

Letter to the Editor

Milk intake and risk of colorectal cancer

Bakken *et al.* conducted a prospective study to investigate the effect of milk intake on subsequent colorectal cancer (CRC) in women⁽¹⁾. Colon cancer and rectal cancer were separately analysed. Based on Cox proportional hazard regression analyses, repeated and baseline measurements of milk intake were both used for the analyses. The adjusted hazard ratios (HR) of high milk intake against no/seldom milk intake in repeated and baseline measurements for colon cancer were 0.80 (95 % CI 0.62, 1.03) and 0.81 (95 % CI 0.64, 1.01), respectively. In addition, the adjusted HR of high milk intake against no/seldom milk intake in repeated and baseline measurements for rectal cancer were 0.97 (95 % CI 0.67, 1.42) and 0.71 (95 % CI 0.50, 1.01), respectively. There was a weak inverse association between the milk intake and the risk of colon cancer among women. Although Bakken *et al.*⁽¹⁾ precisely reviewed past reports and understood the potential limitations of their study, I have one query about a statistical procedure and also present two reports, which present evidence of significant preventive effects of milk intake on CRC incidence.

First, Bakken *et al.*⁽¹⁾ conducted a risk assessment of an independent variable by single and repeated measures. I understand that milk intake would be changed during the follow-up period, and time-dependent Cox-regression analysis might be a useful statistical procedure. Discrepancy between the results obtained by the two methods would be difficult to explain as the authors mentioned, and further information is needed to specify a valid statistical method.

Second, Barrubés *et al.* recently conducted a prospective study to assess the association between the consumption of total dairy products and milk and the risk of CRC⁽²⁾. The adjusted HR of the highest tertile of total dairy product and low-fat milk consumption against the lowest tertile for CRC were 0.55 (95 % CI 0.31, 0.99) and 0.54 (95 % CI 0.32, 0.92), respectively. In contrast, other dairy products showed no significant association. They recognised that the consumption of total dairy products was higher in women than in men, and the effect of sex differences on the risk reduction for CRC by dairy products should be specified by further study. In addition, Bakken *et al.*⁽¹⁾ classified CRC

into colon and rectal cancer, and sub-analysis by separating the types of CRC would also be informative.

Finally, Cho *et al.* conducted a meta-analysis for the association between milk and Ca intake and CRC⁽³⁾, which had also been cited by Bakken *et al.*⁽¹⁾. The pooled relative risks of the second highest and highest quartiles of milk intake against the lowest one for CRC were 0.88 (95 % CI 0.81, 0.96) and 0.85 (95 % CI 0.78, 0.94), respectively. Ca intake also significantly reduced the risk of CRC. There was no sex difference in the association, and a significant inverse association between milk intake and CRC was limited to cancers of the distal colon and rectum. I think that a meta-analysis with a sufficient number of prospective studies is indispensable to verify the association, and Bakken *et al.*⁽¹⁾ presented additional information for a meta-analysis.

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