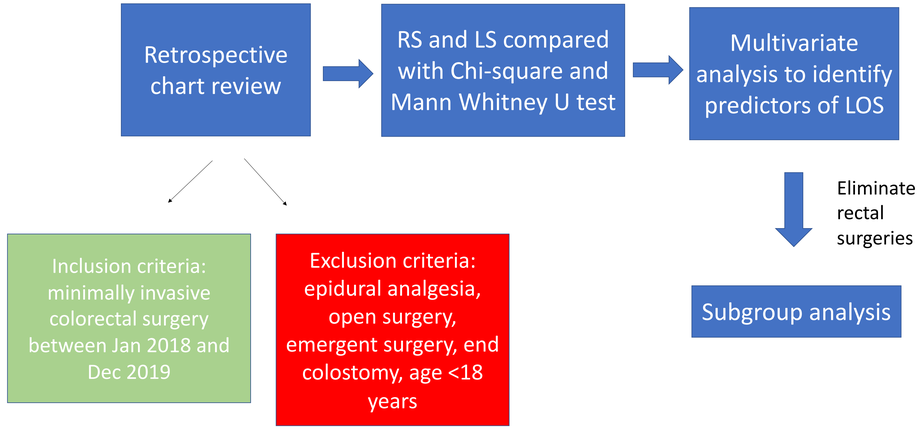
Robotic elective colorectal surgery is associated with decreased hospital length of stay compared to laparoscopic surgery

Mallory Jebbia, MD; Dena Nasir, MD; Juliane Golan MD; Gabriel Akopian, MD, MBA; Howard Kaufman, MD, MBA

INTRODUCTION:

- Advantages of robotic surgery (RS) in colorectal procedures include improved visibility, ease of dissection within a deep or narrow pelvis, improved intracorporeal suturing, and assessment of anastomotic blood flow
- The aim of this study is to compare outcomes between elective colorectal RS and laparoscopic surgery (LS) at a community hospital. We hypothesize that RS is associated with decreased length of stay (LOS) and similar complication rates

METHODS:



RESULTS:

	LS N=124	RS N=122	P-value
Surgery duration in minutes (±SD)	160 (±97)	208 (±92)	0.001
PACU time in minutes (±SD)	97 (±51)	81 (±43)	0.003
Median LOS (days)	4	3	0.001
Mean LOS (days)	5.6	3.9	0.001
Median initiation of clears (POD)	1	0	0.001

- Rectal disease was more common in the RS group (18% vs 9%; p=0.004)
- No differences between the groups in modalities of analgesia, complications, and readmission rates

- The multiple linear regression model identified the following independent predictors of LOS:

	B	CI Lower 95%	CI Upper 95%	P-value
Age (years)	0.04	0.01	0.07	0.009
Robotic Surgery	-1.20	-2.19	-0.25	0.014
Late initiation of clears	0.93	0.50	1.36	0.001
Rectal Surgery	1.85	0.44	3.25	0.010
Complications	4.07	2.76	5.39	0.001

- The subgroup analysis showed similar results, except for a lower complication rate in the RS group (6% vs. 16%; p = 0.002)

DISCUSSION:

- For patients undergoing minimally invasive colorectal surgery, RS and early feeding were independent predictors of shorter LOS
- Older age, rectal surgery, and complications were associated with longer postoperative stays
- Patients undergoing robotic intra-abdominal colectomy had fewer complications
- RS and components of enhanced recovery pathways decrease LOS with potentially improved morbidity