

Dear Sir:

We would like to thank the editors and reviewers for their helpful comments and advise. The manuscript was revised as requested. We answered the questions and remarks of the reviewers point by point. Changes in the text were marked in blue.

We feel that the revised manuscript has been improved as compared to the original version. We therefore hope that this revised version will be considered for publication.

Point by point answers to the editor and reviewers

Editor:

- Author contributions, and conflict of interest statement were added on the first page
- Figure and table were added
- Core tip and audio core tip were included
- Bibliography and references were reformatted according to the journals' instructions

Reviewer 1:

- Immunotherapy in the context of transplantation. We agree that this is an important issue, which we did not discuss. We have added a paragraph on this topic.
- Overall, the 5-year survival is around 5-6%. We agree that this statement could lead to some confusion. We omitted this sentence: the survival rates of different stages of disease are presented in the text.
- A diagram providing an overview of the anti-HCC immune response was included
- English was “polished”

Reviewer 2:

- A table summarizing clinical trials in immune-based therapy for HCC was included

Reviewer 3:

- Some questions were asked on DC vaccination and immune escape mechanisms of HCC.
Dendritic cell-based therapies try to induce new or enhance pre-existing antigen-specific T cells, nevertheless dendritic cell-based vaccines have no direct effect on the tumor cells. Instead these vaccines have an effect on different cell types of the immune system and these cells are capable to induce tumor cell death.

However, tumors have developed several mechanisms to escape from this process as already quoted by the reviewer. Researchers have extensively investigated these mechanisms and several approaches are developed to counteract these inhibitory mechanisms. In this regard, anti-PD1/PD-L1, anti-CTLA4, ... treatment can counteract the inhibitory molecules on tumor cells. Recently, a clinical study with anti-PD1 (Nivolumab) administration has been presented at the latest ASCO meeting. They reported a favorable overall survival.

In addition, RFA treatment has been shown to up-regulate tumor antigen expression and MHC molecules on tumor cells in an in vivo mouse model. (Gameiro et al, Plos 2013)

These results suggest a combination of active immunotherapy and conventional therapies, such as RFA, to augment tumor cell recognition by T cells and eventually clinical outcome.

We have added some paragraphs on these topics.

- We agree that Sorafenib has some immune effects and we have included that in the discussion.
- We have included a figure as suggested by 2 reviewers