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The usefulness of preoperative determination of CEA and TPS concentrations in patients with colorectal cancer

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Purpose: According to an account published by The European Group on Tumour Markers (EGTM) of 2003, CEA is the main marker used in detecting colorectal cancer. It is important to point out, however, that approximately 10-15 % of patients do not produce CEA at all or secreted only minimal amounts of it. In such cases the normal level of CEA concentration does not exclude the existence of a neoplasm even at an advanced stage. The test for TPS concentration should be added to the list of markers for this group of patients. TPS increases the sensitivity in detecting early stages of colorectal carcinoma. At the advanced stage of colon and rectal carcinomas the CEA concentration can increase eightfold and CA 19-9 concentration can increase fourfold. Recently an increased interest in the soluble fragments of cytokeratins, especially the 18^{th} (TPS), has been noted.

Methods: In this research the preoperative CEA and TPS concentrations in a group of 178 patients with colorectal cancer were estimated. The patients were divided into 4 groups according to the Dukes's stage level of carcinoma advancement.

Results: In determining TPS the observed profile of TPS concentration was different from the profile of CEA concentration because the TPS concentration was increased even at the earliest stage of tumour development.

Conclusions: The determination of TPS concentration in patients with colorectal cancer provides essential information in detecting the carcinoma, especially at the earliest stages of its development