Reviewer's report

Title: Increased Paired Box Transcription Factor 8 has a Survival Function in Glioma

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Reviewer: Craig Horbinski

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The manuscript titled "Paired Box Transcription Factor 8 is Increased and has a Survival Function in Glioma" by Hung et al., show that the PAX8 transcription factor is increased with increasing glioma grade, and in GBMs is more associated with telomerase and other types of telomere maintenance than with ALT. They also show that knockdown of PAX8 reduces Bcl2 expression as well as in vitro cellular proliferation in multiple glioma cell lines.

The data presented are interesting and novel; I can't find any papers addressing PAX8 in gliomas in the literature, other than their prior Cancer Research paper.

Major comments:

* Methods: "Consultant neuropathologists at each hospital made the histological diagnoses." Usually there's centralized review of the diagnoses in such cohorts. Why was this not done here?

* Table 1 and Figure 1: The data on metastatic tumors should be deleted, since there isn't any matched primary tumor tissue and the overall N for each histotype is rather low, so comparing between metastatic tumor types is not really useful. The authors would be better served to remove the metastatic data.

* Is PAX8 expression associated with survival in glioblastomas?

* I see no western blot data specifically addressing WT1 in Figure 3B. Furthermore, the figure legend refers to a 3C but there is no 3C in the actual figure. If the growth curves are supposed to be 3C, why are they labeled as 3B?