Reviewer’s report

Title: The efficacy of tumor debulking surgery is improved by adjuvant immunotherapy using imiquimod and anti-CD40

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Reviewer: michael kershaw

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The authors present a study aimed at developing a new strategy for cancer treatment in the adjuvant setting. While chemotherapeutics and radiotherapy are commonly used as adjuvants following surgery to reduce overt and occult disease, immunotherapy represents a potentially effective yet safer option. The authors build on some of their previous work using immunotherapeutics, where they have demonstrated inhibition of primary tumor growth. In the current study, the authors use a combination of IMQ and anti-CD40 to treat debulked mesothelioma tumors in a mouse cancer model. Efficacy of the combination is clearly demonstrated leading to enhanced survival of mice compared to debulking alone. Indeed, a proportion of mice survived long term following surgery and immunotherapy. Mechanistically, increased CTL activity was associated with tumor inhibition following IMQ and anti-CD40 treatment. The authors argue that IMQ and anti-CD40 activate dendritic cells, and although no details are provided in the current study, this statement is supported by reference to previous studies and can be inferred from the CTL data.

The manuscript is well written with appropriate introduction and discussion. The conclusions are supported by the data, and there is novelty in the use of immunotherapeutics in the adjuvant setting. This type of approach has the potential to lead to improved treatment options for cancer patients, particularly those for whom complete surgical resection is not possible. As a minor comment, panels A, B, and C of Figure 4 were not labelled as stated in the text, but rather presented as separate Figures 4, 5 and 6 in the on-line version.

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: 

No competing interests