data to help to clarify the effect of DCVAC/OvCa, or to find prognostic markers that could be used, for example, to identify such patients for those the treatment would be beneficial.

Keywords: immune response, immunotherapy, carcinoma, clinical trial, ovary