Reviewer’s report

Title: Synergistic effects of oncolytic reovirus and docetaxel chemotherapy in prostate cancer

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Reviewer: Pooja Hingorani

Reviewer’s report:

Heinemann et al. have presented a well written report of activity of reovirus in combination with chemotherapy. The background and rationale is explained in detail and the hypothesis of enhanced anti-tumor activity of reovirus with chemotherapeutic agents is supported by well conducted in vitro and in vivo experiments. This work can be published as presented, however, a couple of discretionary suggestions are as below:

1) Synergy of Reovirus is demonstrated with several other chemotherapy agents besides docetaxel at ED50 and higher doses whereas there is antagonism noted at higher doses with Docetaxel. The MS may have been improved if further in vivo experiments were conducted with combination of reovirus and other chemotherapeutic agents such as paclitaxel or vincristine which seemed to have better in vitro syngergistic data.

2) Based on in vitro experiments, the authors conclude that reovirus replication is increased in combination with docetaxel due to possible microtubule stabilization. This could have been further validated by looking at reovirus content and microtubule protein content in the treated tumor tissue from the in vivo experiments as we all know that the in vitro systems, although essential for conduct of such experiments, never closely replicate the in vivo milieu and interaction of various therapeutic agents in the body.

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 declare that I have no competing interests