Reviewer's report

Title: Expression of delta-catenin is associated with progression of human astrocytoma

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Reviewer: S Ashraf Imam

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This is a well written manuscript which describes and suggests the utilization of #-catenin expression as a marker of astrocytoma. The authors also present data on the roles of #-catenin in vitro to promote proliferation and invasion of astrocytoma cells. However, following are the major concerns about the utilization of #-catenin as a useful diagnostic marker of astrocytoma.

Judging by the illustrations (microphotographs), #-catenin expression is detectable in normal brain (Fig. 1B) and high grade (III & IV) astrocytoma (Fig. 1H and J), but undetectable in both grade I and II (Fig. 1D and F) astrocytoma. Detection of grade I astrocytoma in particular could be challenging with respect to distinguishing it from reactive gliosis in certain cases. In the absence of #-catenin expression in low grade astrocytoma would severely limit its utilization as a useful diagnostic marker.

Furthermore, detection of high grade III or IV astrocytoma rarely present any challenge to neuropathologists to make a definite diagnosis. Therefore, utilization of #-catenin expression, which is restricted to high grade astrocytoma, would have no impact on the diagnosis of early state astrocytoma.