



# AB030. SOH23ABS\_142. The impact of bariatric surgery on the incidence of colorectal cancer in patients with obesity—a systematic review and meta-analysis of registry data

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**Background:** Cancer and obesity represent two of the most significant global health concerns. The risk of malignancy, including colorectal cancer (CRC), increases with obesity. We aimed to determine the impact of bariatric surgery on CRC risk in patients with obesity using registry data.

**Methods:** A systematic review and meta-analysis were performed as per PRISMA guidelines. The risk of CRC was expressed as a dichotomous variable and reported as odds ratios (OR) with 95% confidence intervals (CI) using the Mantel-Haenszel method. A multi-treatment comparison was performed, examining the risk reduction associated with commonly performed bariatric surgery procedures. Analysis was performed using RevMan, R packages, and Shiny.

**Results:** Data from 11 registries including 6,214,682 patients with obesity were analysed. Of these, 14.0% underwent bariatric surgery (n=872,499) and 86.0% did not undergo surgery (n=5,432,183). The mean age was 49.8 years and mean follow-up was 5.1 years. In total, 0.6% of patients who underwent bariatric surgery developed CRC (4,843/872,499), as did 1.0% of unoperated patients with obesity (54,721/5,432,183). Patients with obesity who underwent bariatric surgery were less likely to develop CRC

(OR: 0.53, 95% CI: 0.36–0.77,  $P < 0.001$ ,  $I^2 = 99\%$ ). Patients with bypass surgery (GB) (OR: 0.513, 95% CI: 0.336–0.818) and sleeve gastrectomy (SG) (OR: 0.484, 95% CI: 0.307–0.763) were less likely to develop CRC than unoperated patients.

**Conclusions:** At a population level, bariatric surgery is associated with reduced CRC risk in patients with obesity. GB and SG are associated with the most significant reduction in CRC risk.

**Keywords:** Bariatric; colorectal; metabolic; obesity; surgery

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## Footnote

*Conflicts of Interest:* The authors have no conflicts of interest to declare.

*Ethical Statement:* The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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