



First-line Chemotherapy for Ovarian Carcinoma

A Phase III Randomized Trial of Docetaxel-Carboplatin Versus Paclitaxel-Carboplatin

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Background

Chemotherapy with a platinum agent and a taxane (paclitaxel) is considered the standard of care for treatment of ovarian carcinoma. We compared the combination of docetaxel-carboplatin with the combination of paclitaxel-carboplatin as first-line chemotherapy for stage Ic-IV epithelial ovarian or primary peritoneal cancer.

Methods

We randomly assigned 1077 patients to receive docetaxel at 75 mg/m² of body surface area (1-hour intravenous infusion) or paclitaxel at 175 mg/m² (3-hour intravenous infusion). Both treatments then were followed by carboplatin to an area under the plasma concentration-time curve of 5. The treatments were repeated every 3 weeks for six cycles; in responding patients, an additional three cycles of single-agent carboplatin was permitted. Survival curves were calculated by the Kaplan-Meier method, and hazard ratios were estimated

with the Cox proportional hazards model. All statistical tests were two-sided.

Results:

After a median follow-up of 23 months, both groups had similar progression-free survival (medians of 15.0 months for docetaxel-carboplatin and 14.8 months for paclitaxel-carboplatin; hazard ratio [HR] docetaxel-paclitaxel = 0.97, 95% confidence interval [CI] = 0.83 to 1.13; $P = .707$), overall survival rates at 2 years (64.2% and 68.9%, respectively; HR = 1.13, 95% CI = 0.92 to 1.39; $P = .238$), and objective tumor (58.7% and 59.5%, respectively; difference between docetaxel and paclitaxel = -0.8%, 95% CI = -8.6% to 7.1%; $P = .868$) and CA-125 (75.8% and 76.8%, respectively; difference docetaxel-paclitaxel = -1.0%, 95% CI = -7.2% to 5.1%; $P = .794$) response rates. However, docetaxel-carboplatin was associated with substantially less overall and grade 2 or higher neurotoxicity than paclitaxel-carboplatin (grade >2 neurosensory toxicity in 11% versus 30%, difference = 19%, 95% CI = 15% to 24%; $P < .001$; grade >2

neuromotor toxicity in 3% versus 7%, difference = 4%, 95% CI = 1% to 7%; $P < .001$). Treatment with docetaxel-carboplatin was associated with statistically significantly more grade 3-4 neutropenia (94% versus 84%, difference = 11%, 95% CI = 7% to 14%; $P < .001$) and neutropenic complications than treatment with paclitaxel-carboplatin, although myelosuppression did not influence dose delivery or patient safety. Global quality of life was similar in both arms, but substantive differences in many symptom scores favored docetaxel.

Conclusions:

Docetaxel-carboplatin appears to be similar to paclitaxel-carboplatin in terms of progression-free survival and response, although longer follow-up is required for a definitive statement on survival. Thus, docetaxel-carboplatin represents an alternative first-line chemotherapy regimen for patients with newly diagnosed ovarian cancer. [*J Natl Cancer Inst* 2004;96:1682-91] OA