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Letter to the Editor

MiR-431 inhibits colorectal cancer cell invasion via repressing CUL4B

Dear Editor,

Colorectal cancer (CRC) represents one of the most commonly diagnosed cancers worldwide. In the last decade the survival of patients with metastatic CRC has improved dramatically but it remains the third leading cause of cancer-related deaths worldwide[1,2].

To date, due to advent of new drugs (irinotecan and oxaliplatin) and target therapies (i.e., bevacizumab, cetuximab, panitumab regorafenib), the median overall survival has risen from about 12 months in the mid nineties to 30 months recently[1].

Many questions needing of right collocations and more clearness still exist regarding the prognostic factors and the predictive factors of response to therapy.

In the recent past molecular analyses have shown that the natural history of all CRCs is not the same. Individual patients with same stage tumors may have different long-term prognosis and response to therapy. In addition, some prognostic variables are likely to be more important than others.

In this context the manuscript by Su et al[3] is interesting because describes the role of MIR-431 able to inhibit the epithelial-mesenchymal transition (EMT) in the complex process of the tumor invasion and metastasis.

In fact, to date, there are few studies on EMT-related miRNA-431 expression in the CRC samples and the potential role of CRC cells.

According to the English literature, the EMT process of CRC contains cytoskeleton rearrangement, cell adhesion structure enhanced cells and cell polarity changes, leading to cell deformation, protruding filopodia and cell polarity loss, etc., so it plays an extremely pivotal role in the development of CRC[4].

The statistical and experimental methods adopted by the authors are interesting and very clear to explain the mechanism of cancer diffusion/invasion.

They found that the expression of miRNA-431 mRNA in CRC samples was significantly lower than that in para-cancerous tissue. It's interesting that the differentially expressed miR-431 was not associated with gender, age, etc., but it was significantly related to tumor metastasis and staging.

Moreover, the results presented that miRNA-431 expression in the CRC samples was lower than that in the adjacent samples, indicating that miRNA-431 was involved in the development, progression, and metastasis. In addition, the cell migration with low expression of miRNA-431 was significantly increased, and the migration level of cells with high expression of miRNA-431 was significantly decreased, indicating that miRNA-431 can inhibit CRC cell migration and may be involved in the process of CRC by influencing the migration of CRC cells.

The authors concluded that "MiRNA-431 may play a role in promoting colorectal tumor, participate in the processes of the tumor and CRC with EMT-related protein E-cadherin mainly through the migration of CRC cells. Detection of miRNA-431 in patients with CRC may have certain guiding significance in the clinical treatment and prognosis of CRC".

We know if the authors have some suggestions, according to their results, about the choice of better medical treatment. Moreover, why the cut-off of recruiting patients is until 69 years old?

In conclusion we firmly believe that this kind of manuscript is important to improve the knowledge about prognostic factors and outcomes in CRC patients[5-8] and it is a classic example of translational research.

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Conflict of interest
The authors declare no conflicts of interest.

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