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Scientific Research Process

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Title: Circulating inflammatory factors associated with worse long-term prognosis in colorectal cancer

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What did this study explore?

Inflammation is of importance in cancer development, and many tumours develop due to prolonged or chronic inflammation throughout their progression. This study investigated levels of 40 different inflammatory factors in plasma from colorectal cancer patients and its association to mortality.

How did the authors perform all experiments?

174 colorectal cancer patients who had undergone surgical resections for primary colorectal adenocarcinoma between 2006-2013 were included in the study. The

clinicopathological characteristics of the patients were obtained from surgical and pathological records. Follow-up was performed by consulting the medical records from all hospital departments and the primary care up to January 31, 2016. The date of an eventual cancer recurrence and the date and cause of death as related to CRC-specific mortality or not were determined from a review of the patient´s files.

How did the authors process all experimental data?

Tertiles of the examined inflammatory variables with CRC specific and total mortality were performed with Kaplan-Meier curves, log-rank test and Cox`s regression analysis. Data were adjusted for association of age, sex, tumour localization, TNM stage, local radical resection, pre- and postoperative adjuvant treatment using the SPSS for Windows computer package (IBM® SPSS® Statistics, 2012, version 21, SPSS Inc., Chicago, IL, USA).

How did the authors deal with the pre-study hypothesis?

Multivariable models were used to test the primary hypothesis that increased mortality is associated with higher levels of inflammatory cytokines.

What are the novel findings of this study?

For most of the inflammatory factors the association between higher tertile levels and an increased mortality in general appeared two years after surgery. High tertile levels of CCL1 and CCL24 remained significant for CRC-specific mortality in a multivariate model.

Sincerely,

Dick Wågsäter, Professor