Interferon-gamma in combination with carboplatin and paclitaxel as a safe and effective first-line treatment option for advanced ovarian cancer: results of a phase I/II study

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We have previously shown that interferon-gamma 1b (IFN-gamma) in combination with cyclophosphamide and cisplatin significantly prolongs progression-free survival in ovarian cancer. In this phase I/II study, we examined if administration of IFN-gamma is also safe in combination with the current standard treatment, paclitaxel and carboplatin. Thirty-four patients with newly diagnosed advanced epithelial ovarian cancer, FIGO stage III/IV, were treated for six to nine cycles with paclitaxel (175 mg/m²) and carboplatin (area under the curve [AUC] 5) every 3 weeks. IFN-gamma was administered in an escalating dose from 6 days/cycle with 0.025 mg sc up to 9 days/cycle with 0.1 mg sc. As expected, administration of IFN-gamma was associated with flu-like symptoms. Grade 3/4 neutropenia was observed in 74% (25 out of 34) of patients. Other side effects, in particular peripheral neuropathies, were within the previously observed ranges for the paclitaxel plus carboplatin combination. Overall response rate (complete or partial response) in patients who received either six or nine doses (0.1 mg) of IFN-gamma/cycle (n = 28) was 71%. IFN-gamma is safe in combination with carboplatin and paclitaxel for first-line treatment of patients with advanced ovarian cancer. This combination should be further evaluated as an immunotherapeutic treatment option for ovarian cancer.