

quantifying the dose-response relationship between circulating folate concentrations and colorectal cancer in cohort studies : a meta-analysis based on a flexible meta-regression model

Deskripsi Lengkap: <https://lib.fkm.ui.ac.id/detail.jsp?id=102866&lokasi=lokal>

Abstrak

Most epidemiologic studies on folate intake suggest that folate may be protective against colorectal cancer, but the results on circulating (plasma or serum) folate are mostly inconclusive. We conducted a meta-analysis of case-control studies nested within prospective studies on circulating folate and colorectal cancer risk by using flexible meta-regression models to test the linear and nonlinear dose-response relationships. A total of 8 publications (10 cohorts, representing 3,477 cases and 7,039 controls) were included in the meta-analysis. The linear and nonlinear models corresponded to relative risks of 0.96 (95% confidence interval (CI): 0.91, 1.02) and 0.99 (95% CI: 0.96, 1.02), respectively, per 10 nmol/L of circulating folate in contrast to the reference value. The pooled relative risks when comparing the highest with the lowest category were 0.80 (95% CI: 0.61, 0.99) for radioimmunoassay and 1.03 (95% CI: 0.83, 1.22) for microbiological assay. Overall, our analyses suggest a null association between circulating folate and colorectal cancer risk. The stronger association for the radioimmunoassay-based studies could reflect differences in cohorts and study designs rather than assay performance. Further investigations need to integrate more accurate measurements and flexible modeling to explore the effects of folate in the presence of genetic, lifestyle, dietary, and hormone-related factors.