Reviewer's report

Title: Activity ex vivo of cytotoxic drugs in patient samples of peritoneal carcinomatosis with special focus on colorectal cancer: a preclinical study

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Reviewer: Kurt Van der Speeten

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discretionary revisions

the authors are to be commended on their continuing effort to guide chemotherapy drug choice in intraoperative chemotherapy.

some minor points need to be addressed in the discussion.

1) it's a giant leap to take results from an ex-vivo model to conclusions in patients. The main issue the reader should be made aware of is that the ex vivo model does not mimic certain important aspects of the pharmacokinetics in patients (metabolism, clearance, distribution).

2) the model obviously does not mimic pharmacodynamics. Tumor nodule size, density, vascularization and others have proven to be important determinants in peritoneal carcinomatosis patients.

3) The incubation periods in the model do not correlate with incubation in patients. For cell-cycle specific drugs, this might be of importance.

4) I'm a bit suprised by the irinotecan results ex vivo. Irinotecan is a prodrug and needs to be metabolized to SN 38 by carboxylesterases.

I would dare to suggest the main potential application in short term of these tests would be post surgery to determine if the choice of drug made was the correct one; i.e. showed any cytotoxic activity in vitro. If not these patients even in the presence of an Ro resection should be considered at high risk of recurrence.

Generally well written paper that raises important questions.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:
I acknowledge being part of the same research group until 2010 as part of my PhD thesis.