

NEW PREDICTIVE METHOD FOR THE PROGRESSION OF COLORECTAL CANCER

A research group from CIBER and Institut Hospital del Mar d'Investigacions Mèdiques (IMIM), has identified new genetic signatures that could predict the progression of colorectal cancer and provide information on candidate targeted therapy.

The Need

Colorectal cancer (CRC) remains the second leading cause of cancer-related death, which highlights the need for novel therapies focused on treatment of advanced disease. Even after adequate treatment, around 25-30% of colorectal cancer (CRC) patients in the less aggressive stage II tumors and up to 30-50% in stage III relapse and most of them eventually die due to metastasis and chemotherapy (CT) resistance.

The Solution

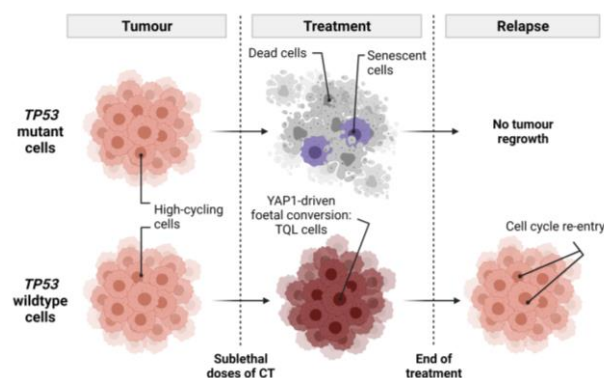
Currently, there are no accurate biomarkers that allow to predict the evolution of CRC in early stages (II and II/III). It has been patented a new fetal 'gene signature' capable to predict the worse evolution of the CRC patients who could suffer a relapse after chemotherapeutic regime or surgery. It has been also provided evidence on the possibility of using YAP1 inhibitors to specifically eradicate tumors carrying fetal traits.

Innovative Aspects

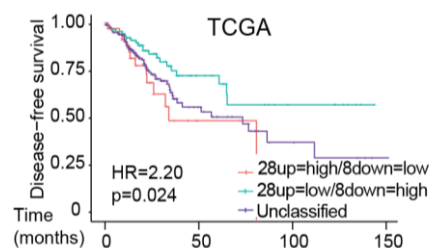
This is a specific transcriptional signature that is characteristic of fetal intestinal stem cells. Identification of p53 wildtype tumors carrying this signature will inform on the efficacy of classical chemotherapeutic regimes and allow to recommend personalized therapies for a patient with cancer.

Stage of Development:

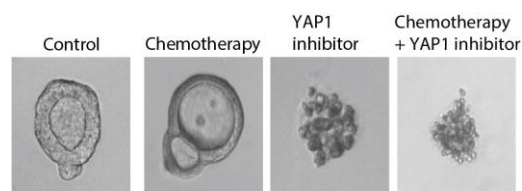
Validated in vitro experiments on cancer cells derived from colorectal cancer patients but it could be used in other types of cancer i.e., lung cancer.



Tumors carrying wildtype p53 can display or acquire, in response to sublethal chemotherapy, a YAP1 dependent fetal phenotype that increases tumor relapse.



Representation of disease-free survival over time for CRC patients from the TCGA Portal, with high or low expression of patented signature.



Representative stereoscopic images of a colorectal cancer patient-derived organoid differently treated.

Intellectual Property:

- Priority European patent application filed (March 1st, 2021) DOI: <https://doi.org/10.1101/2021.04.08.438915>

Aims

Looking for a partner interested in a license and/or a collaboration agreement to develop and exploit this asset.

Contact details