

Abstract

Colorectal carcinoma (CRC) is worldwide known as one of the most often tumor diseases. Approximately 50 % of patients are diagnosed with advanced stage of CRC and moreover even after removing all of the tumor bearings, there is high risk of its recurrence. As most of others solid tumors the CRC also releases fragments of DNA also known as the circulating tumor DNA (ctDNA). The ctDNA analysis is a new tool for monitoring continuous tumor burden and for observing treatment response. Due to its minimal invasivity and high specificity is suitable for instance for long period postoperative follow-up of patients with CRC. Within the long period follow-up process an evaluation radicality of operation is conducted as well as an early detection of new tumor foci. This thesis focus on an origin and releasing mechanism of ctDNA into bloodstream, its features and clinical utility options for patients with an advanced colorectal carcinoma.

Key words: circulating tumor DNA, ctDNA, advanced colorectal carcinoma, mCRC, marker