HOW TO PREPARE YOU ENDOSCOPY PATIENTS FOR SURGERY

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Alberta Society of Endoscopic Practice

Conflicts of interest:

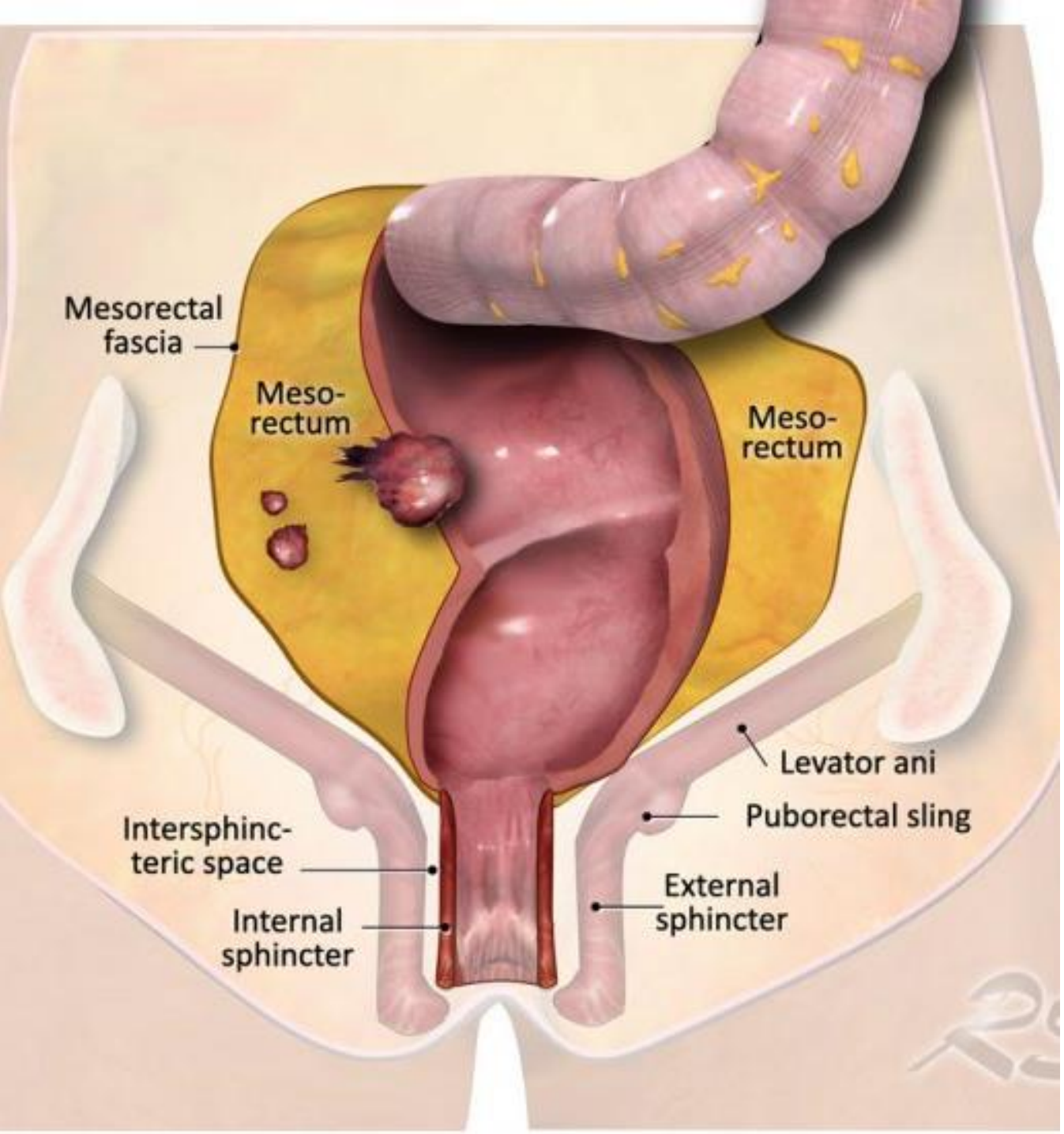
- I have no conflicts to declare

Objectives:

- Understand how tumour localization impacts surgical decision making
- Recognize endoscopic approach to patients with obstructive lesions
- Discuss decision making in patients diagnosed with inflammatory bowel disease
- Discuss benefits of surgical prehabilitation

Preparing Patients for Surgery after Endoscopy:

- Endoscopy is the *first* and an *influential step* in surgical pathway
  - Set **expectations** for patient
  - **Prepare patient mentally** for surgery
  - Arranging appropriate **investigations** may streamline pathway to surgery
  - **Prehabilitation** can help prepare patient mentally and physically for surgery

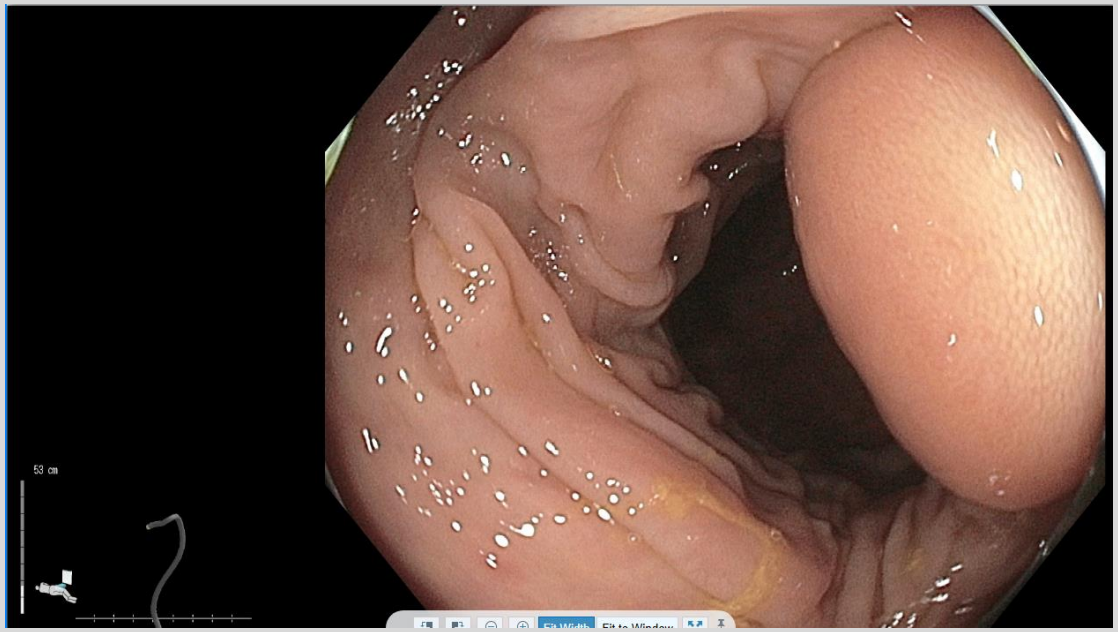


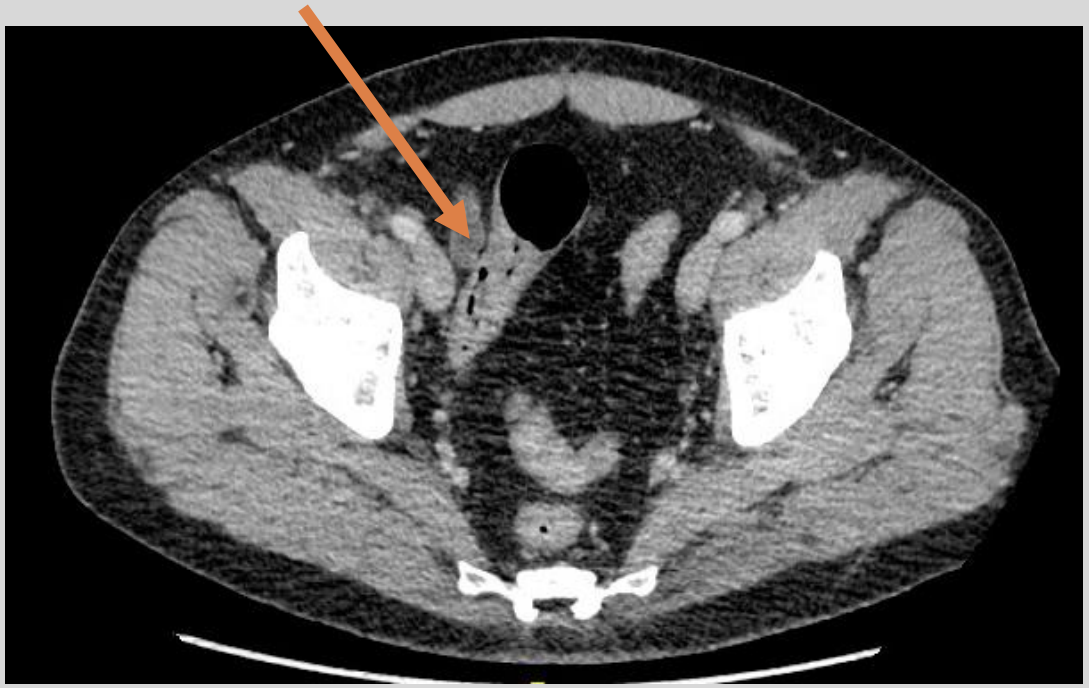
Why localization matters

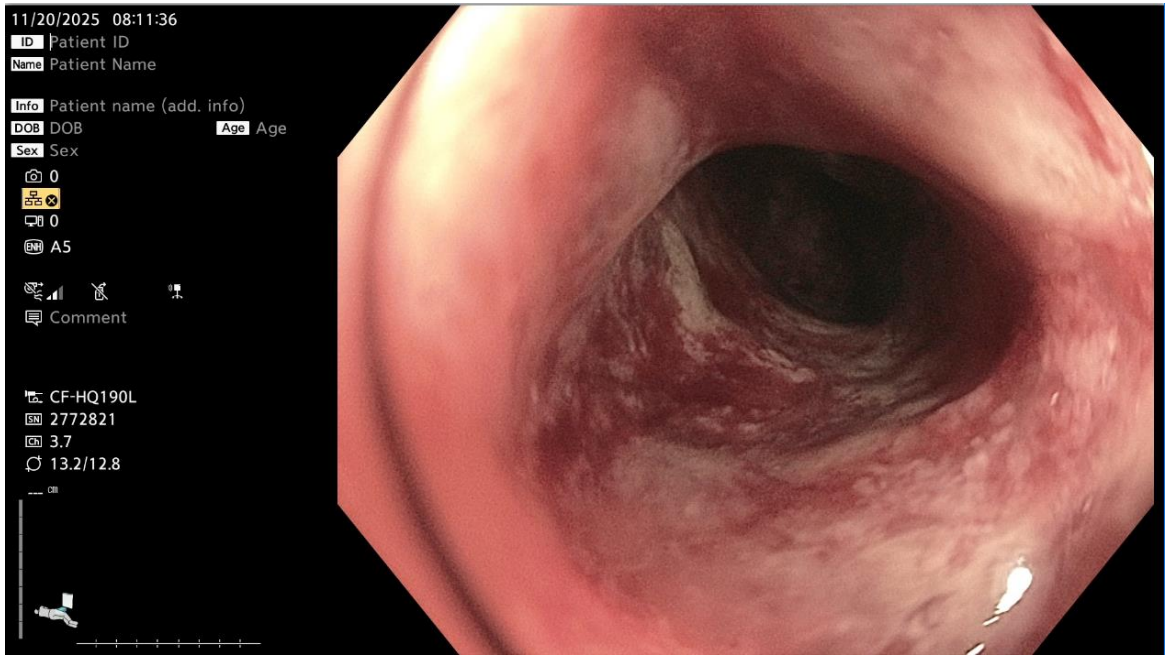
- Colon vs. Rectal cancer
  - General vs. Colorectal surgeon
  - Neoadjuvant therapy for rectal cancer
  - Localization errors can cause redirection delays, repeat procedures

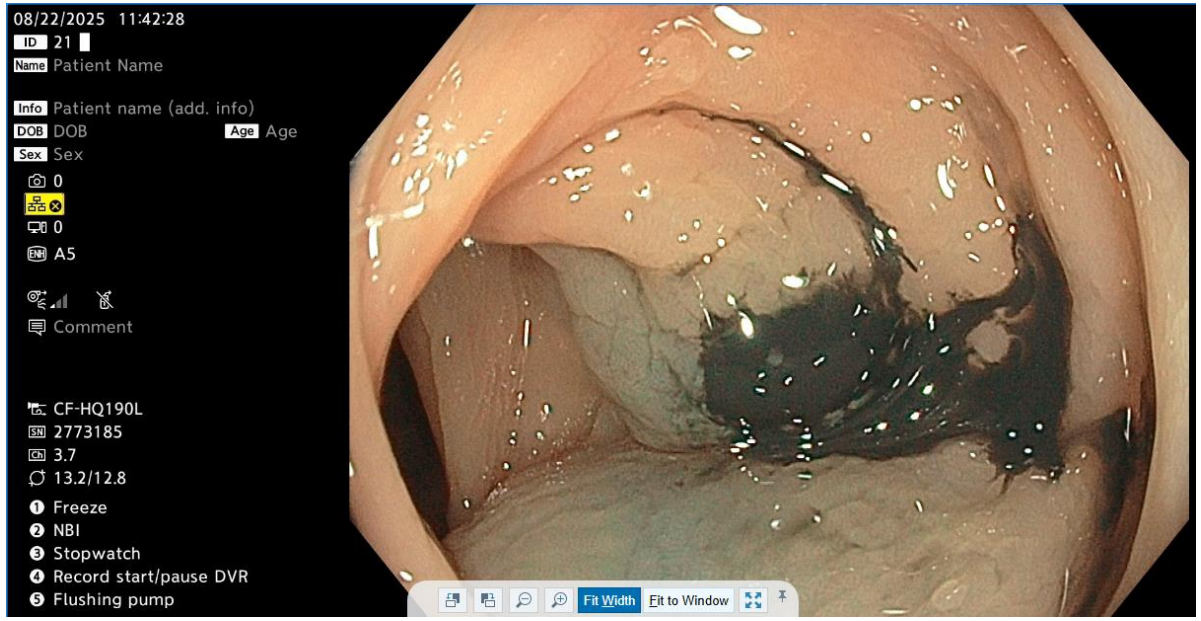
Lesion localization

- Endoscopic landmarks and measurements can be inaccurate
  - Electromagnetic localiation
  - Imaging distance CT/MRI









Practical localization guide

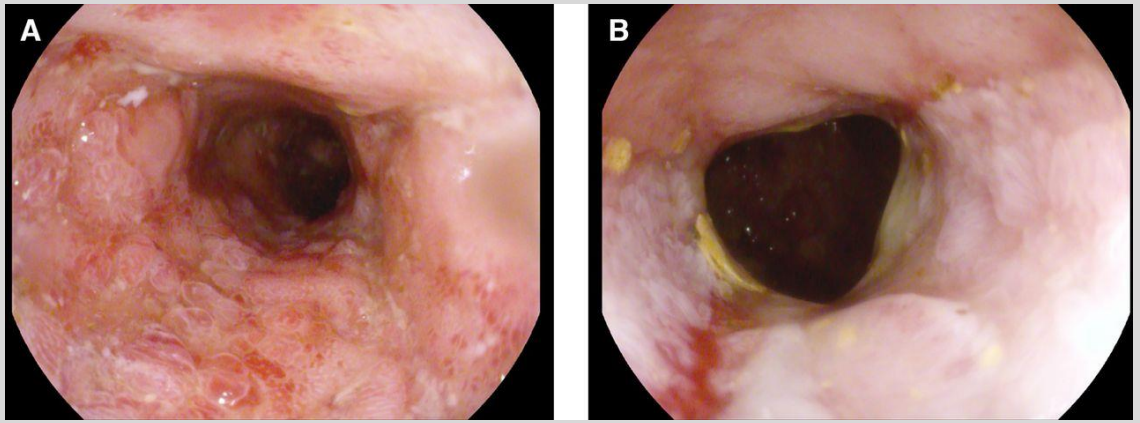
- **Endoscopic details surgeons rely on:**
  - Distance from anal verge (cm)
    - Best measured upon withdrawal when scope is the straightest
    - Rigid sigmoidoscopy, DRE
- **Circumferential involvement**
  - Obstructing vs. non obstructing
- Relationship to **rectal folds** / valves
- **Tattoo placement** (2–3 cm distal)
  - 2-3 sites – 1cm submucosal bleb
  - Initial saline bleb will prevent transmural injection

Local Practice Factors

- Are there separate **referral pathways** for general vs. colorectal surgery?
- What access do your surgeons have to urgent/pick up OR time?
- **Imaging:** What are local wait-times for Pelvic MRI, staging CT scans?
- **Colon cancer staging:**
  - CT Chest/Abdomen/Pelvis
    - Now if patient comes from afar, does not have local access to CT, vs urgent outpatient
  - Preoperative bloodwork
    - In recovery vs lab req
    - CEA, CBC, lytes, Cr, Albumin in frail patients, LFTs?

Endoscopists Role in IBD surgical Management

- Distinguish inflammatory vs fibrostenotic disease
- Biopsy strictures
- Avoid balloon dilation if malignancy suspected
- **Surgery is sometimes part of disease control, not a last resort**



Decision making in patients with IBD

- Medical treatment vs. Surgical risk
- Surgery likely:
  - Fulminant colitis
  - Dysplasia Associated Lesion/Mass (DALM)
  - Fibrostenotic diseae
- Surgery is a consideration
  - LIR!C trial – primary management of ileocecal disease
  - Medically refractory disease

Laparoscopic ileocaecal resection versus infliximab for terminal ileitis in Crohn's disease: retrospective long-term follow-up of the LIR!C trial

Toer W Stevens, MD [a,*] · Maria L Haasnoot, MD [a,*] · Prof Geert R D'Haens, PhD [a] · Christianne J Buskens, PhD [b] · E Joline de Groof, PhD [b] · Emma J Eshuis, PhD [a] · et al. Show more

- Multicentre RTC
- ~150 patients ileocecal resection vs. infliximab
- Surgery alone can result in remission in ~40% of patients

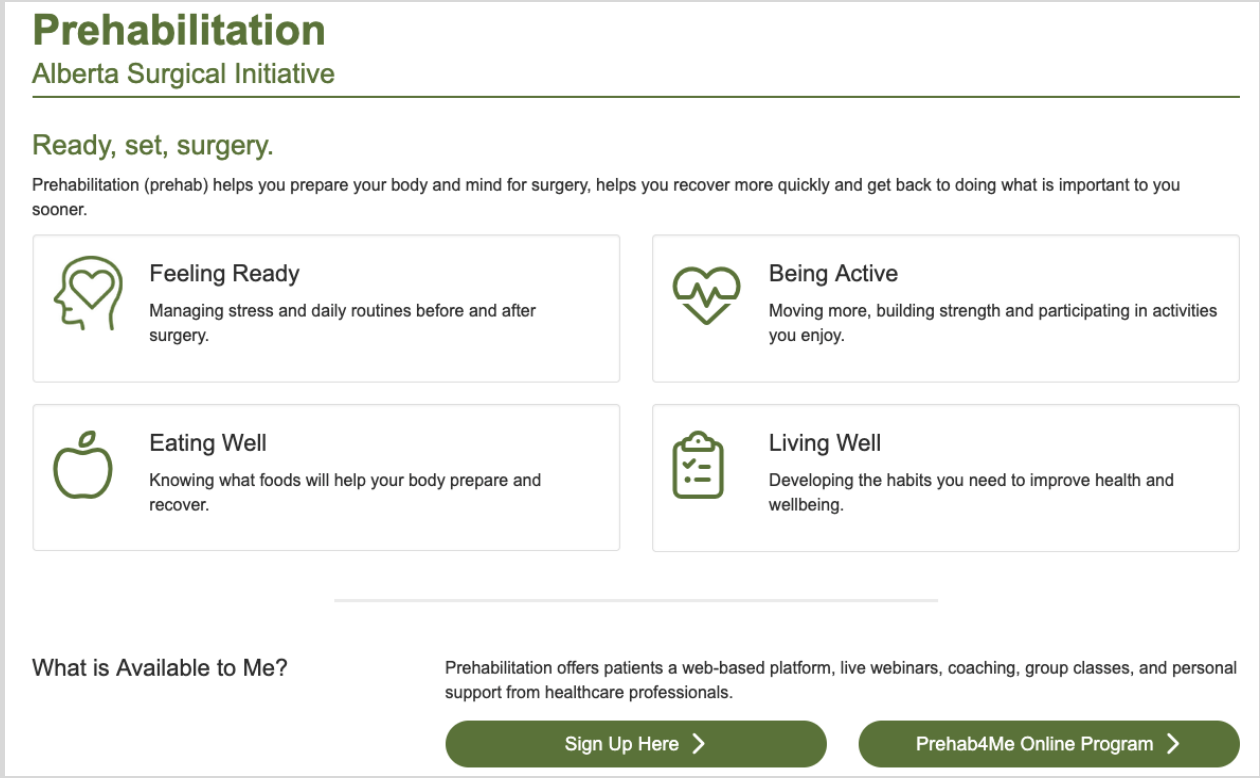
Surgical decision making in IBD

- **Surgery is a complementary, disease-modifying tool** — not just damage control.
- **Best outcomes occur when**:
  - Surgery is timed *before*
    - prolonged malnutrition
    - steroid dependence
    - sepsis

Surgery is needed

Prehabilitation

- Presurgical intervention aimed at **enhancing patient's preoperative condition** with goal of improving **surgical outcomes.**



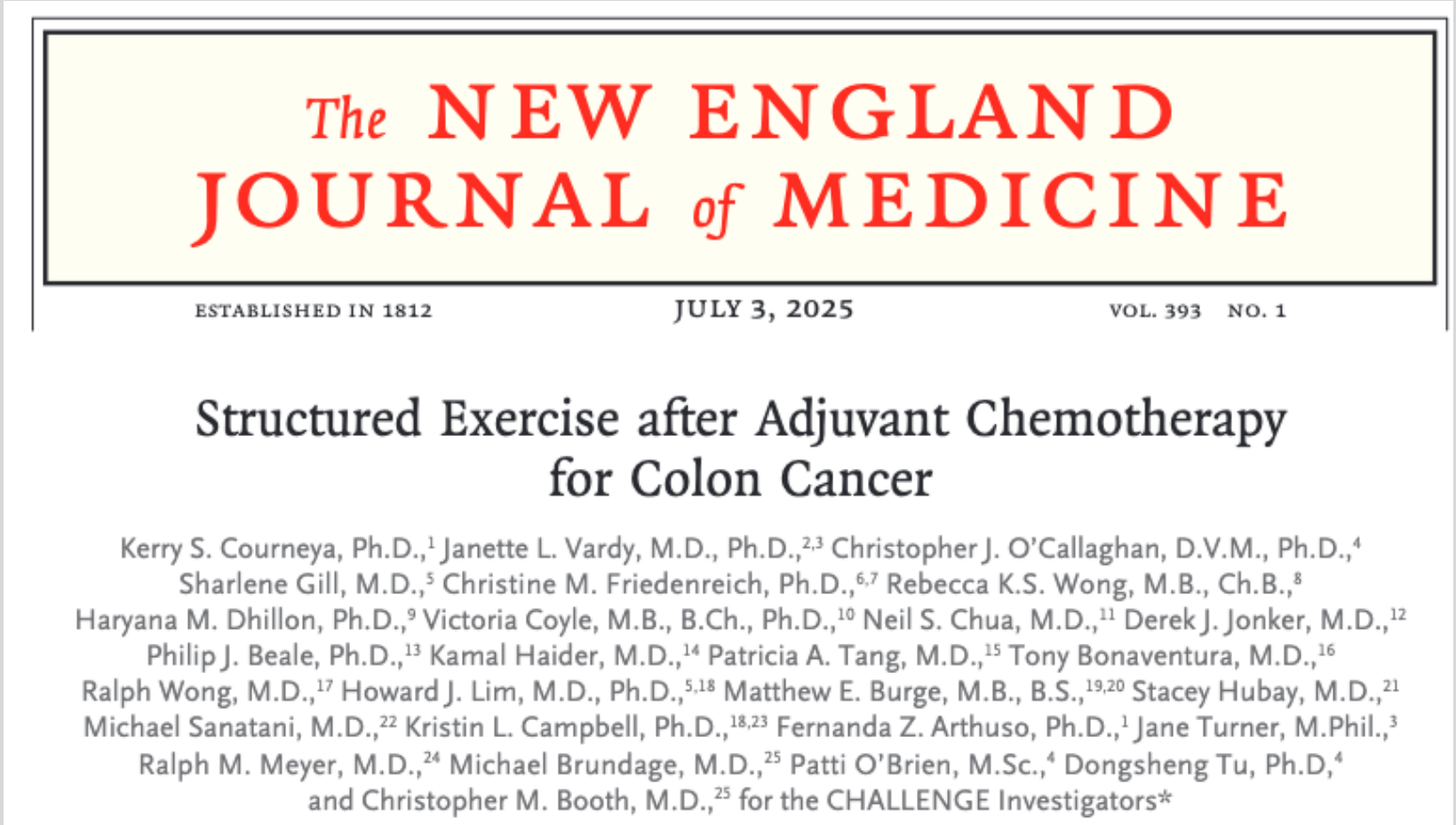
https://www.albertahealthservices.ca/aop/Page14292.aspx

Evidence for prehabilitation

- Evidence is not robust but in studies completed there is a **trend towards improved morbidity, mortality, LOS** in some studies
  - Most beneficial with **multimodal** activity and nutritional programs in **frail** patients

- Innovative avenues of delivery: virtual, self-directed have minimal system cost.
- **Empowers patient** during a time of feeling helpless and passive part of the system.

Structured Exercise post-operatively improves cancer outcomes



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Structured Exercise after Adjuvant Chemotherapy for Colon Cancer

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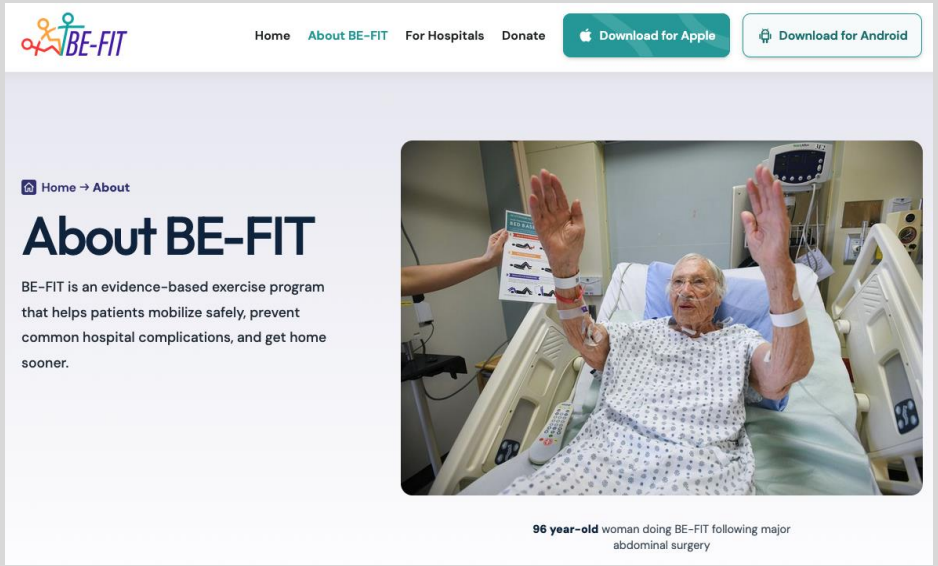
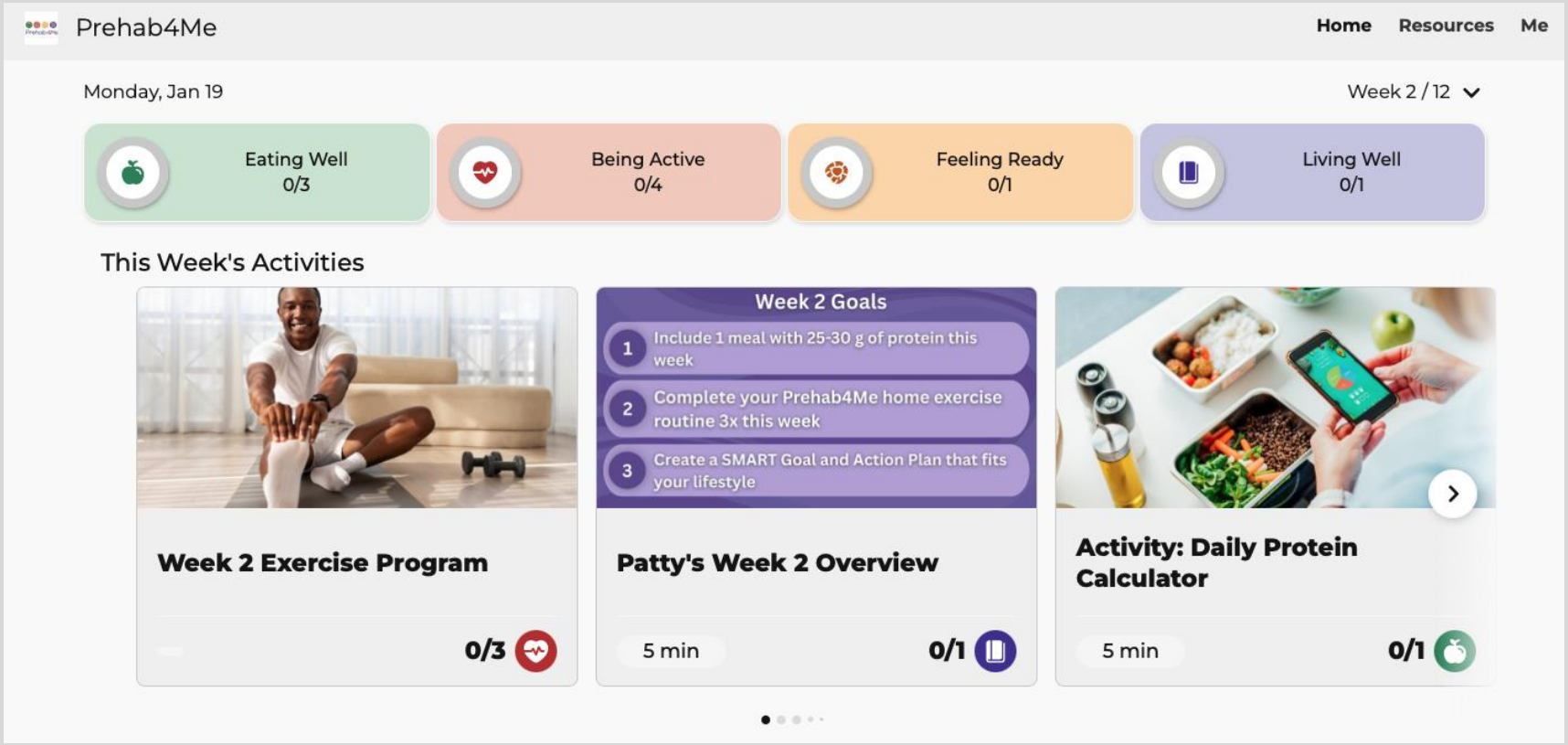
Activity in Surgical and Oncologic population

- Be-Fit (https://www.befit4u.com/about)
- ACTIVE-North (https://www.albertacancerexercise.com/active-north)



AHS – Prehab4Me



https://www.albertahealthservices.ca/aop/Page14292.aspx

Endoscopy: the first stage of treatment

- Identify anemia – start iron
  - Po iron replacement
  - IV Iron vs. Monoferric
- Encourage daily walking
- Nutrition focus (protein intake)
- Smoking/alcohol reduction

Waiting for biopsy/staging imaging does not have to be passive waiting time

Thank you!
Questions?

Small Group Cases

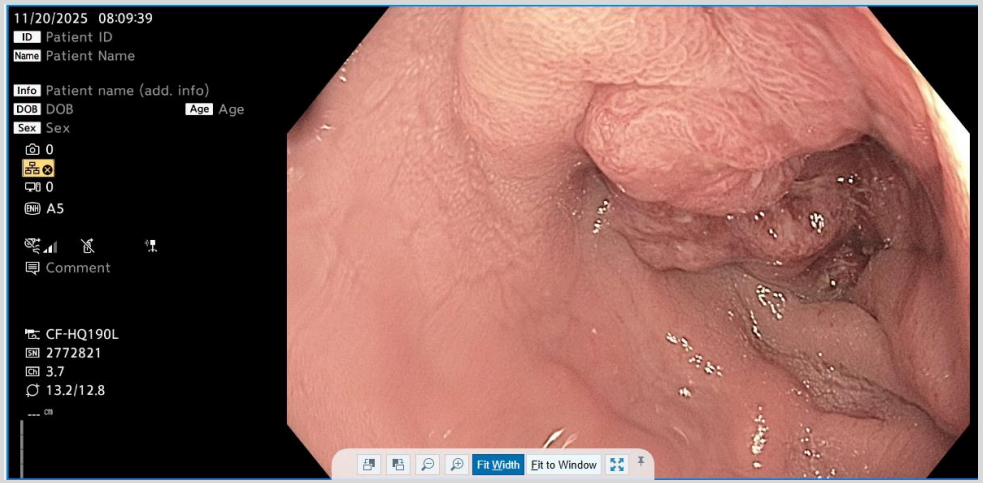
Near Obstructing Colon Cancer

- 47 yo male – Healthy IT supervisor
  - LLQ abdominal pain for 6 months – post prandial
  - Constipation started at time of pain, BM 2x a week (prior daily BM); at time of endoscopy bowel are now alternating between constipation and diarrhea
  - 20 lb wt loss over 2 months
  - No FHx
  - Hgb Normal at onset of pain
  - FeCal 121, no FIT, no prior endoscopy

Discussion points:

- What imaging is appropriate for symptomatic patients <50?
  - Sx: Constipation, Abdominal pain
  - No blood, no change in stool calibre, no weight loss, no family history

Endoscopy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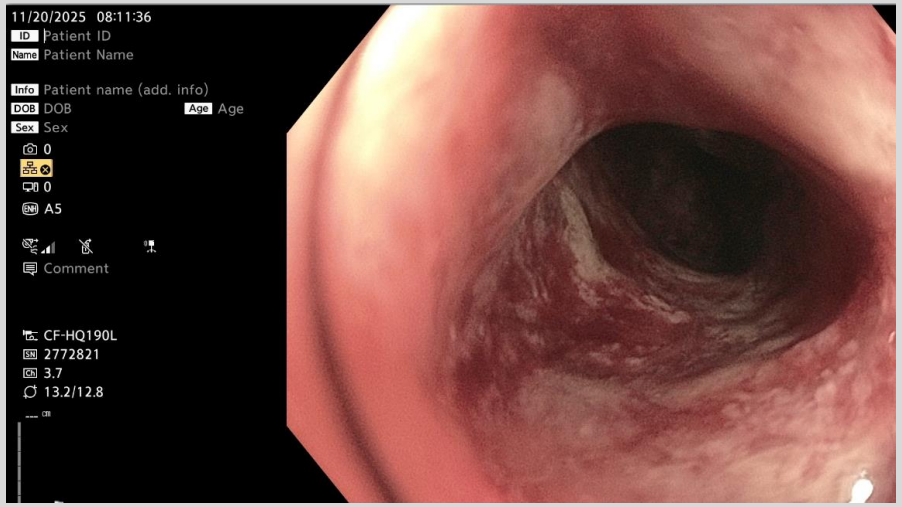
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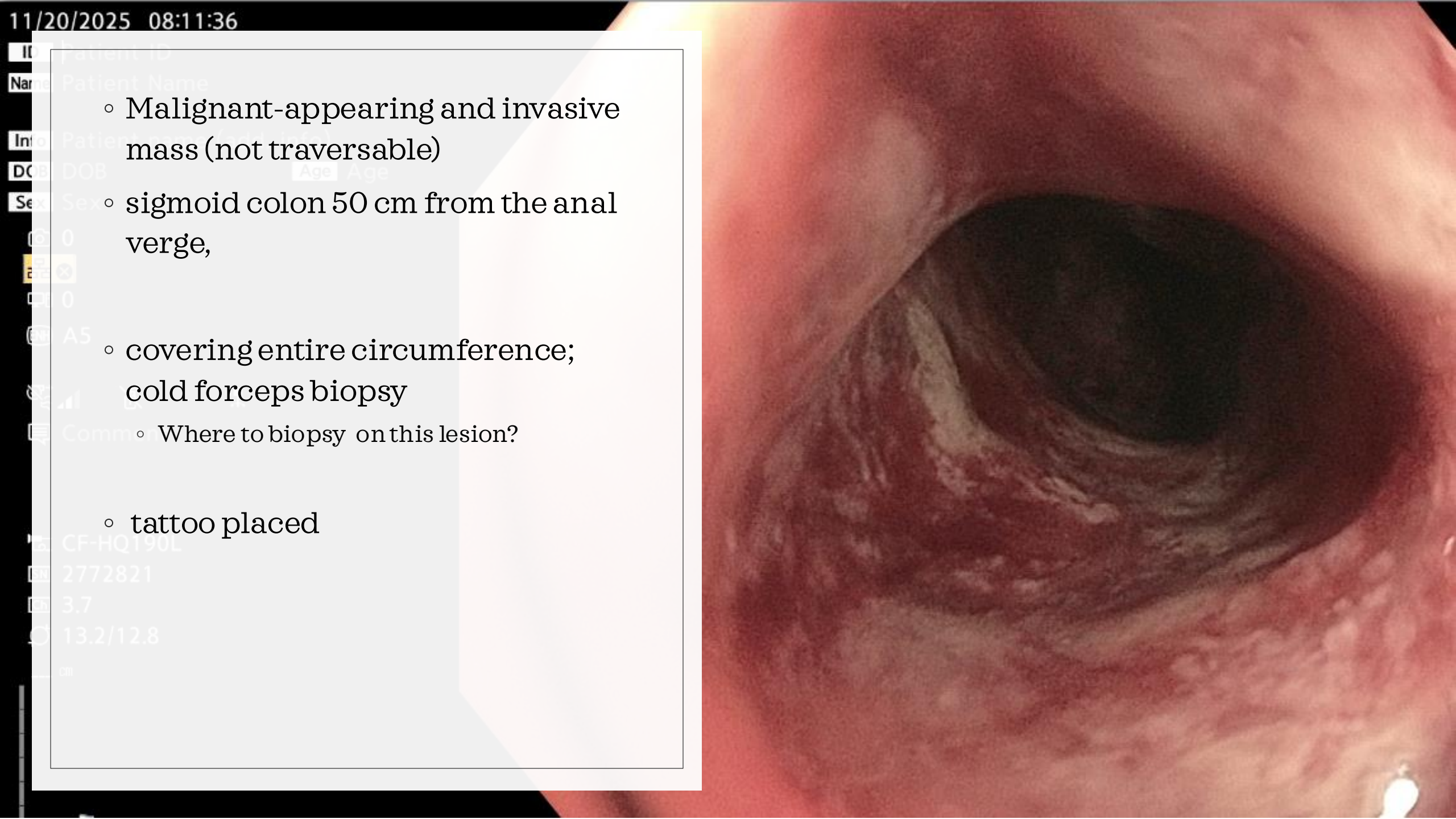
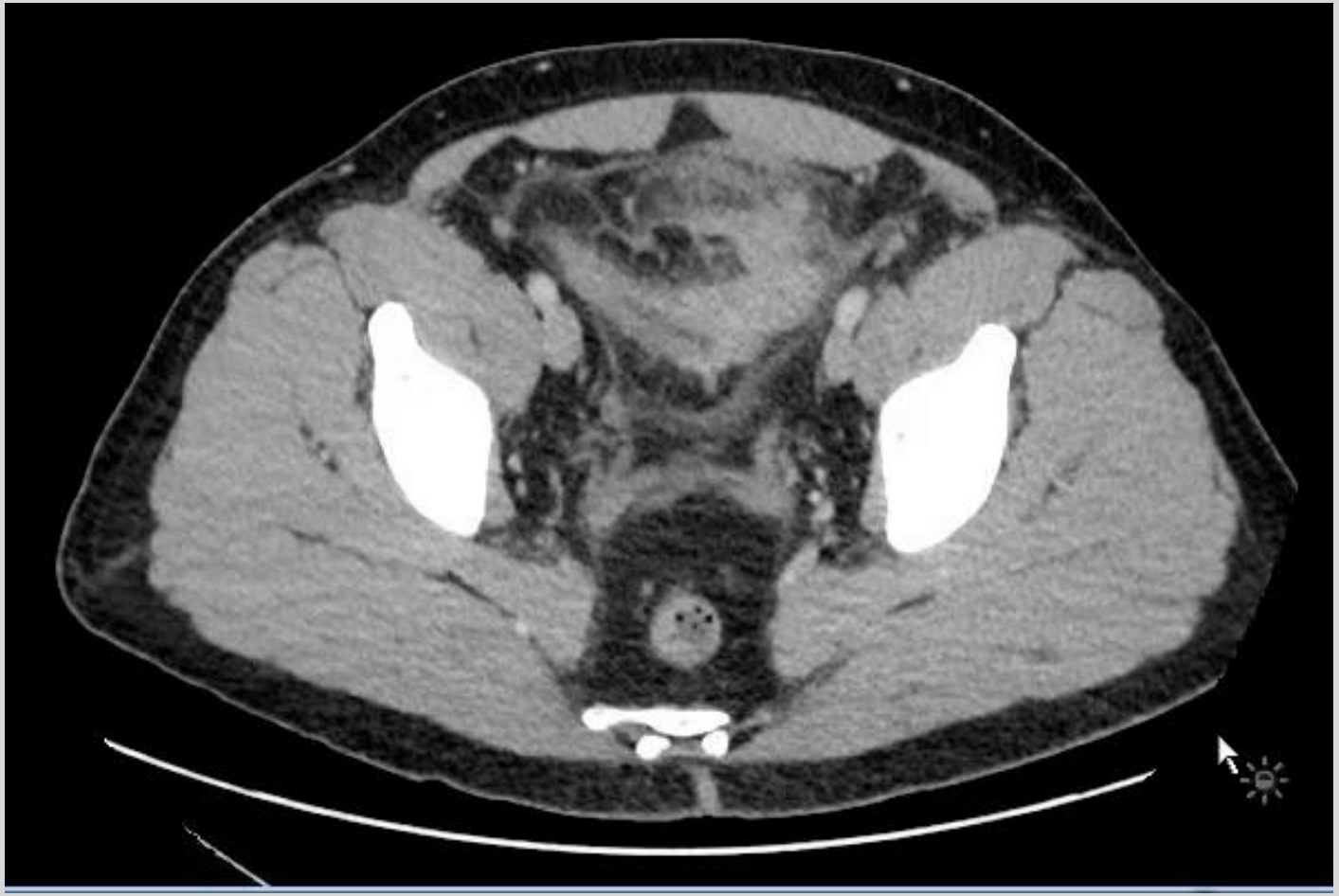


- Malignant-appearing and invasive mass (not traversable)
- sigmoid colon 50 cm from the anal verge,
- covering entire circumference; cold forceps biopsy
  - Where to biopsy on this lesion?
- tattoo placed

Staging CT Scan

- Liver cysts, no metastatic disease

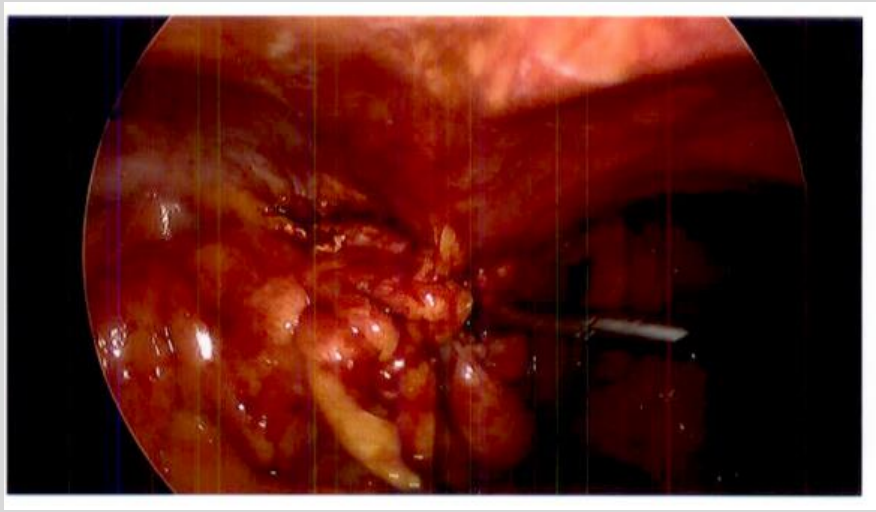


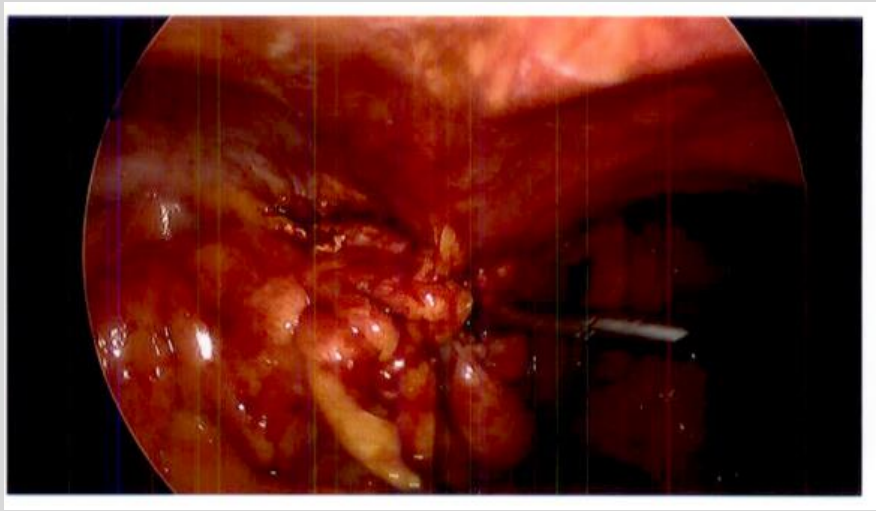
Case Questions

1) When and how do you inform patient of findings?
2) How urgently should staging CT be arranged?
3) What would be the best pathway to surgery
   - Outpatient referral letter, call surgeon on call?
4) Is there any role in considering a colonic stent?
5) When would surgical bypass be considered?
6) When should we involve regional cancer centre and consider neoadjuvant treatment?

Surgery

- pT4b pN0 M0
  - Grade 1
  - MMR proficient
- Stage II – colon cancer
- High Risk due to T4b status and offered chemotherapy by oncologist





Teaching Pearls:

- New-onset constipation with abdominal pain should prompt consideration of **partial or impending colonic obstruction**
- Symptoms may precede complete obstruction and can be subtle or intermittent
- Assess risk of imminent obstruction when determining **timing and pathway of referral**
- Earlier escalation allows elective assessment and intervention, avoiding emergency presentation

CASE #2

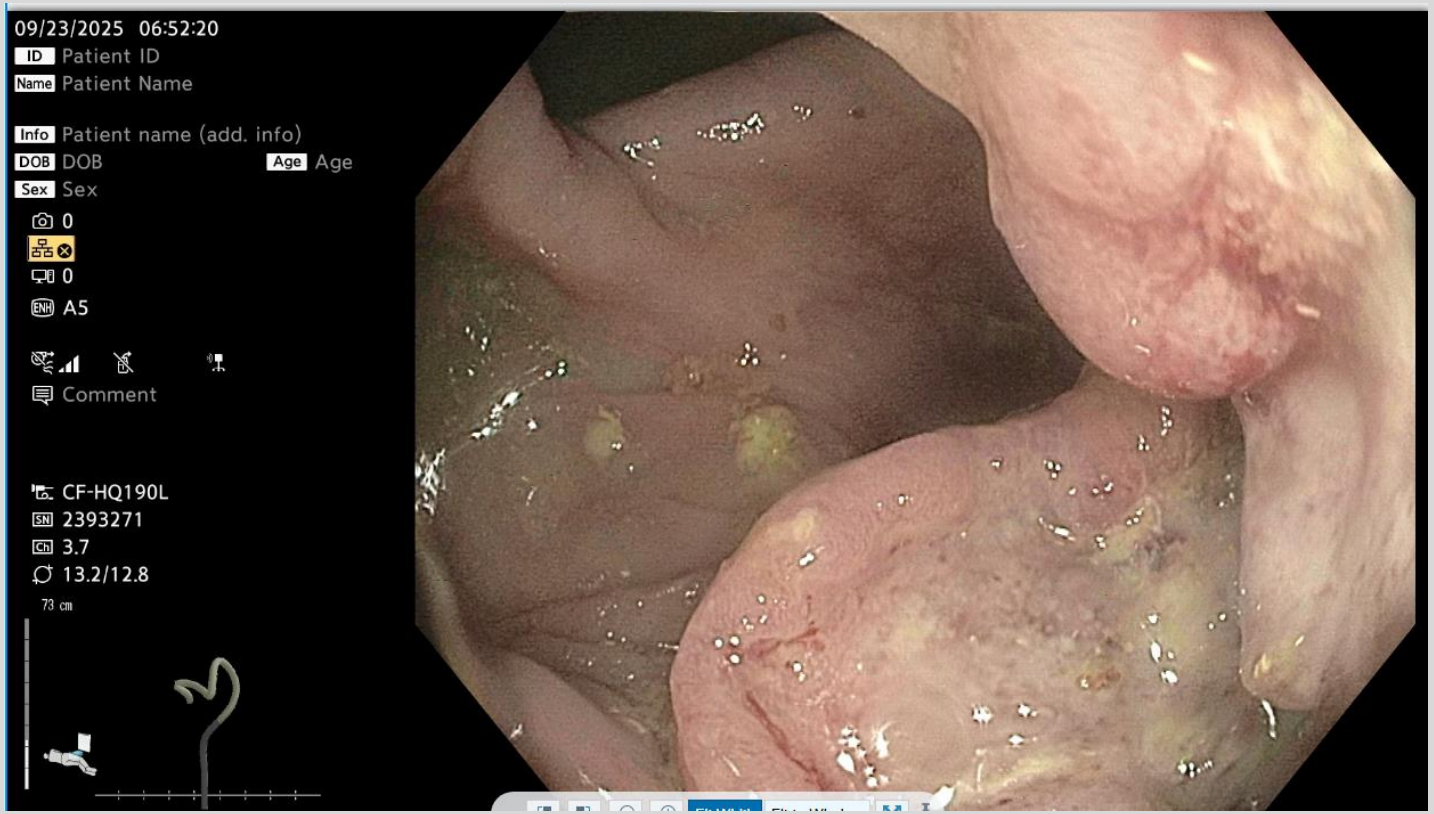
Colon Cancer - Indecisive Patient

- 87 yo male
  - ~1 year ago had transient facial droop. Work-up revealed area 2cm poorly defined cerebral infarct. Atrial Flutter and started on DOAC
  - Now hgb 65, iron deficient, intermittent melena no other GI symptoms
  - Recently moved to Lodge setting, widower
  - Presents for EGD and colonoscopy

PMHx: HTN, Aflutter, Aortic insufficiency, OA

Mobilizes with a walker

- Mass in the proximal ascending colon
- Covering three quarters of the circumference;
- 1 fold distal to IC valve.
- No tattoo given immediate proximity to cecum.



- Staging CT:
  - No metastatic disease

Patient is “frail”

Clinical Frailty Scale*

1 **Very Fit** – People who are robust, active, energetic and motivated. These people commonly exercise regularly. They are among the fittest for their age.

2 **Well** – People who have **no active disease symptoms** but are less fit than category 1. Often, they exercise or are very **active occasionally**, e.g. seasonally.

3 **Managing Well** – People whose **medical problems are well controlled,** but are **not regularly active** beyond routine walking.

4 **Vulnerable** – While **not dependent** on others for daily help, often **symptoms limit activities.** A common complaint is being “slowed up”, and/or being tired during the day.

5 **Mildly Frail** – These people often have **more evident slowing,** and need help in **high order IADLs** (finances, transportation, heavy housework, medications). Typically, mild frailty progressively impairs shopping and walking outside alone, meal preparation and housework.

6 **Moderately Frail** – People need help with **all outside activities** and with **keeping house**. Inside, they often have problems with stairs and need **help with bathing** and might need minimal assistance (cuing, standby) with dressing.

7 **Severely Frail** – **Completely dependent for personal care**, from whatever cause (physical or cognitive). Even so, they seem stable and not at high risk of dying (within ~ 6 months).

8 **Very Severely Frail** – Completely dependent, approaching the end of life. Typically, they could not recover even from a minor illness.

9. **Terminally Ill** - Approaching the end of life. This category applies to people with **a life expectancy <6 months**, who are **not otherwise evidently frail.**

Scoring frailty in people with dementia

The degree of frailty corresponds to the degree of dementia. Common **symptoms in mild dementia** include forgetting the details of a recent event, though still remembering the event itself, repeating the same question/story and social withdrawal.

In **moderate dementia**, recent memory is very impaired, even though they seemingly can remember their past life events well. They can do personal care with prompting.

In **severe dementia**, they cannot do personal care without help.

* 1. Canadian Study on Health & Aging, Revised 2008.
2. K. Rockwood et al. A global clinical measure of fitness and frailty in elderly people. CMAJ 2005;173:489-495.

DALHOUSIE UNIVERSITY *Inspiring Minds*

Surgical Consultation

- “Stroke within past 8 months”
  - Facial droop 12 months ago, 2cm area of ischemia, started on DOAC for Aflutter
  - Wife and Son passed away from advanced cancer and struggled with chemotherapy
  - Just moved from home to lodge facility
    - Adamant about not losing more independence.
    - “I would rather die than go to LTC”

What is risk of surgery?

- Risk of mortality from surgery ?

A) 50%

B) 20%

C) 5%

D) <1%

- Risk of any Morbidity?

A) 100%

B) 50%

C) 20%

D) 10%

- Risk of any discharge to Nursing Home?

A) 100%

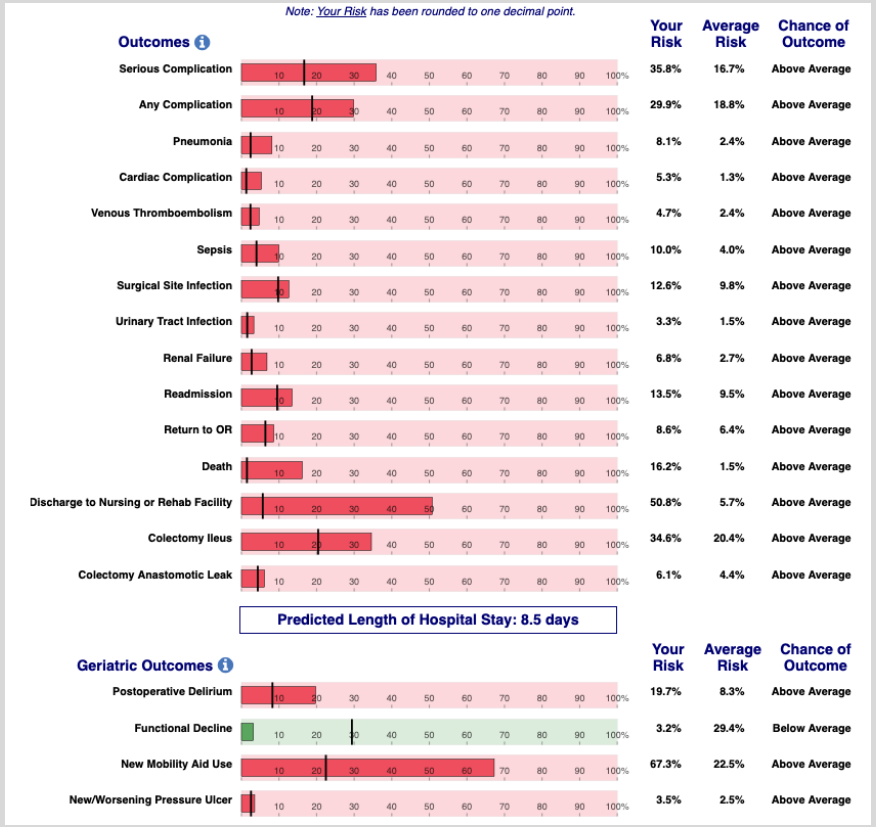
B) 50%

C) 25%

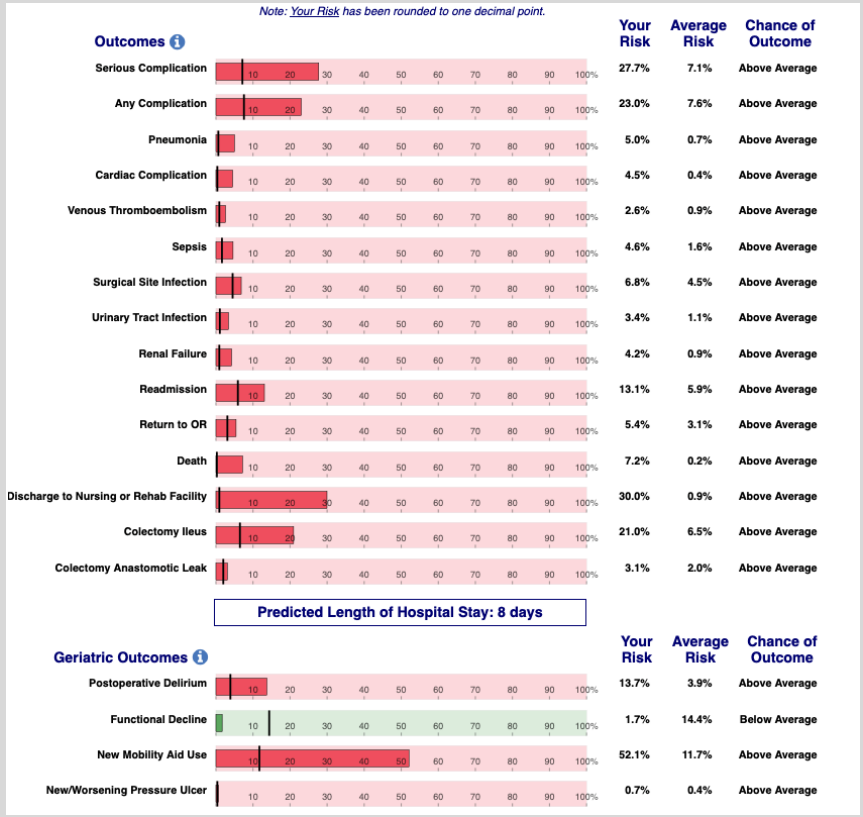
D) 10%

ACS – NSQIP Surgical Risk Calculator

open



laparoscopic



https://riskcalculator.facs.org/RiskCalculator/

Surgical Delay

- Patient opted against surgery
- But still wanted some form of treatment – asked for referral for palliative chemotherapy
- After seeing oncologist, poor ECOG status, risk associated with indefinite palliative chemotherapy also high
- 6 weeks later presents again to discuss surgical options again
  - Offered laparoscopic right hemicolectomy with intracorporeal anastomosis
  - Discharged to Lodge: LOS 12 days

Case Questions:

- 1) What tools can we use to support frail, comorbid patients in making treatment decisions?
- 2) What fears do patient's have with regard to surgery? Chemotherapy? Dying?

Teaching Pearls:

- Clinician perceptions of risk may unintentionally over- or under-influence patient choices
- Frailty is often implicit; using an objective tool (e.g., **Clinical Frailty Scale**) improves clarity an
- Risk calculators translate abstract risk into understandable, patient-centred datad consistency
- Objective measures support transparent discussions of trade-offs between medical and surgical options

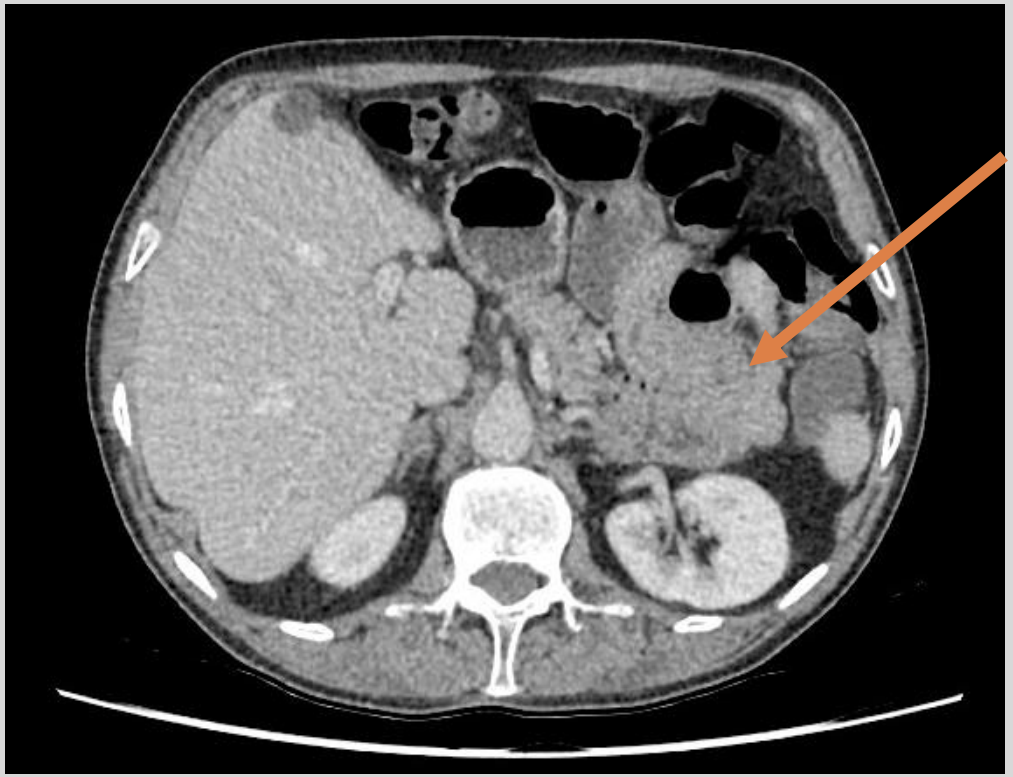
CASE #3

Obstructing Crohn's Disease

- 62 yo male – maintenance worker
  - no other comorbidities
- Diagnosed in 90's with Crohn's disease in New Brunswick
- Was treated with prednisone and told to stay on Asacol life long
- Has self treated with herbals and liquid diet when he has "flares" over the years

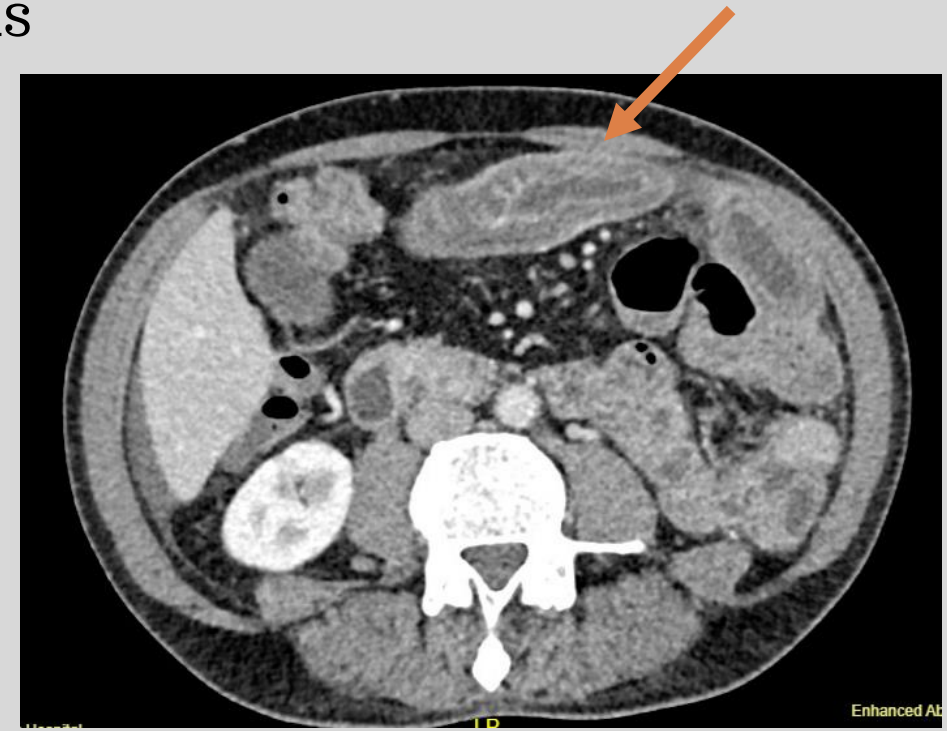
ER presentation 2024

- Post-prandial abdominal pain after solid foods.
- Small bowel obstruction with abscess at root of SB mesentery
- Extensive ileal and jejunal thickening consistent with history of Crohn's disease

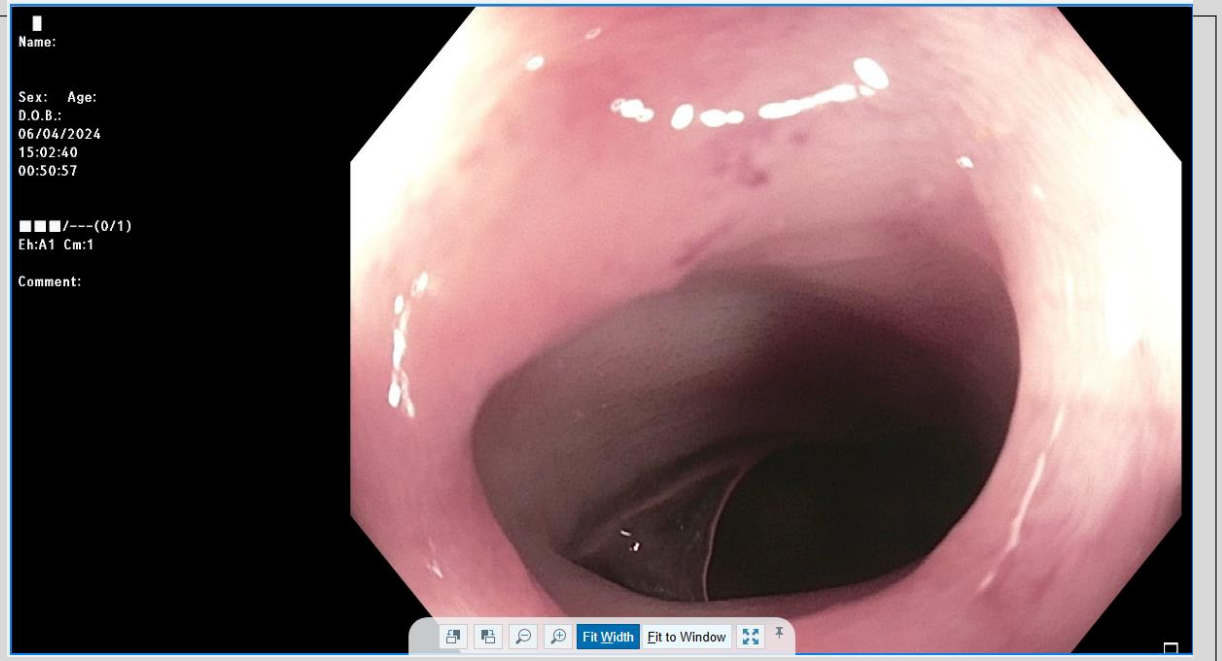


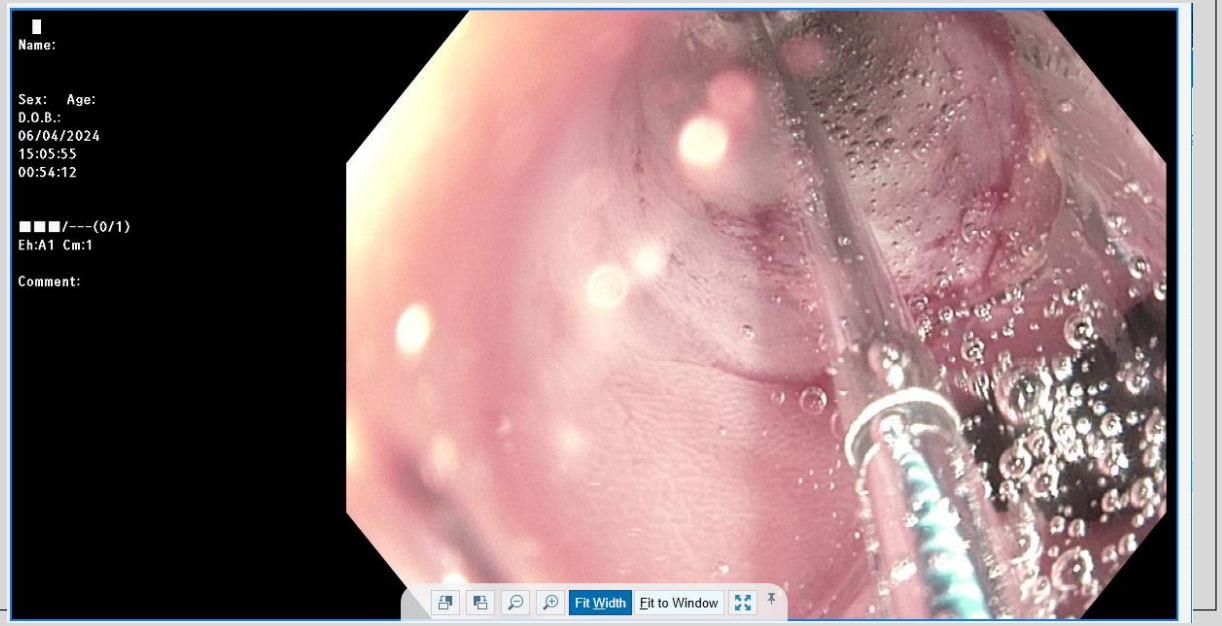
Re-obstruction 2025

- Patient wished to avoid surgery and managed with soft and liquid diet on biologic therapy for 14 months
- No weight gain ~64kg
- CT:
  - Thickening of ileum
  - Dilated loops of small bowel



- June 2024
- Non traversable stricture at terminal ileum
- Balloon dilated





Nov 2025

- Laparotomy
- Small bowel resection 33cm ileum
  - Small bowel abscess with wall adherent to proximal jejunum, descending colon
  - Enterotomy of descending colon and jejunum repaired primarily as thought to be secondarily involved due to abscess

Pathology

A. Ileum, resection:
- Poorly differentiated adenocarcinoma with signet ring cells and mucinous features
- Positive for lymphovascular and perineural invasion
- Three lymph nodes positive for malignancy (3/3)
- AJCC: At least T3, please see comment

Please see synoptic report for details

Case questions:

- 1) What are indications for surgical intervention of Crohn's disease
- 2) What are surgical options for management of fibrostenotic strictures?
- 3) How are biologics managed in the perioperative period?

Teaching Pearls

- **Early discussion supports timely, patient-centred decisions and reduces downstream delays**
- Early awareness of surgical pathways allows patients to contextualize risks and benefits alongside medical therapy
- Reduces decisional paralysis when medical therapy plateaus or fails
- Normalizes surgery as a *planned option*, not a last-minute escalation