

## Prognostic methylation-based classifier for non-metastatic colorectal cancer (ProMCol)

### Keywords

- Survivability prediction in colorectal cancer
- Treatment options evaluation
- Patient monitoring

### Abstract

Colorectal cancer (CRC) is the third most common cancer worldwide accounting for 1.36 million new cases annually. Harmful overtreatment of patients with colorectal cancer (CRC) due to imprecise prognosis prediction based on the traditional tumor, node, metastasis system highlights the need of additional prognostic markers. Our classifier (ProMCol) allows predicting disease specific survival of colorectal cancer patients. This can guide treatment decisions and therefore avoid unnecessary side effects associated with chemotherapy, if the survivability prediction is positive.

### Development Stage

The method has been revealed by genome-wide methylation analysis and developed and validated in two multicentric study cohorts including together about 800 non-metastatic CRC patients with a median follow up time of 5 years (Gut 2017). It has already been verified in a large independent international study (Gut, 2018) and in our actual new CRC study.

### The Technology

This technology is a robust method for determining a survival probability of those suffering from colorectal cancer. It involves gauging the methylation status of certain biomarkers. The combination of the novel ProMCol classifier and standard clinical parameters can predict patients' prognosis considerably more accurately than clinical parameters taken alone.

### Applications and Commercial Opportunity

At present, the most accurate means for the prediction of patient survival remains pathological staging according to the tumor-node-metastasis system but it has been recognized that even patients within the same tumor stage display a strong heterogeneity for prognosis and treatment response. Especially for

stage II patients there is an ongoing debate if adjuvant chemotherapy should be recommended or not. Our method enables clinical decision making to avoid potential under- or over-treatment of patients. Apart from treatment decision guidance and patient monitoring, the method can be used to make lifestyle recommendations.

We are seeking licensees and/or partners for further clinical development.

### Inventors

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### Intellectual Property

Priority application was filed at the European Patent Office on 18 October 2017 (EP17197156.7).

### Further Information

Further information (speaking with the inventor) is available under a signed Confidential Disclosure Agreement (CDA).

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