TARGETED THERAPIES

Congratulations, you are still in the running towards becoming ovarian-next-top treatment

For many cancer types, the response rates to antiangiogenic agents have not been as successful as anticipated according to the results in preclinical models, and most patients develop resistance to this type of treatment. Ovarian cancer, however, seems to respond well to antiangiogenic therapy and several studies have reported improved progression-free survival (PFS) when administered alone and in combination with platinum-based therapies, making angiogenesis inhibition an encouraging approach for this often fatal cancer.

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For this reason, Jonathan Ledermann and colleagues decided to assess the efficacy of a new antiangiogenic compound, BIBF 1120. This compound is a kinase inhibitor that blocks three

growth factor receptors simultaneously: VEGFR, PDGFR and FGFR, all of which are involved in angiogenesis. “Advanced ovarian cancer is difficult to treat, and we are always looking for new and potentially effective therapies”, explains Allan Hackshaw, co-investigator of the study. “We collaborated with Boehringer Ingelheim to conduct an early-phase trial of their drug BIBF 1120, which showed promise in laboratory experiments as well as in other studies of patients with cancer”. Is this phase II study, 84 patients with advanced-stage ovarian cancer were randomly assigned to receive BIBF 1120 ($n = 43$) or placebo ($n = 41$). All the patients enrolled in the trial had already shown response to a chemotherapy regimen, which could maximize the efficacy of BIBF 1120, if it was proved to be effective at all. The primary end point (PFS) was met and, at 36 weeks, PFS was 16.3% in the BIBF 1120 group and 5% in the placebo group. No major adverse effects were reported. “The drug was well-tolerated,

and although patients given BIBF 1120 experienced more diarrhea, nausea and vomiting, they were not severe cases and were readily treated,” affirms Hackshaw. There were 30 deaths in the BIBF 1120 arm and 32 deaths in the placebo arm, and almost all of them were as a consequence of ovarian cancer.

This is just the second round for BIBF 1120: “the findings need to be confirmed in a larger randomized phase III trial, and Boehringer Ingelheim are already conducting such a study. If the results and conclusions are confirmed, BIBF 1120 would become a recommended treatment for advanced ovarian cancer,” says Hackshaw.

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Original article Ledermann, J. A. *et al.* Randomized phase II placebo-controlled trial of maintenance therapy using the oral triple angiokinase inhibitor BIBF 1120 after chemotherapy for relapsed ovarian cancer. *J. Clin. Oncol.* doi:10.1200/JCO.2010.33.5208