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First line chemotherapy and targeted therapy in ovarian carcinoma

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First line chemotherapy of ovarian cancer has not changed since 1996, when, together with platinum, paclitaxel was introduced and a significant improvement was achieved regarding overall survival. Since 2006, the studies have shown that intraperitoneal application of this protocol in the first line gave better results of survival in advanced stages of the disease. The NCCN (the National Comprehensive Cancer Network) recommendations include the third modality: dose – dense paclitaxel for the first line of treatment of stages II, III and IV. Nevertheless, a very small number of patients in an advanced stage of the disease has longer PFS (progression free survival). In the attempt to prolong the disease free period after the standard 6 series, some new studies of continual therapy were started, in which the treatment was continued with paclitaxel (GOG 212) in certain number of cycles or targeted therapy.

The development of molecular targeted therapy gave new possibilities in treatment. One of the aims of the therapy is angiogenesis, without which, the tumor growth is not possible. Tumor cells produce angiogenesis stimulators, VEGF, PDGF, FGF. VEGF activates migration, differentiation and proliferation of endothelial cells and vascular permeability. As overexpression of VEGF is present in majority of solid tumors, anti-VGFR monoclonal antibody, bevacizumab, presented the activities in the case of ovarian carcinoma. By addition of bevacizumab to chemotherapy, the PFS was prolonged in women with recurrent ovarian carcinoma. Based upon the results from several phase II studies, 2 phase III studies were initiated: GOG 218 and ICON7 on implementation of bevacizumab in the first line chemotherapy in ovarian carcinoma. So far, a significant prolongation of PFS was proved in patients who were treated with bevacizumab in the regime of concurrent and continual administration. Data on overall survival and the quality of life have not been published yet. Final recommendations on implementation of this therapy shall be given upon obtaining of the final results of these studies.

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