Reviewer’s report

Title: Presence of activating KRAS mutations correlates significantly with expression of tumour suppressor genes DCN and TPM1 in colorectal cancer

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Reviewer: Milo Frattini

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In the manuscript “Presence of activating KRAS mutations correlates significantly with expression of tumour suppressor genes DCN and TPM1 in colorectal cancer”, the Authors, by using microarray and Real-Time PCR experiments, identified novel genes involved in the development of colorectal cancer. The Authors found that in the majority of tumors SLC26A3, TPM1 and DCN genes are underexpressed, a finding consistent with their tumor suppressor role. In addition, they showed a correlation of DCN underexpression with the presence of K-Ras mutations.

Major Compulsory Revisions

The paper is based on microarray and Real-Time PCR methods, and to be sure about the obtained results, a careful selection of tumor blocks is mandatory. However, this information is completely absent in the manuscript. Therefore, the Authors must describe how they selected tumor blocks for RNA extraction.

Minor Essential Revisions

- Antibodies against the protein encoded by DCN gene for IHC analysis are available: the authors must investigate DCN by immunohistochemical techniques and then match these results with those obtained through the methodologies outlined in the present manuscript.

- DCN encodes for a protein that acts through EGFR. The Authors did not investigated the EGFR deregulation, but analyzed the association with K-Ras, a member of an EGFR downstream pathway that is altered in an independent manner with respect to EGFR. Therefore the Authors must investigate the EGFR deregulation, ideally by FISH as IHC is not a reliable method for the evaluation of EGFR deregulation.

- Finally, for the association with K-Ras alterations, the Authors must discuss this datum in the context of the model proposed by Vogelstein for the development of colorectal cancer.

Level of interest: An article whose findings are important to those with closely related research interests

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