Reviewer's report

Title: GLUT1 gene is a potential hypoxic and prognostic marker in colorectal cancer patients

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Reviewer: Gemma Dominguez

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Chung et al, describe expression of GLUT1 associated to hypoxia conditions in colon cancer cell lines. The authors also observed overexpression of GLUT1 in the tumor tissue of colorectal carcinoma patients (CRC) compared to healthy donors. GLUT1 overexpression correlated with advanced tumor stages. Additionally, they found GLUT1 mRNA expression in the blood of CRC patients. GLUT1 overexpression in the blood also correlated with advanced tumor stages, suggesting that GLUT1 may be a prognosis marker that could be determined by a non-invasive method. As early as in the 90’s different groups described the putative prognostic value of GLUT1 expression in CRC (Younes et al, 1996; Haber et al, 1998), so the novelty of the current work lies in the detection of the expression of GLUT1 in blood of CRC patients and its correlation with poor prognosis.

Some major compulsory revisions should be addressed:

- The investigators analyzed the expression of GLUT1 in 10 CRC patients and in 10 healthy donors. In some parts of the manuscript it seems that the authors analyzed the expression of GLUT1 in the tumor tissue of 10 CRC patients and in the normal counterpart tissue of the same patient. This fact should be clarified throughout the text.

- GLUT1 overexpression in the blood correlated with tumor stages II and III. Why is not tumor stage IV represented in the 100 patients? In a 100 CRC series 4-6 stage IV patients should be represented.

- In the Discussion section the data regarding the findings in the blood of the 100 CRC patients is not discussed (although it is mentioned in Conclusions). As the novelty of the study lies in it, authors should discuss these results and emphasized them.

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

Quality of written English: Needs some language corrections before being published

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.