Reviewer's report

**Title:** Chemokine mediated distribution of dendritic cell subsets in renal cell carcinoma

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**Reviewer:** Teresa Cabrera

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This paper characterizes the distribution of two different subgroups of myeloid dendritic cells, mature and immature DCs, and of the chemokines that influence this distribution in normal and malignant kidney tissue. The authors demonstrated that immature dendritic cells are mostly found within the tumor nests, while mature dendritic cells are mainly located in peritumoral areas forming clusters with proliferating T cells, as a part of a local immune response.

The article is well written and adds new information to the knowledge in the corresponding field of science since better understanding of the role of dendritic cells in tumors is of great importance for the development of more advanced cancer treatment approaches.

The role and distribution of DCs in various types of cancer, including RCC, have been previously reported by other authors; however, the data presented in this manuscript is more detailed and provides more information. The used methodology is appropriate, employing different techniques and antibodies. The conclusions are well supported by the data collected.

Discretionary Revisions:

- I would like to recommend the authors to include one more reference: Troy et al., 1999. CD1a dendritic cells predominate in transitional cell carcinoma of bladder and kidney but are minimally activated. The Journal of Urology. Vol. 161, 1962-1967. This paper describes similar distribution pattern of CD1a + dendritic cells within the tumor and CD1a- in the tumor periphery, although only in 5 RCC cases.

- The Discussion is too big and starts with a large preface which repeats some topics discussed in the Introduction. I recommend to make it more focused and shorter.

- There are several antibodies presented in Table 1 but not described in the results, including: anti-CCL19, CCL20, and CCL21. In addition, there are results describing the use of antibodies anti-CD4 y Ki67, but they are not listed in the Table.

- There is no information regarding which of the used antibodies are raised in rabbit and which in mouse.
- Reference 14 is missing year of publication, volume and pages. Reference 41 is also incomplete, should be states that it is “in press”

- The authors stated in the Material and Methods that they used The Thoenes criteria of nuclear grading and UICC TNM system for pathological staging of tumors. However, they did not demonstrate any use of this information neither in correlation studies with tumor grade or in the analysis of tumor DC distribution.

- There is no information regarding the manufacturer of the biotin-streptavidin-peroxidase kit used in the study.

- In some sentences English correction is recommended, for instance, in the first paragraph of the discussion: “However, tumour response is observed at least in a subset of patients” should be changed to “However, tumour response is observed only in a subset of patients”

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