



Elective IBD surgery: Does robotics offer real advantages over laparoscopy? 10mins

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Nope.

/nəʊp/

exclamation [INFORMAL]

a very clear, wholehearted, vehement and firm “no”.

‘A fool with a tool is still a fool’

What matters more than the robot

For IBD surgery, outcomes are usually driven more by:

- Surgeon experience with IBD
- High-volume colorectal center
- Multidisciplinary IBD care
- Nutritional optimization
- Steroid/biologic management
- Case complexity



A highly experienced laparoscopic IBD surgeon is generally preferable to a low-volume robotic program.

Quick comparison

Feature	Laparoscopic surgery	Robotic surgery
Instruments	Straight rigid instruments	Wristed robotic instruments with greater articulation
Visualization	2D or 3D camera	Usually high-definition 3D view
Surgeon ergonomics	Physically demanding	More ergonomic for surgeon
Precision in pelvis	Good	Often better in narrow pelvic spaces
Operative time	Usually shorter	Often longer, especially during setup
Cost	Lower	Higher
Availability	Widely available	Limited to specialist centers
Evidence in IBD	Strong long-term data	Growing but still evolving



Outcomes: what studies generally show

Current evidence suggests:

Similar patient outcomes

Most studies show:

- Similar complication rates
- Similar leak rates
- Similar conversion-to-open-surgery rates
- Similar length of stay
- Similar recovery times

Potential robotic advantages

Some studies report:

- Lower conversion to open surgery in complex pelvic operations
- Less blood loss
- Better nerve preservation in rectal surgery
- Improved surgeon precision

But these advantages are not consistently large across all IBD operations.

Minimally Invasive Surgery for Inflammatory Bowel Disease: A Systematic Review and Meta-Analysis of Robotic Versus Laparoscopic Surgical Techniques

Zaman S, Mohamedahmed A, Abdelrahman W, Abdalla H, Wuheb A, Talaat Isa M, Yassin N

11 non-randomised trials (n=5568)

Operating time	L<R
Conversion	L=R
Complications*	L=R
Length of stay	L>R

**Anastomotic leak, abscess, wound infection
Ileus, re-operation*



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Procedure-specific considerations

Crohn's disease

Crohn's Disease surgery is often complicated by inflammation, fistulas, abscesses, and prior operations.

- Standard laparoscopic ileocolic resection is already very effective.
- Robotics may help in complex redo or fistulizing disease, but evidence is still limited.
- Many surgeons still prefer conventional laparoscopy for routine Crohn's resections.

Ulcerative colitis

Ulcerative Colitis patients undergoing total colectomy or ileal pouch-anal anastomosis (IPAA/J-pouch) may benefit more from robotics because pelvic dissection is demanding.

Some colorectal surgeons believe robotics is particularly promising for:

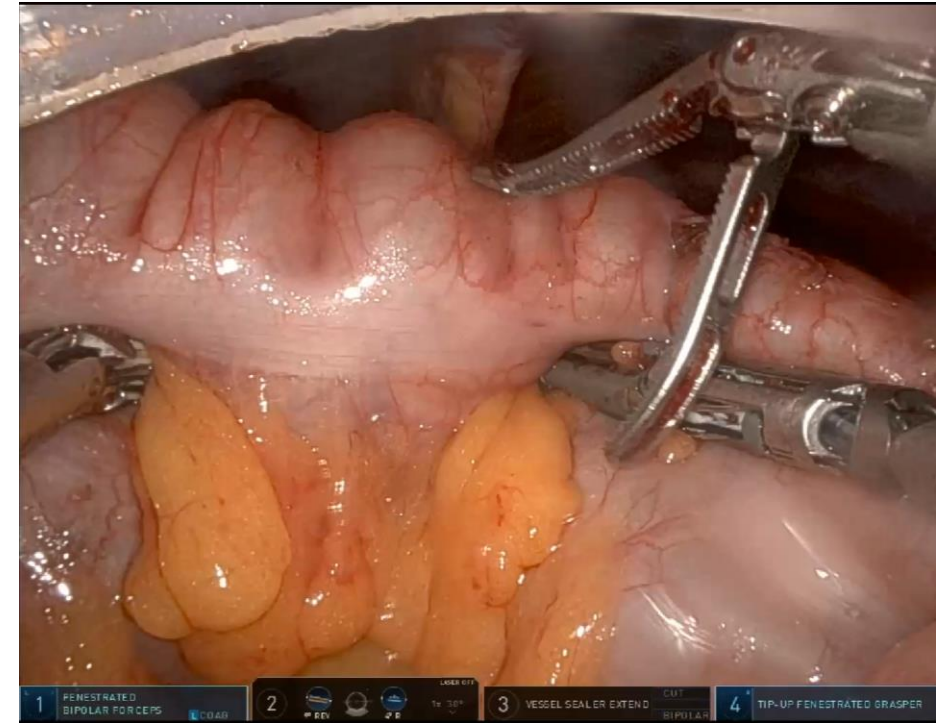
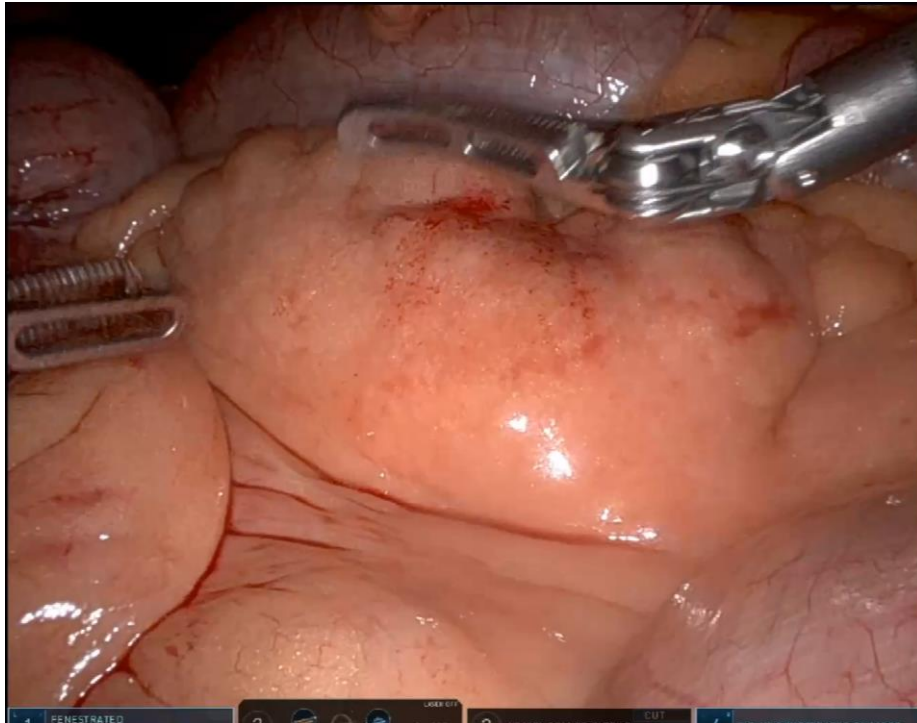
- IPAA creation
- Rectal mobilization
- Obese male patients with narrow pelvises

Ileocaecal Crohn's Disease



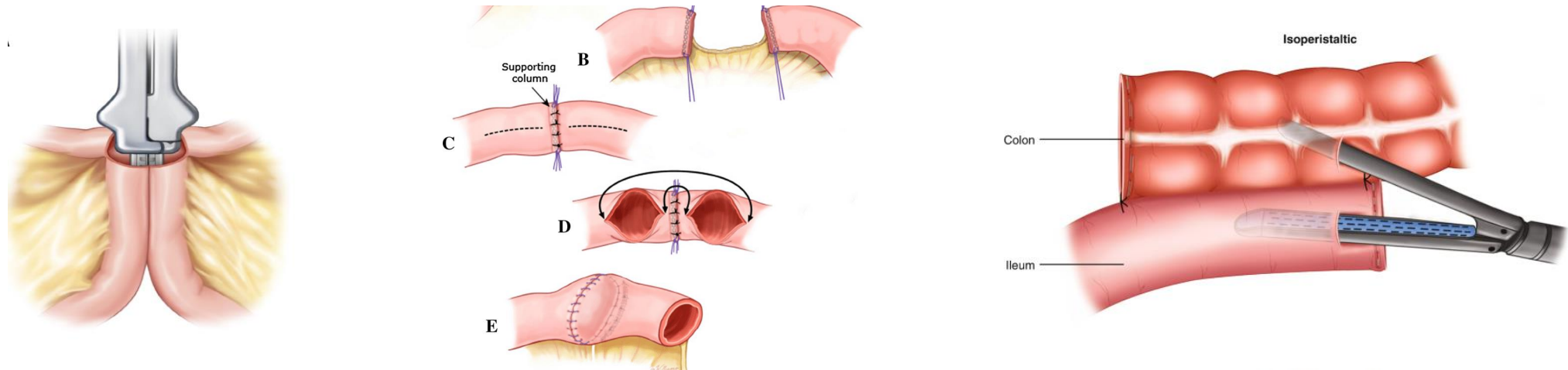
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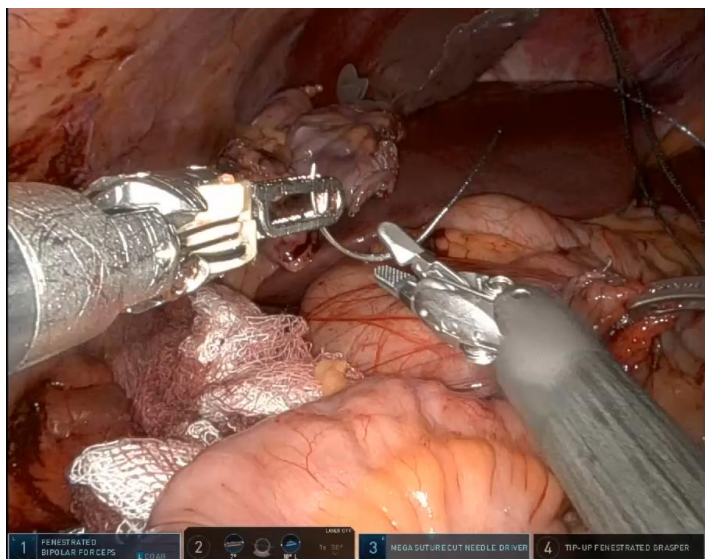
Crohn's mesentery



Type of anastomosis

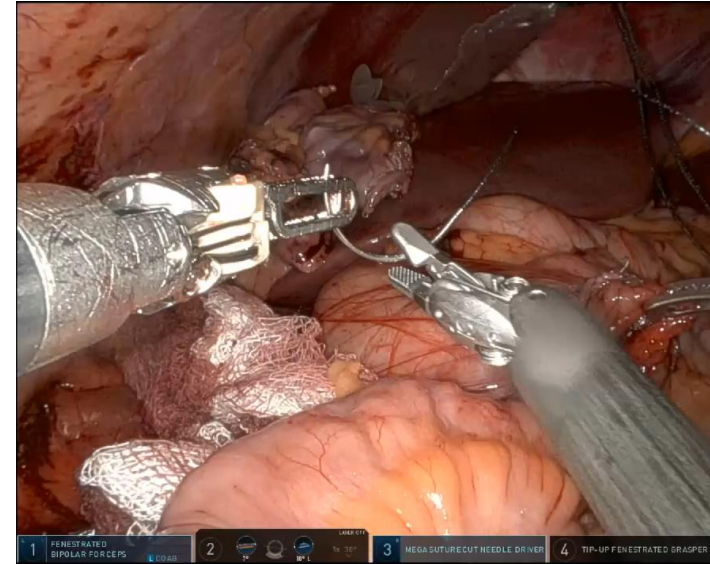
- *Stapled side-to-side anastomoses* in small-bowel or ileocolic resections for CD
- *Kono-S* anastomosis may be '*an alternative*' surgical approach to other types of anastomoses after ileocecal resection including isoperistaltic





Stitch 1 - Back wall suture

Stitch 1 - Back wall suture

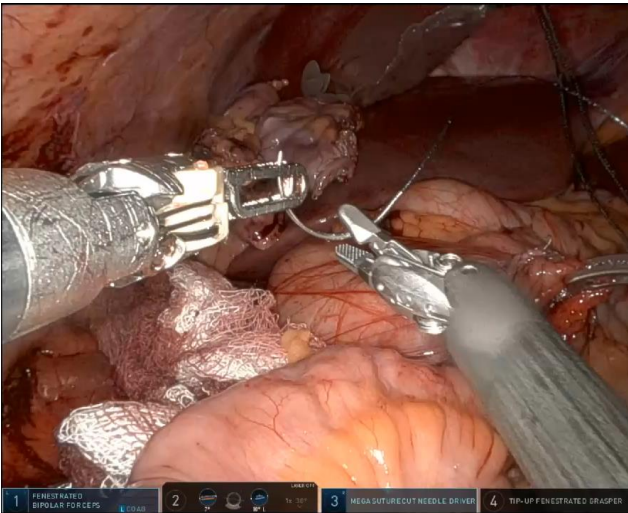


Enterotomy and staple

Stitch 1 - Back wall suture

Enterotomy and staple

Stitch 2 - Close enterotomy

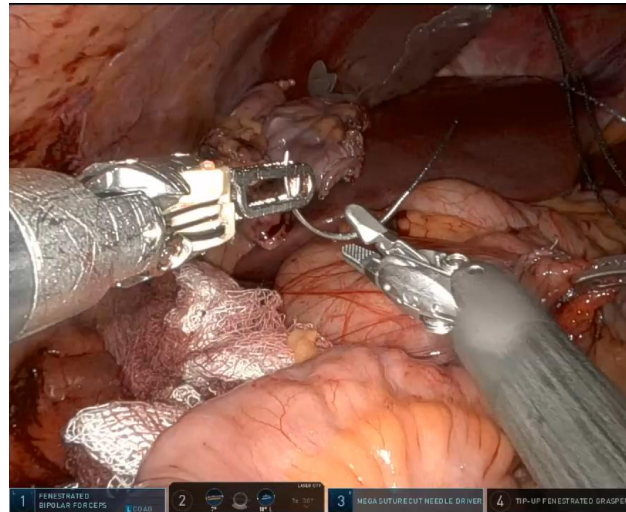


Stitch 1 - Back wall suture

Enterotomy and staple

Stitch 2 - Close enterotomy

Run up the anterior staple line



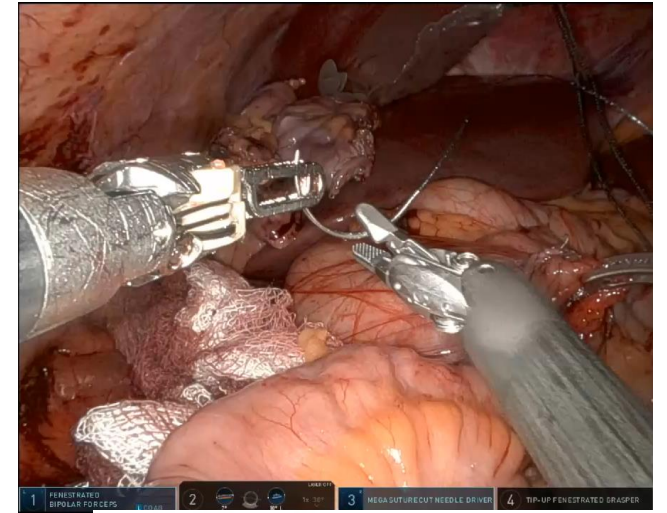
Stitch 1 - Back wall suture

Enterotomy and staple

Stitch 2 - Close enterotomy

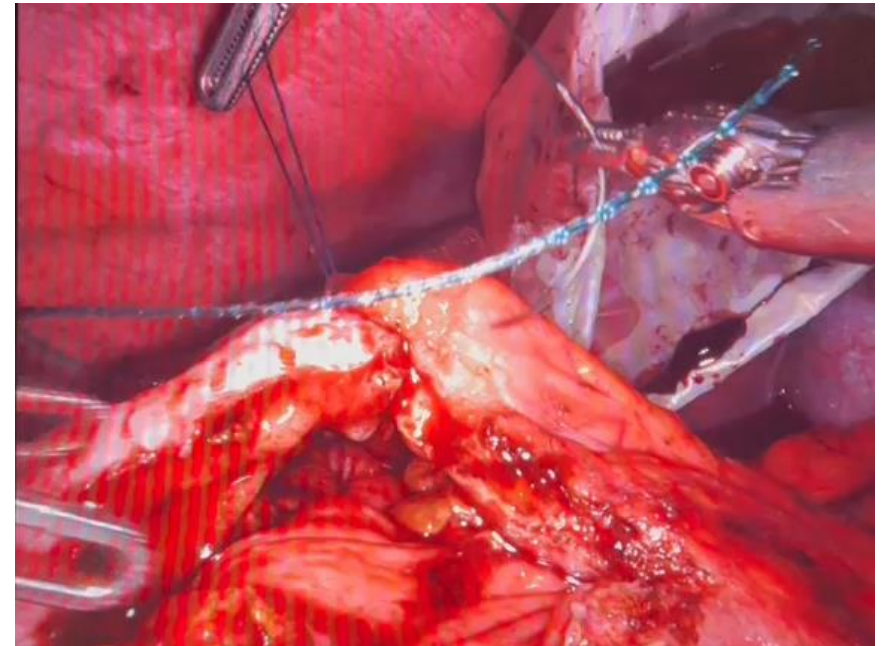
Run up the anterior staple line

Stitch 1- reinforce enterotomy



Other Considerations

	RICA	LECA
N	70 (29%)	169 (71%)
Op time	238 ± 79 min	143 ± 52 min
30d C	17/70(24%)	54/169(32%)
SSI	0/70	16/169 (10%)
Leak	0/70	14/169 (8%)
Bowel F	2.1 ± 1.1	2.6 ± 1.2
LOS	3.4 ± 2.2	4.2 ± 2.5



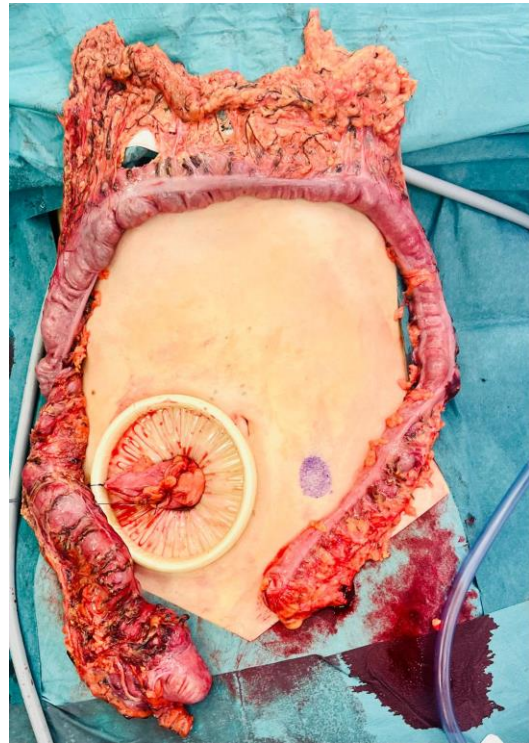
Calini, G., et al. *J Robotic Surg* (2023).

Surgery for Ulcerative Colitis



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Ulcerative colitis – Subtotal Colectomy





My Intuitive

Confirm specialty

Is **General Surgery** your specialty?

Yes

No, update

Cases >

Mar 13, 2025 10:01 AM Xi

⌚ Pending

65min

Total Colectomy #7

Multi-surgeon

Dual Console

59min

28min

Total active time

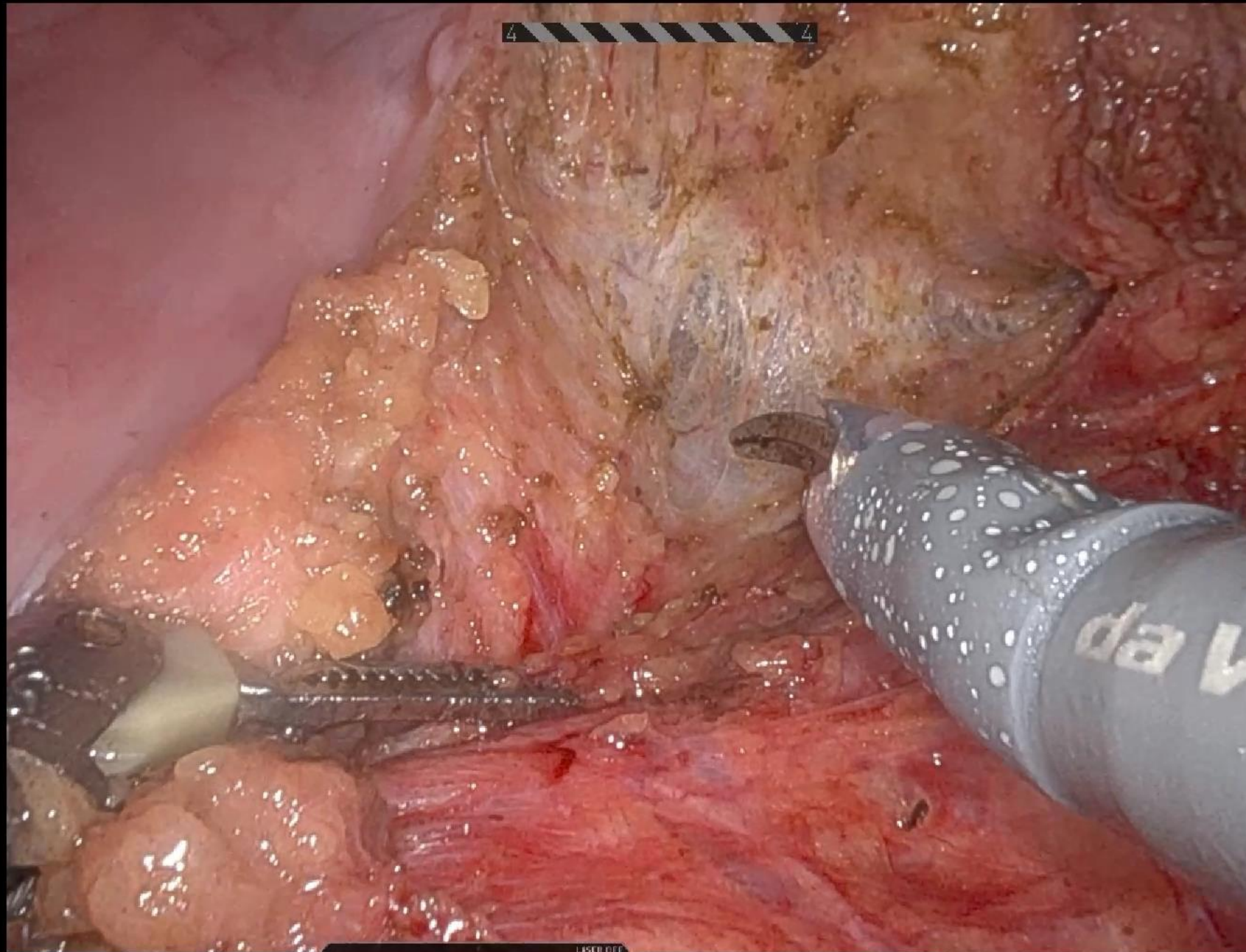
Your active time



Ileoanal pouch surgery



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1

FENESTRATED
BIPOLAR FORCEPS

COAG

2

30°

15° R

LASER OFF

1x 30°

3

MONOPOLAR CURVED
SCISSORS

CUT
COAG

4

CADIERE FORCEPS

Robotic restorative proctocolectomy

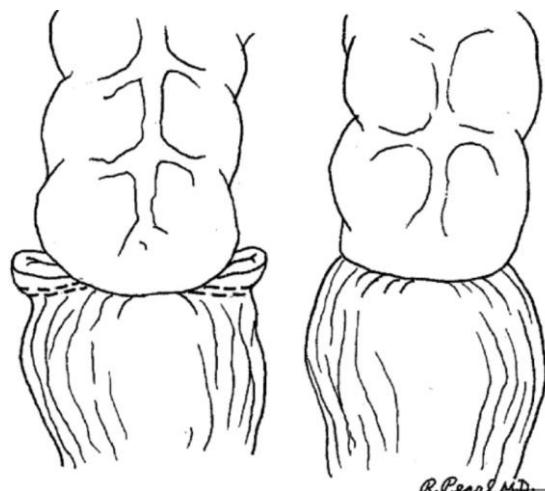




VIDEO CORRESPONDENCE

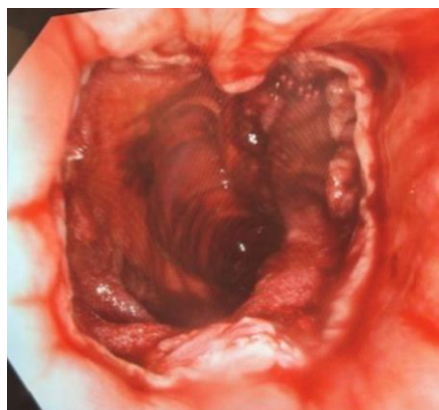
Robotic proctocolectomy and ileoanal pouch with robotic intracorporeal single-stapled anastomosis for familial adenomatous polyposis – a video vignette

Jordan Fletcher ✉, Corina Behrenbruch, Mohammed Deputy, Danilo Miskovic, Omar Faiz



RiSSA

- N=20 (now 60)
- Various morbidities
- **1 clinical leak (pouch failure)**



An early experience in Robotic Ileoanal Pouch surgery with Robotic intracorporeal Single Stapled Anastomosis (RiSSA) at a tertiary referral centre

Mohammed Deputy, Francesca Pitman, Kapil Sahnan, Danilo Miskovic, Omar Faiz



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Take away messages

- Robotic applications in IBD surgery appear safe, feasible and seem broadly similar to laparoscopy
- Laparoscopy remains the standard for minimally invasive IBD surgery but robotics may offer advantages for complex pelvic or re-do procedures



Thank you