Molecular lesions in colorectal cancer: impact on prognosis? Original data and review of the literature.

BACKGROUND: In the Dukes' B and C stages of colorectal carcinoma there are considerable variations in the observed courses of the disease. Since post-operative chemotherapy in patients with Dukes' C (node-positive) colon carcinoma has been demonstrated to be effective in improving overall-survival, a more exact prognosis assessment gains additional significance and therapeutic relevance.

DISCUSSION: One also hopes to derive improved prognostic factors from the clarification of the molecular pathogenesis. Because of its frequency and the accessibility and recognizability of its developmental stages colorectal carcinoma is among the best investigated of all solid tumors. Despite a multitude of suggested molecular candidate markers none of these changes has yet been able to enter the everyday life of the clinic. However, it is to be expected that some of the molecular alterations presently discussed will gain importance before long in the clinical treatment of patients with colorectal carcinoma.

CONCLUSION: Considering also our own findings, this review presents the latest developments in the scientific discussion of the tumor suppressor/oncogenes p53, k-ras, and DCC, biochemical determinants of the 5-fluorouracil metabolism, and defects of the DNA repair system.