Trial Watch

BEVACIZUMAB IN OVARIAN CANCER

Expression of vascular endothelial growth factor (VEGF) and angiogenesis correlate with ovarian cancer progression, and the VEGF-neutralizing monoclonal antibody bevacizumab has shown activity in Phase II trials in ovarian cancer. Two Phase III trials have now shown that bevacizumab may be beneficial when added to standard chemotherapy in the first-line treatment of ovarian cancer.

The first trial — Gynecologic Oncology Group study 0218 (GOG-0218) — was a double-blind, placebo-controlled Phase III trial enrolling 1,873 women. Eligible patients had previously untreated stage III or IV epithelial ovarian cancer and had undergone tumour-debulking surgery. All patients received intravenous infusions every 3 weeks for 22 cycles, and cycles 1–6 consisted of carboplatin and paclitaxel. The control group also received a placebo in cycles 2–22. The group receiving bevacizumab-initiation therapy had infusions of bevacizumab in cycles 2–6 and a placebo in cycles 7–22. Bevacizumab-throughout therapy consisted of bevacizumab infusions in cycles 2–22. Median progression-free survival, which was the primary end point of the trial, was 10.3 months in the control group, 11.2 months in the bevacizumab-initiation group and 14.1 months in the bevacizumab-throughout group. The hazard of progression or death was significantly lower in the bevacizumab-throughout group compared with the control group ($P<0.001$). No significant differences in overall survival were observed.

The Gynecologic Cancer InterGroup International Collaboration on Ovarian Neoplasms 7 (ICON7) trial was a double-blind, placebo-controlled Phase III trial enrolling 1,528 women post-surgery with high-risk, early stage disease or advanced epithelial ovarian cancer. As in the GOG-0218 trial, all patients received carboplatin and paclitaxel every 3 weeks for 6 cycles. One group also received bevacizumab every 3 weeks for 5 or 6 cycles and for 12 additional cycles or until disease progression. Progression-free survival (restricted mean) at 36 months was 20.3 months for standard chemotherapy compared with 21.8 months for those who also received bevacizumab ($P=0.004$). In updated analyses, progression-free survival at 42 months was still higher with bevacizumab compared with standard therapy (24.1 months versus 22.4 months; $P=0.04$). This difference was greater in patients at a high risk of progression (18.1 months versus 14.5 months; $P=0.002$), and this translated to an increased median overall survival (36.6 months versus 28.8 months; $P=0.002$).

ORIGINAL RESEARCH PAPERS Burger, R. A. *et al.* Incorporation of bevacizumab in the primary treatment of ovarian cancer. *N. Engl. J. Med.* **365**, 2473–2483 (2011) | Perren, T. J. *et al.* A Phase 3 trial of bevacizumab in ovarian cancer. *N. Engl. J. Med.* **365**, 2484–2496 (2011)