

Evaluation of prognostic factors for colon cancer

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Abstract

Introduction: Colon cancer represents a major health problem in the world. The outcome of newly diagnosed cases predominantly relies on stage as defined by the UICC-TNM and American Joint Committee on Cancer classifications.

Aims: The aim of this retrospective study was to identify the additional prognostic factors for patients with colon cancer.

Patients and methods: We retrospectively analyzed the incidence and significance of 8 clinical and pathological factors in 225 patients treated over a 2-year period in Surgery Clinic No.III, Cluj-Napoca. In order to avoid selection bias, all cases with a prior diagnostic of colon cancer and intervention for recurrence or metastasis, as well as cases lacking more than 20% of necessary data were excluded. The candidate variables were analyzed using the Cox Proportional Hazards Model in order to select those who influence the outcome.

Results: The overall 5-year survival rate was 42%. Patients treated with resection of the primary tumor had a survival rate of 50%, ranging from 82% in patients with stage I malignancy to 11 % in the presence of metastatic disease. 21% of all patients underwent emergency operation for obstruction or perforation but this did not significantly influence survival ($p=0.1$). The TNM stage of the tumor (HR=1.2-8.4), grade of tumor differentiation (HR=2.1) and perineural invasion (HR=1.8) were independent negative prognostic factors. Venous invasion and status of resection margins were found to influence the outcome on univariate analysis, but were discarded when integrated in the multivariate model. The number of lymph nodes analyzed ($p=0.9$) and the tumor location ($p=0.3$) did not significantly affect the outcome of patients.

Conclusion: These results suggest that the prognosis of newly diagnosed cases of colon cancer is influenced by the TNM stage, the degree of tumor differentiation and the presence of perineural invasion.

Key words: prognosis, colon cancer, TNM staging, 5-year survival rate

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