

# AB020. SOH21AS218. Obesity status as a risk factor for anastomotic leak in colorectal cancer: a meta-analysis

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**Background:** Colorectal cancer (CRC) is the third most common cancer in Ireland. Surgical resection is the foundation of curative treatment, however despite advances in techniques and new technologies, anastomotic leak (AL) remains a major complication. Evidence has shown AL to impact significantly on short-term morbidity and mortality as well as local recurrence rates and overall survival. Obesity has been proposed as a risk factor for AL, however the evidence to date is debated. A meta-analysis was carried out to explore obesity as a risk factor for AL.

**Methods:** PubMed/MEDLINE databases were searched for relevant articles. Studies meeting criteria were divided into Western and Asian groups based on their country of origin. Body mass index (BMI) cut-offs specific to these populations were applied to these groups and a meta-analysis carried out.

**Results:** There were 2,158 articles initially screened of which 30 studies comprising 45,782 patients were included. A higher rate of AL was found in all obese patient groups however this was only statistically significant for the Asian population group; Non-obese Asian population AL rate 4.6% vs. 5.3% in Obese Asian population [OR 0.69 (0.53–0.90)].

**Conclusions:** These results suggest obesity is a considerable risk factor for AL in certain populations. This increased risk is likely attributable to technical difficulties associated with increased intra-abdominal fat however there may also be systemic and metabolic factors at play. Obesity status is an important consideration in patients who are undergoing restorative resection for CRC.

**Keywords:** Anastomotic leak (AL); body mass index (BMI); colorectal cancer (CRC); 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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