Reviewer's report

Title: Identification of Transcriptional Regulatory Networks Specific to Pilocytic Astrocytoma

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Reviewer: Antonio Iavarone

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This is quite an interesting manuscript comparing the transcriptional networks of three different human brain tumor types (pilocytic astrocytoma, oligodendroglioma and glioblastoma multiforme). The results are interesting and, although the authors do not conduct any experimental validation, their publication may be useful for the brain tumor community.

Two points should be fixed:

1) The authors need to recognize that the choice of comparing the gene expression profile of brain tumors with that of “normal brain” is far from perfect. The cell of origin of brain tumors is unknown so the comparison takes into account the heterogeneous distribution of different normal distribution of cells in the brain. A better idea might have been the comparison of the gene expression profiles among the different brain tumors.

2) Transcriptional regulatory networks of human brain tumors have recently been described (and validated experimentally) in the recent literature (Nature, 463:318-325, 2010). To be complete, the discussion section should report a careful description and analysis of these studies.

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' below