INTRODUCTION: Obesity has been linked to the development of Colorectal Cancer and to increase morbidity. However, the impact BMI has on surgical staging through nodal harvest is not entirely understood.

METHODS: We queried the targeted colectomy NSQIP database from 2015 through 2019. The cohort was selected based on codes corresponding to elective colectomies for colon cancer. BMI was grouped into the 5 clinically relevant categories. Nodal harvest was dichotomized into <12 and ≥12 lymph nodes. A multivariate regression was utilized to evaluate the association between BMI and adequate nodal harvest controlling for key covariates.

RESULTS: A total of 35,039 patients were included. Median BMI was 29.02 mg/kg² (IQR, 24.37-32.44) with a median of 22 (15-27) lymph nodes harvested. The BMI groups with the highest adequate LN harvest were those <25 with 93.7% compared to 92.8% in BMI ≥25 (p=0.002). Right colon cancers had a higher rate of achieving adequate harvest compared to left, 94.8% vs. 90.8%, respectively (p <0.001). Right tumors had a higher rate of adequate harvest in the <25 groups, this frequency decreases as BMI increases and conversely for left tumors (p <.001). Inadequate harvest was higher for open approach (9.82%) compared to laparoscopic (6.12%) or robotic (6.6%) (p=<0.001). BMI ≤25 was associated with a 13% increase likelihood for an adequate nodal harvest (OR: 1.13, 95% CI 1.02-1.26).

CONCLUSION: This study associated lower BMI’s with a higher probability of achieving adequate nodal harvest. This can increase awareness in the risk of incomplete harvest in overweight and obese patients.

Decreasing Wound Infection and Deep Surgical Site Infection in Colorectal Surgery: The Benefits of Minimally Invasive Surgery and a Rigorous Perioperative Protocol
Rafael Pereza, DO, Paige C Adams, BA, Jaafar Elhagarc, MD, Henry Schoonyoung, MD, FACSc, John H Marks, MD, FACs
Lankenau Medical Center, Wynnewood, PA

INTRODUCTION: Colorectal surgery has the highest surgical site infection rate for abdominal surgery, 5-30%. We hypothesize that a minimally invasive surgical approach and use of standardized perioperative treatment path have led to a decrease in SSI rate.

METHODS: A prospectively maintained database of MIS colorectal resections at a single institution from 2000-2020 was queried. All patients received mechanical and po antibiotic bowel prep; surgery was performed minimally invasively using a clean-dirty technique. Superficial wound SSI and deep abdominal/pelvic SSI were analyzed and compared among multiple risk factors.

RESULTS: 2716 MIS colorectal resections were analyzed; mean age 61 years (17-95). 51% were women. Mean BMI was 27.3 kg/m² (13.6-51.6). 635 patients (23.4%) received neoadjuvant radiation. Superficial wound SSI rate was 0.77% (N=21). Abdominal/pelvic SSI rate was 2.7% (N=74). Overall SSI rate was 3.5% (N=95). Anastomotic leak rate was 1.22%. There was no difference in superficial and abdominal/pelvic SSI rate based on BMI (p = 0.79) or age (p=0.56). Patients receiving neoadjuvant radiation and undergoing rectal resections had a statistically significant higher rate of superficial and deep infections (p<0.01). In multivariate analysis, radiation and rectal surgery still are more likely to develop SSI (p<0.01).

CONCLUSION: A standardized treatment path including mechanical and oral antibiotic bowel prep, MIS approach and strict clean/dirty techniques result in very low superficial wound infection rates (0.77%) and a lower SSI rate than found in the literature (3.5%). Rectal surgery and neoadjuvant therapy were associated with higher infection rates; age, obesity, and site of colon surgery were not.