Improving outcomes in surgery for Crohn's disease

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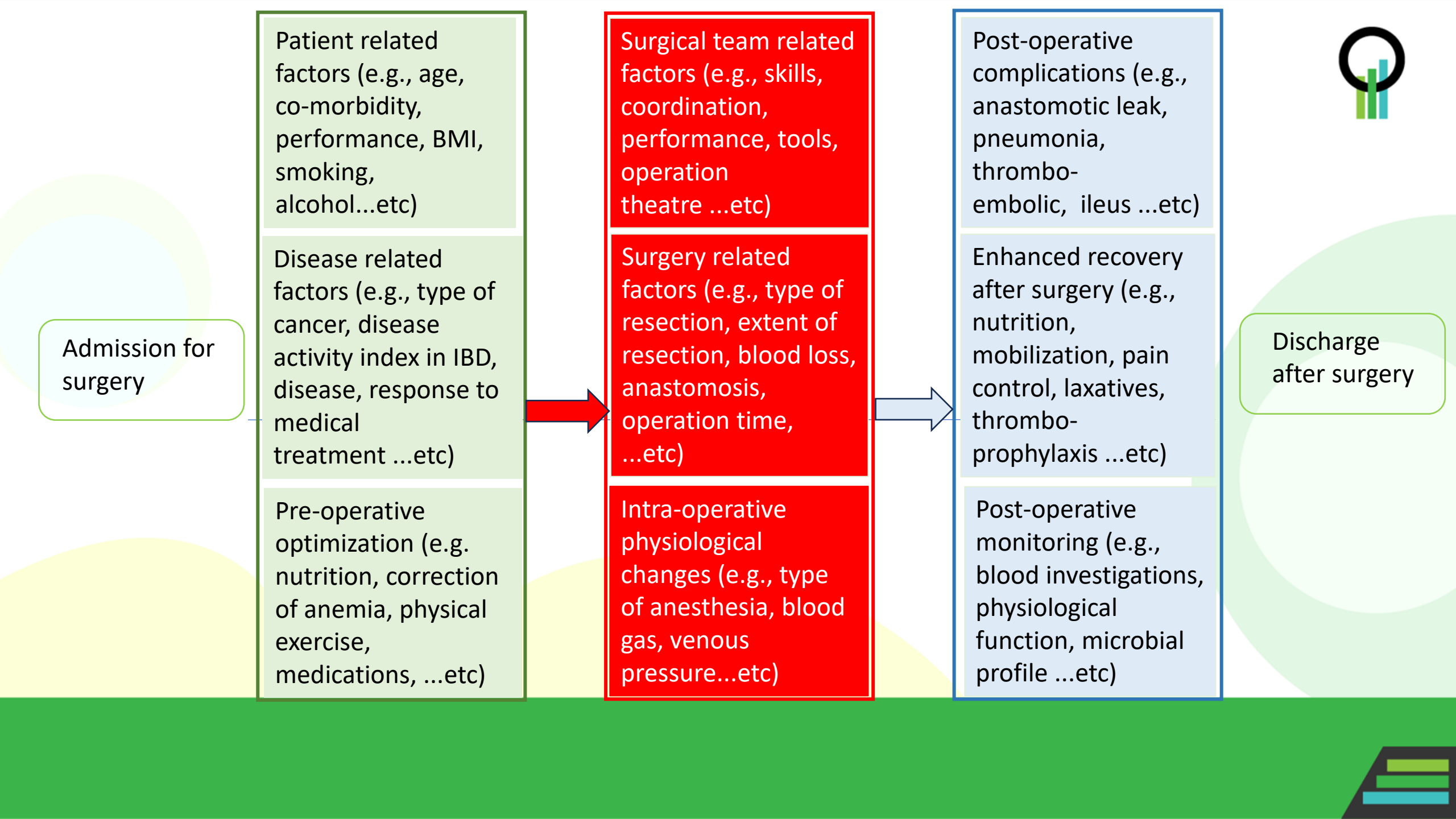
No Disclosures


Admission for surgery
Patient related factors (e.g., age, co-morbidity, performance, BMI, smoking, alcohol...etc)
Disease related factors (e.g., type of cancer, disease activity index in IBD, disease, response to medical treatment ...etc)
Pre-operative optimization (e.g. nutrition, correction of anemia, physical exercise, medications, ...etc)
Surgical team related factors (e.g., skills, coordination, performance, tools, operation theatre ...etc)
Surgery related factors (e.g., type of resection, extent of resection, blood loss, anastomosis, operation time, ...etc)
Intra-operative physiological changes (e.g., type of anesthesia, blood gas, venous pressure...etc)
Post-operative complications (e.g., anastomotic leak, pneumonia, thrombo-embolic, ileus ...etc)
Enhanced recovery after surgery (e.g., nutrition, mobilization, pain control, laxatives, thrombo-prophylaxis ...etc)
Post-operative monitoring (e.g., blood investigations, physiological function, microbial profile ...etc)
Discharge after surgery

Philosophy of marginal gains

"If you broke down everything that could impact on a cycling performance

and then

you improved every little thing by **1%**,

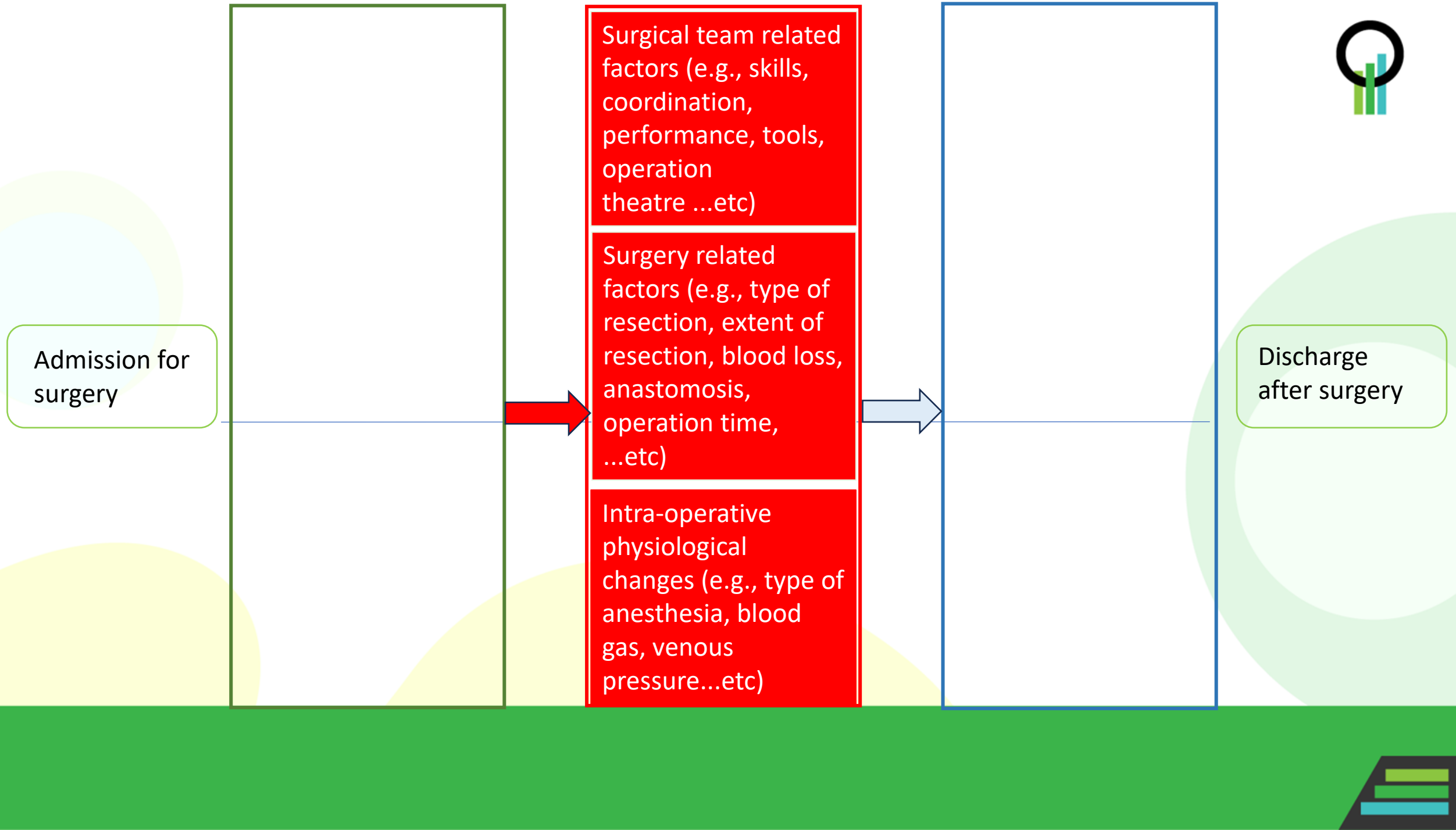
when you clump it all together,

you're going to get quite a **significant increase** in performance"

Dave Brailsford

British cycling coach and performance director

Courtesy of *Richard* Hooper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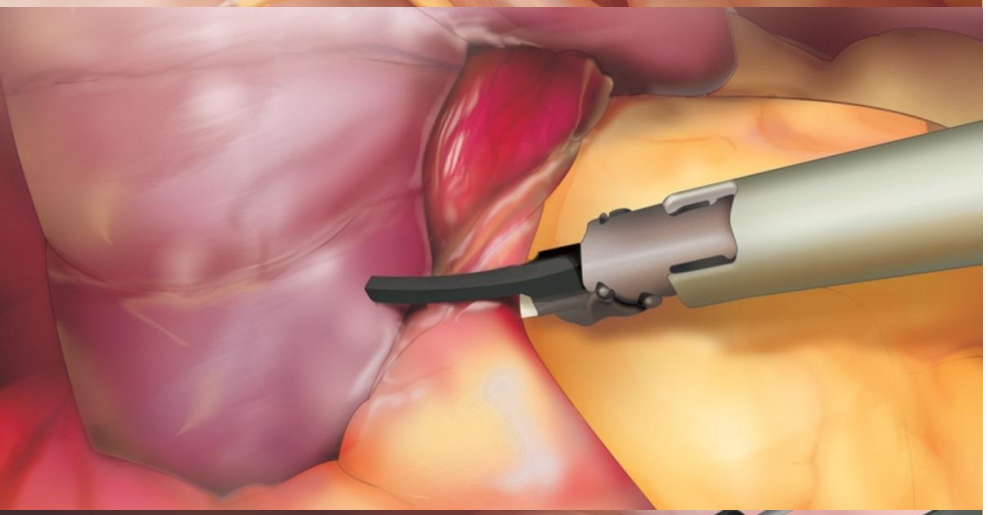
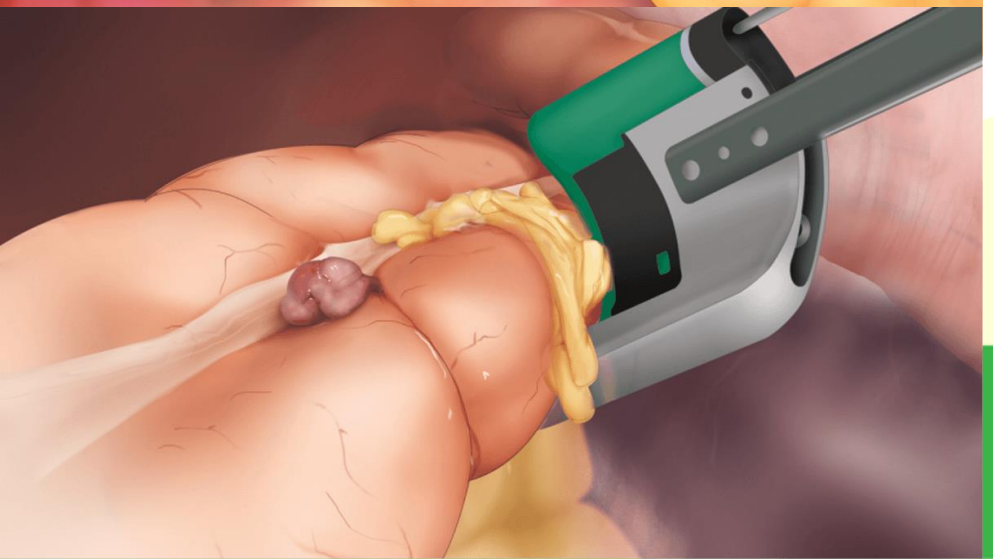




IBD surgeon why?

ESCP Collaborating Group 2018 The impact of stapling technique and surgeon specialism on anastomotic failure after right-sided colorectal resection. Colorectal Dis.

Elective surgery why?

Udholm 2021 A systemic review and metaanalysis of postoperative outcomes in urgent and elective bowel resection in patients with Crohn's disease. Int J Colorectal Dis.

Anesthesiologist is part of the team how?

Hallet 2023 Association Between Familiarity of the Surgeon-Anesthesiologist Dyad and Postoperative Patient Outcomes for Complex Gastrointestinal Cancer Surgery. JAMA Surg.

Crohn's disease pathogenesis?

CD is "thought" to result from an inappropriate **inflammatory response**
to the **gut microbial flora**
in **genetically predisposed** **individuals**

Eremin O, Sewell H. Essential immunology for surgeons. Oxford: Oxford University Press; 2011.
Sewell GW, Marks DJ, Segal AW. The immunopathogenesis of Crohn's disease: a three-stage model. Curr Opin Immunol 2009;21:506–13.

Mesentery poor evidence

Alshantti 2021 The role of Kono-S anastomosis and mesenteric resection in reducing recurrence after surgery for Crohn's disease: a systematic review. Colorectal Dis.

Anastomosis technique poor evidence

Alshantti 2021 The role of Kono-S anastomosis and mesenteric resection in reducing recurrence after surgery for Crohn's disease: a systematic review. Colorectal Dis.
Feng 2018 Stapled side-to-side anastomosis might be benefit in intestinal resection for Crohn's disease: A systematic review and network meta-analysis. Medicine (Baltimore).
He 2014 Stapled side-to-side anastomosis might be better than handsewn end-to-end anastomosis in ileocolic resection for Crohn's disease: a meta-analysis. Dig Dis Sci.

Resection margin controversial. Why?

Yzet 2023 Positive margins and plexitis increase the risk of recurrence after ileocecal resection. Dig Liver Dis.
Tandon 2021 Active Margins, Plexitis, and Granulomas Increase Postoperative Crohn's Recurrence. Clin Gastroenterol Hepatol.

Stricture-plasty in selected patients

Butt 2020 Strictureplasty versus bowel resection for the surgical management of fibrostenotic Crohn's disease: a systematic review and meta-analysis. Int J Colorectal Dis.
Bemelman 2018 ECCO-ESCP Consensus on Surgery for Crohn's Disease. J Crohns Colitis.


ATTENTION
PLEASE !

Extraction site/incision to be considered

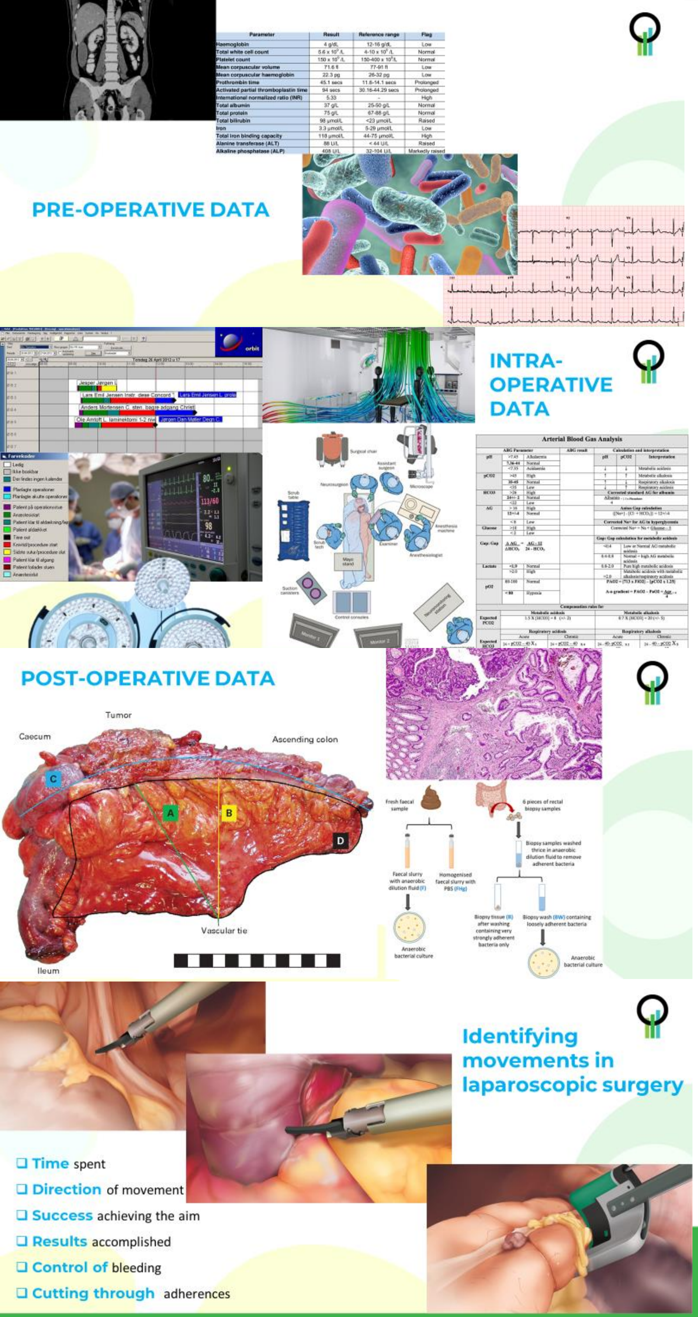
Calini 2023 Incisional hernia rates between intracorporeal and extracorporeal anastomosis in minimally invasive ileocolic resection for Crohn's disease. Langenbecks Arch Surg.

Laparoscopic versus open important

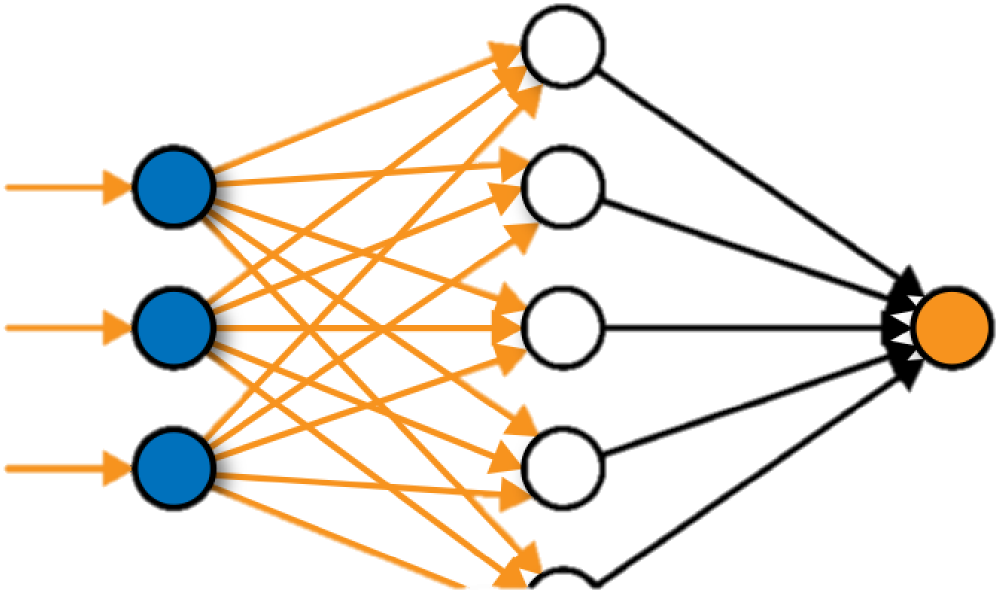
Bemelman 2018 ECCO-ESCP Consensus on Surgery for Crohn's Disease. J Crohns Colitis.

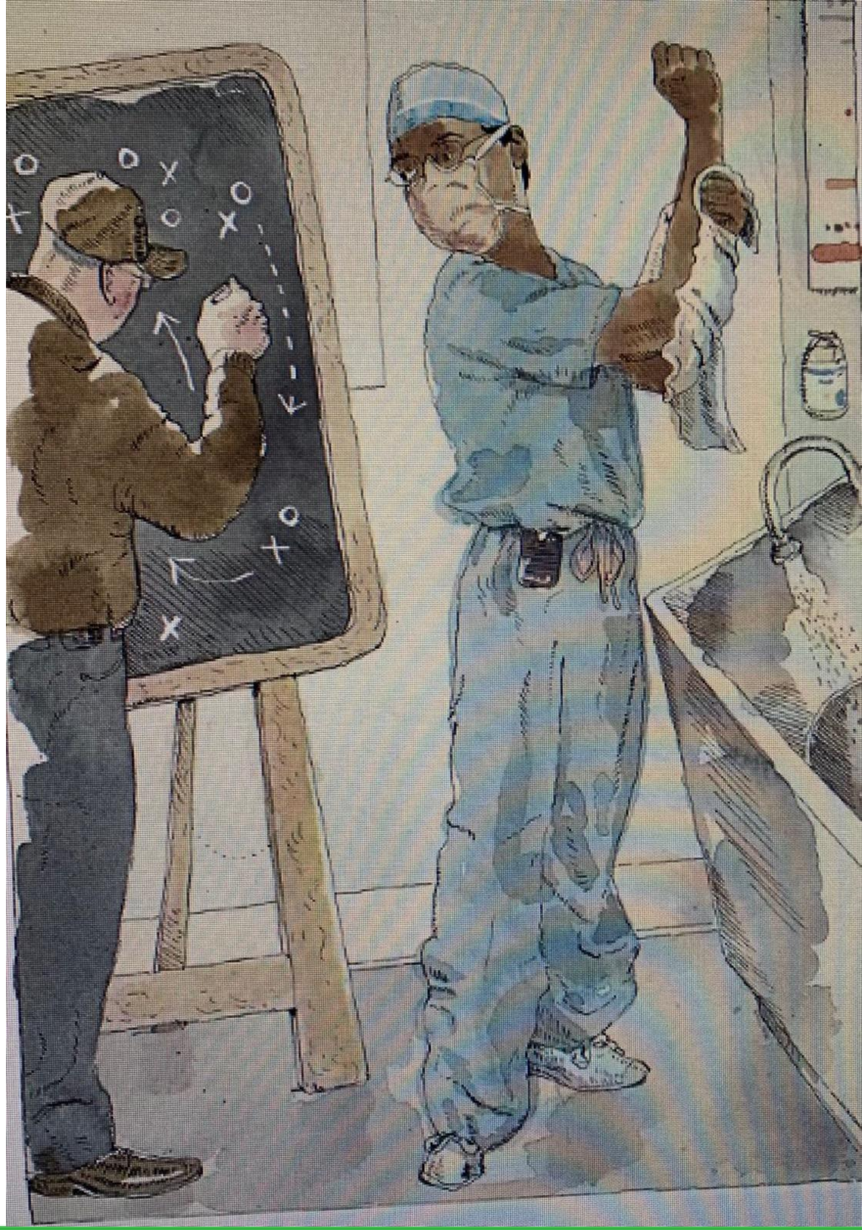
Length of resected/remained bowel very important

Hendel 2017 Systematic review of pre, peri and postoperative factors and their implications for the lengths of resected bowel segments in patients with Crohn's disease. International Journal of Surgery Open



Artificial intelligence to improve surgeon's performance





See AIS channel for details about AI in surgical research and innovation

More about Innovation in Surgery?

OSRC. network

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Breeding innovators through workshops, courses and research