

Prognostic and Predictive factors in Colorectal Cancer

A. Bolocan¹, D. Ion¹, D.N. Ciocan², D.N Paduraru¹

¹IIIrd Department of General Surgery, University Emergency Hospital Bucharest, Romania

²IInd Department of General Surgery, "Sfântul Ioan" Emergency Hospital Bucharest, Romania

Abstract

Colorectal cancer (CRC) is an important public health problem; it is a leading cause of cancer mortality in the industrialized world, second to lung cancer: each year there are nearly one million new cases of CRC diagnosed worldwide and half a million deaths (1). This review aims to summarise the most important currently available markers for CRC that provide prognostic or predictive information. Amongst others, it covers serum markers such as CEA and CA19-9, markers expressed by tumour tissues, such as thymidylate synthase, and also the expression/loss of expression of certain oncogenes and tumour suppressor genes such as K-ras and p53. The prognostic value of genomic instability, angiogenesis and proliferative indices, such as the apoptotic index, are discussed. The advent of new therapies created the pathway for a personalized approach of the patient. This will take into consideration the complex genetic mechanisms involved in tumorigenesis, besides the classical clinical and pathological stagings. The growing number of therapeutic agents and known molecular targets in oncology lead to a compulsory study of the clinical use of biomarkers with role in improving response and survival, as well as in reducing toxicity and establishing economic stability. The potential predictive and prognostic biomarkers which have arisen from the study of the genetic basis of colorectal cancer and their therapeutical significance are discussed.

Key words: colorectal carcinoma, prognostic markers, review, angiogenesis, genomic instability, invasion, circulating cells

Corresponding author: Alexandra Bolocan, M.D.

IIIrd General Emergency Surgery Clinic,
Universitary Emergency Hospital Bucharest
E-mail: bolocan.alex@gmail.com