Overexpression of fibroblast growth factor (FGF) in patients with colorectal cancer is usually associated with tumour development, however, there is fresh evidence for a tumour suppression role by FGF14. This dual activity opens new diagnostic opportunities for early screening of FGF biomarkers for the individualisation of therapies. Currently, there is a little known about FGFs and whether it will be worth implementing them as a prognostic tool for cancer treatment? Colorectal cancer (CRC) is the second leading cause of cancer death in both sexes in the United States. Among sites of the digestive system, the colon and rectal cancers were estimated to cause 51,020 deaths in 2019. Unfortunately, the mechanism undelaying the development of cancer is extremely complex and heterogeneous, so early detection and use of 'omics' technologies are currently the best options to contribute to treatment success. Patients with CRC have been reported to potentially overexpress most of the known FGFs at the late stages contributing to differentiation and proliferation of cancer cells. Therefore, different approaches for blocking the FGF pathway with multikinase inhibitors and antibodies have been reported as targeted therapeutics. To this day, there are 3 FDA approved kinase inhibitors, among which only one multikinase inhibitor for the metastatic colon cancer- egorafenib that targets a number of tyrosine kinases including the FGF receptor 17. Such kinase therapies have shown unexpected toxicities that can be successfully avoided by applying a personalised approach with the help of cancer biomarkers. Among antibody therapies, there are four monoclonal antibodies that bind to VEGF and EGFR are widely used in CRC in combination with chemotherapy or radiation therapy.

: Anna A; FGF14- A game changer in the personalised treatment of patients with colorectal cancer; Webinar on Toxicology; October 30, 2020