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**Optimal glycaemic control and the reduced risk of colorectal adenoma and cancer in patients with diabetes: a population-based cohort study**

Mao X, Cheung K, Tan J et al. [Optimal glycaemic control and the reduced risk of colorectal adenoma and cancer in patients with diabetes: a population-based cohort study.](https://gut.bmj.com/content/73/8/1313) Gut 2024; 73(8): 1313-1320. doi: 10.1136/gutjnl-2023-331701.

Diabetes mellitus (DM) has been linked to colorectal cancer (CRC) and adenomas, with literature reporting improved glycaemic control reduces CRC. However, previous studies have not adjusted for important confounders, limiting conclusions. Mao et al., looked to clarify the association through this population-based cohort study that utilises propensity score (PS) matching with competing risk models to estimate sub distribution hazard ratios (SHRs) and also analyses combined effect of baseline/postbaseline glycaemic control based on time-weighted mean HbA1c (Haemoglobin A1C).

Individuals with new DM from 2005 to 2014 were identified from Hong Kong’s Clinical Data Analysis and Reporting System (CDARS), amounting to 88,468 PS-matched patients (mean age 61.5 ±11.7 years; 53.3% male). Among these, over median follow-up of 7.2 (IQR: 5.5–9.4) years, 1229 (1.4%) developed CRC.

Results revealed optimal glycaemic control (defined as mean HbA1c <7%) to be associated with a 13%–27% reduced risk of any adenoma, as well as a 28% reduced risk of CRC (SHR 0.72; 95% CI 0.65 to 0.81), however this latter effect was limited to rectum (SHR 0.71; 95% CI 0.57 to 0.89) and left colon (SHR 0.71; 95% CI 0.59 to 0.85), but not right colon (SHR 0.86; 95% CI 0.67 to 1.10). Otherwise, at both timepoints, as compared to suboptimal glycaemic control, optimal control was found to decrease the risk of CRC – SHR 0.71, 0.79, and 0.61 at baseline, postbaseline and both time periods, respectively. This finding was mirrored when glycaemic control was used as a time-varying covariate (HR (hazard ratio) 0.75). Finally, Mao et al., reported the CRC risk to increase in a stepwise fashion according to worsening degree of glycaemic control and increasing HbA1c – SHRs 1.34 for 7.0% to <7.5%, 1.30 for 7.5% to <8.0%, 1.44 for 8.0% to <8.5%, and 1.58 for ≥8.5%.

Glycaemic control appears independently associated with CRC development, prompting consideration of its incorporation into prevention strategies.