

## Diet quality indices and Gastrointestinal Cancer Risk: Results from the Lifelines Study

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To investigate the long-term association between four dietary quality indices and the risk of gastrointestinal (GI) cancer. x Baseline details of the dietary intake of participants, assessed by a single food frequency questionnaire from the prospective Lifelines population-based cohort, were translated to diet quality scores using several dietary and dietary-lifestyle indices. Incident cases of GI cancer were then assessed by linkage to the Dutch nationwide histocytopathology registry. The association between GI cancer risk and diet quality (defined as higher quintiles on dietary indices compared to the first quintile) were assessed by multivariable Cox proportional hazard models. We included 72,695 participants aged  $51.20 \pm 8.71$  years with a median follow-up to cancer diagnosis of 8 years (interquartile range, 2 years). During follow-up, 434 colorectal cancers and 139 upper GI cancers were diagnosed as incidence cases. High diet quality, as quantified by the Lifelines Diet Index, was associated with a reduced risk of colorectal cancer (hazard ratio, 0.62; 95% confidence interval, 0.44–0.87). There was also a significant reduction in colorectal cancer risk for high categories in the American Cancer Society Index (hazard ratio, 0.62; 95% confidence interval, 0.46–0.84). However, high dietary index scores were not associated with strong beneficial effects on upper GI cancer risk. High quintiles on the Lifelines Diet Index and American Cancer Society Index were associated with significantly reduced risks of colorectal cancer. These indices may be of use in a colorectal cancer prevention program.