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## SURGICAL OUTCOMES OF COLORECTAL CANCER SURGERY ACCORDING TO SPECIFIC BODY MASS INDEX GROUPS.

(P1244)

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**Purpose:** Morbid Obesity is associated with increase postoperative morbidity. There is a lack of large national data regarding the surgical outcomes of colorectal resections (CRS) in specific Body Mass Index (BMI) classes. Therefore, this study aims to examine the outcomes of CRS in relation to BMI.

**Methods:** A retrospective review of colorectal cancer patients undergoing CRS using ACS National Surgical Quality Improvement Program 2005-2012 was conducted. Patients were stratified within BMI groups of <18.5, 26-30, 31-35, 36-40, 41-45, 46-50, and >50. A multivariate logistic regression was used to compare risk-adjusted mortality and morbidity between BMI groups and control group (BMI=18.5-25) (CG).

**Results:** Among the 51,355 CRS, 31.8% of operations were performed on BMI>30, 32.6% on CG, and 33.5% on BMI 26-30, and 2.1% on BMI>45. Laparoscopy was performed in 57.1% of BMI>30 and 56.9% of CG. Rectal cancer comprised 24.7% of BMI>30 and 26.0% of CG. Compared to CG, BMI>45 had higher morbidity (27.8% vs. 21.8%, $p<0.01$ ). Compared to CG, BMI<18.5 had higher morbidity (26.6% vs. 21.8%, $p<0.01$ ) and longer hospital-stays ( $12.5\pm 67$  vs.  $8.5\pm 10$ days, $p<0.01$ ). Compared to CG, BMI>45 had higher rate of urinary-tract-infection (5.8% vs. 3.7%, $p<0.01$ ), acute-renal-failure (3.9% vs. 0.7%, $p<0.01$ ), wound disruption (3.2% vs. 1.0%, $p<0.02$ ) and venous thromboembolism (2.7% vs. 1.8%, $p<0.05$ ). Compared to CG, BMI>45 had longer operative time ( $196\pm 100$  vs.  $157\pm 88$ minutes, $p<0.01$ ). A significant upward trend was observed for risk-adjusted morbidity with respect to BMI class ( $p<0.01$ ). This was observed in colon and rectal cancer. The trend was not significant for mortality.

**Conclusions:** This study shows that morbid obesity negatively impacts CRS outcomes and that risk-adjusted morbidity increases with increasing BMI

