Management of anastomotic leakage after right colectomy

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Conflict of interests: None

What is the risk of anastomotic leak?

ESCP 2015 mixed 8.1% (245/3041)

ESCP 2019 (EAGLE) mixed 10.1% (170/1691)

ESCP 2022 mixed 6.9% (82/1195) submitted

Colorectal Disease

Original Article

Relationship between method of anastomosis and anastomotic failure after right hemicolectomy and ileo-caecal resection: an international snapshot audit

The 2015 European Society of Coloproctology collaborating group

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JOURNAL ARTICLE

Evaluation of a quality improvement intervention to reduce anastomotic leak following right colectomy (EAGLE): pragmatic, batched stepped-wedge, cluster-randomized trial in 64 countries

ESCP EAGLE Safe Anastomosis Collaborative and NIHR Global Health Research Unit in Surgery

How to diagnose anastomotic leak?

Action vs. no action

How to diagnose anastomotic leak?

Clinical vs. radiological/biochemical

How to diagnose anastomotic leak?

Radiological:

CT scan with IV and oral contrast

How to diagnose anastomotic leak?

Biochemical:
CRP & Procalcitonin?

How to treat anastomotic leak?

Conservative management If...

How to treat anastomotic leak?

Re-intervention with/without diversion
It depends...

How to treat anastomotic leak?

Re-intervention endoscopic

OTSC placement, stent, vacuum... Lack of evidence

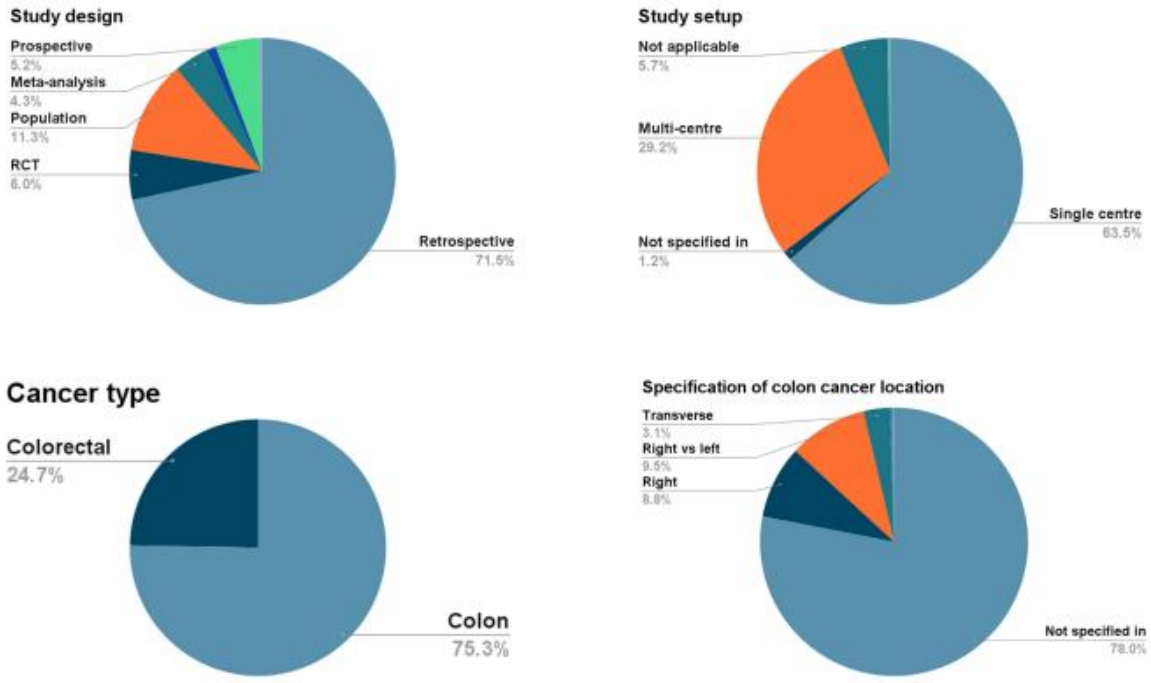
Mixed colorectal surgery
Mixed colorectal pathologies
Retrospective studies

Retrospective Studies with Small Sample Size are Still Dominating Colon Cancer Research: Local Recurrence in Right Sided Colon Cancer as a Case in Point

Yusra Khan[1], Zhi Sean Teng[2], Raza Sayyed[3], Alaa El-Hussuna[4]

Turk J Gastroenterol 2025; 36(5): 333-335

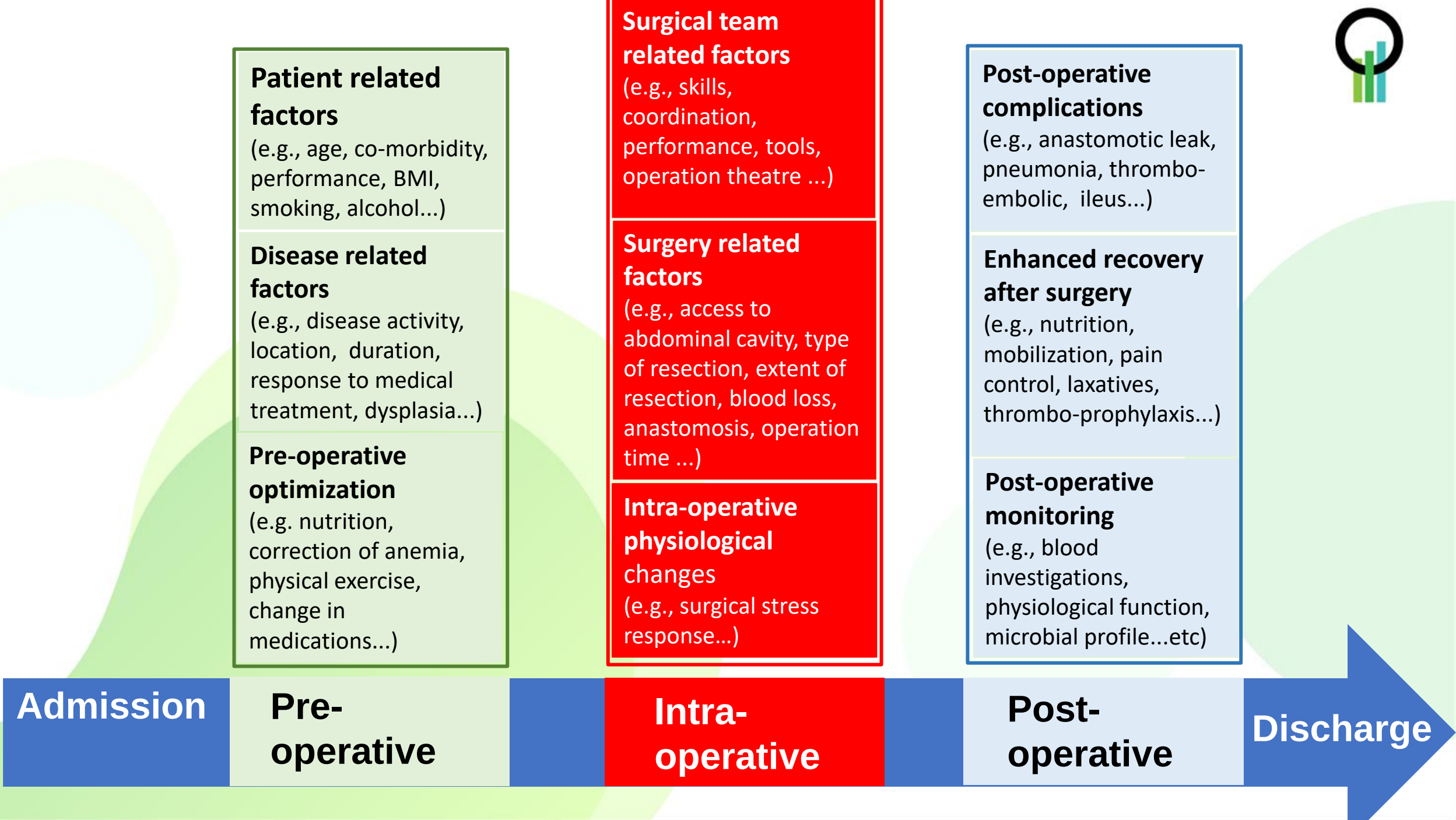
Khan et al. Studies About Local Recurrence in Colon Cancer



Better research design

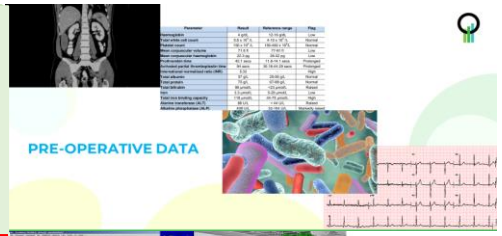
Dedicate research units

Building surgery models

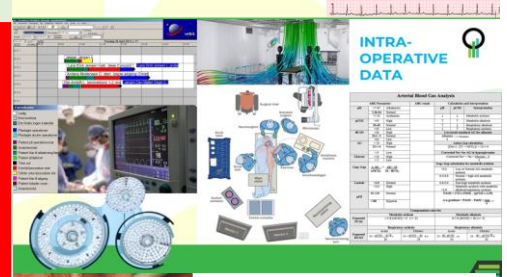

Patient related factors
(e.g., age, co-morbidity, performance, BMI, smoking, alcohol...)
Disease related factors
(e.g., disease activity, location, duration, response to medical treatment, dysplasia...)
Pre-operative optimization
(e.g. nutrition, correction of anemia, physical exercise, change in medications...)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

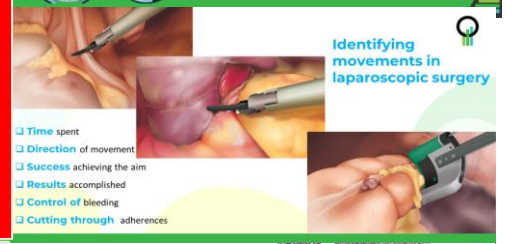
Where the data will come from?

Pre-operative

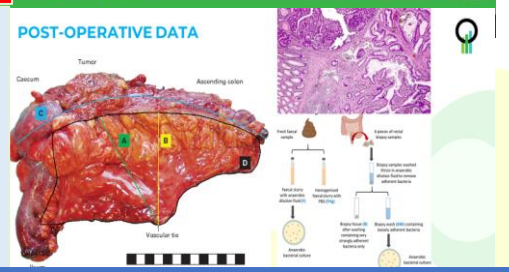


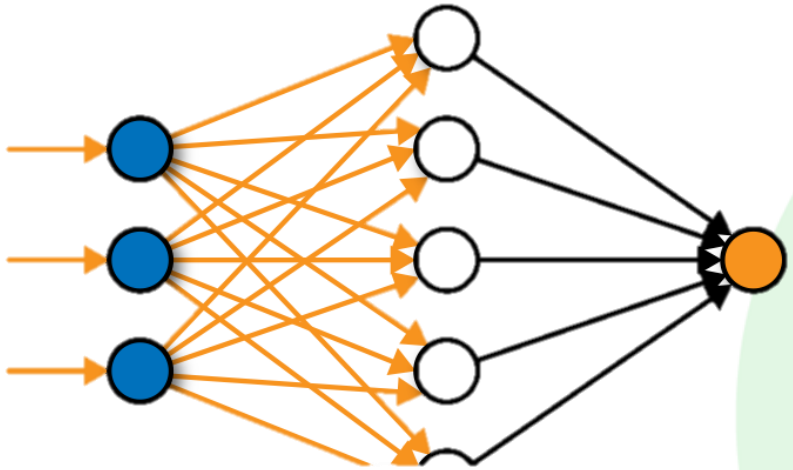
Intra-operative





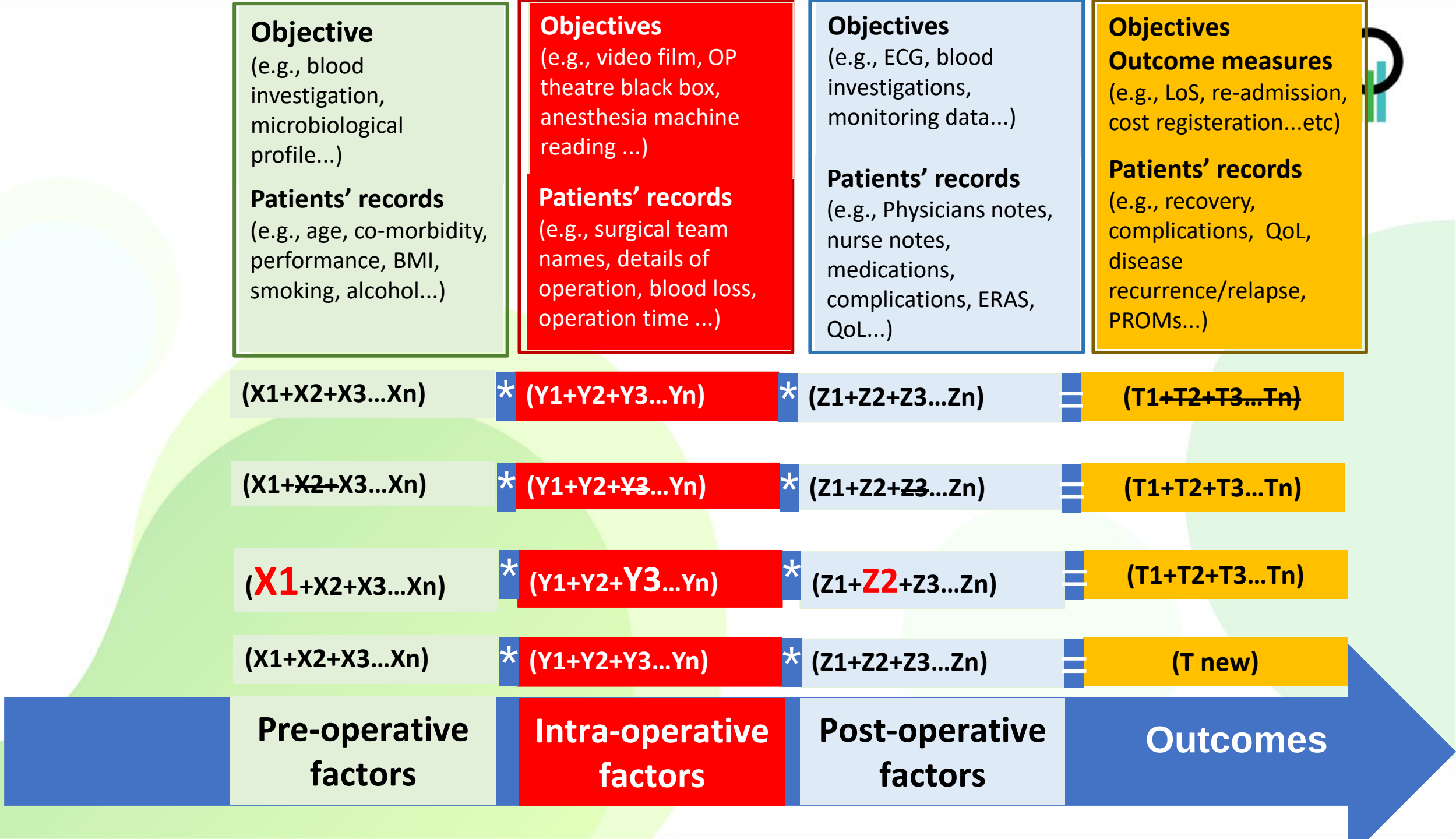
Post-operative





EHRs

Objective


Objective
(e.g., blood investigation, microbiological profile...)
Patients' records
(e.g., age, co-morbidity, performance, BMI, smoking, alcohol...)
Objectives
(e.g., video film, OP theatre black box, anesthesia machine reading ...)
Patients' records
(e.g., surgical team names, details of operation, blood loss, operation time ...)
Objectives
(e.g., ECG, blood investigations, monitoring data...)
Patients' records
(e.g., Physicians notes, nurse notes, medications, complications, ERAS, QoL...)
Objectives
Outcome measures
(e.g., LoS, re-admission, cost registeration...etc)
Patients' records
(e.g., recovery, complications, QoL, disease recurrence/relapse, PROMs...)
(X1+X2+X3…Xn) * (Y1+Y2+Y3…Yn) * (Z1+Z2+Z3…Zn) = (T1+T2+T3…Tn)
(X1+X2+X3…Xn) * (Y1+Y2+Y3…Yn) * (Z1+Z2+Z3…Zn) = (T1+T2+T3…Tn)
(X1+X2+X3…Xn) * (Y1+Y2+Y3…Yn) * (Z1+Z2+Z3…Zn) = (T1+T2+T3…Tn)
(X1+X2+X3…Xn) * (Y1+Y2+Y3…Yn) * (Z1+Z2+Z3…Zn) = (T new)
Pre-operative factors
Intra-operative factors
Post-operative factors
Outcomes

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

Post-operative complications (severity)

Disease free survival

Quality of life

Patient Reported Outcome measures (PROMs)

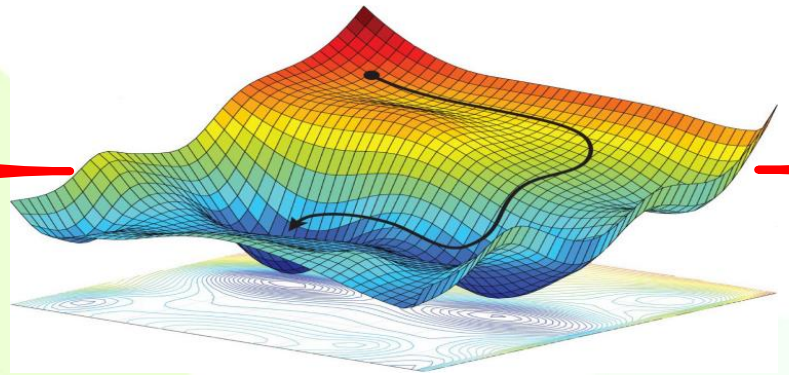
Length of post-operative stay at hospital

Re-admission

Conversion rate

Post-operative recovery

Outcomes



Model of surgical intervention

Efficiency of the model

Costs

Flexibility of the model

Outcome measure

More about innovation in Surgery?

OSRC. network

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