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DNA damage in blood cells in relation to chemotherapy and nutritional status in colorectal cancer patients – A pilot study

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Highlights

- Genotoxicity was assessed in colorectal cancer patients by means of DNA damage utilizing the comet assay on whole blood samples.
- Colorectal cancer patients on adjuvant chemotherapy had higher levels of DNA damage in blood cells compared to patients not receiving chemotherapy.
- Good nutritional status was associated with less DNA damage indicating a possible protective role of nutritional status against genotoxicity.

Abstract

DNA damage can be considered as a biomarker for toxicity and response to chemotherapy. It is not known whether the chemotherapy-induced genotoxicity is associated with malnutrition. In this pilot study, we assess genotoxicity by means of DNA damage in patients with lymph-node positive colorectal cancer (CRC) and explore associations with chemotherapy treatment