Background: Initial cytoreductive surgery followed by 6 cycles of platinum-taxane based chemotherapy (Cx) remains the standard of care for advanced OC. For those patients for whom complete resection is deemed difficult to achieve, IDS after 3 cycles of NACx and followed by 3 others cycles represents an alternative strategy. Three antiangiogenic drugs (AAD) have been shown to be active and to prolong progression-free survival (PFS) in first-line treatment of OC after initial debulking surgery: bevacizumab (BEV, GOG218&ICON7), nintedanib (NIN, OVAR12) and pazopanib (PAZ, OVAR16). In the setting of NACx, none of these drugs have been tested in a randomized trial despite the potential ability of AAD to increase Cx activity and complete surgical resection rate. NIN offers the advantage of being able to be safely combined with Cx and to have a short half-life (7-19 hours) allowing a rapid clearance of the drug before IDS.

Trial design: A total of 188 patients with FIGO stage IIIC/IV ovarian cancer will be randomized (2:1) to receive 6 cycles of first-line 3 weekly carboplatin AUC5 and paclitaxel 175mg/m² with NIN or placebo (200mg bid, d1-20/cycle except the cycle before and after IDS). IDS will be performed after the 3rd cycle. Maintenance therapy Nintedanib/placebo 200mg bid will be administered during 2 years or until disease progression which ever occur first. From January 2013 to April 2014, 90 patients have been randomized. PFS is the primary endpoint and will be compared in both arms using Kaplan-Meier method and log-rank test. Secondary endpoints include surgical complications rate, overall survival and quality of life. A large translational study will be also performed to try to evaluate which patients will benefit most from nintedanib.

Disclosure: I.L. Ray-Coquard: Roche, Pharmamar, Amgen, AstraZeneca board and lecture; F. Joly Lobbedez: Roche; N. Pecuchet: I have received honorarium from Novartis, Amgen, GSK and Roche; J. Alexandre: I am a member of an advisory board concerning bevacizumab. All other authors have declared no conflicts of interest.