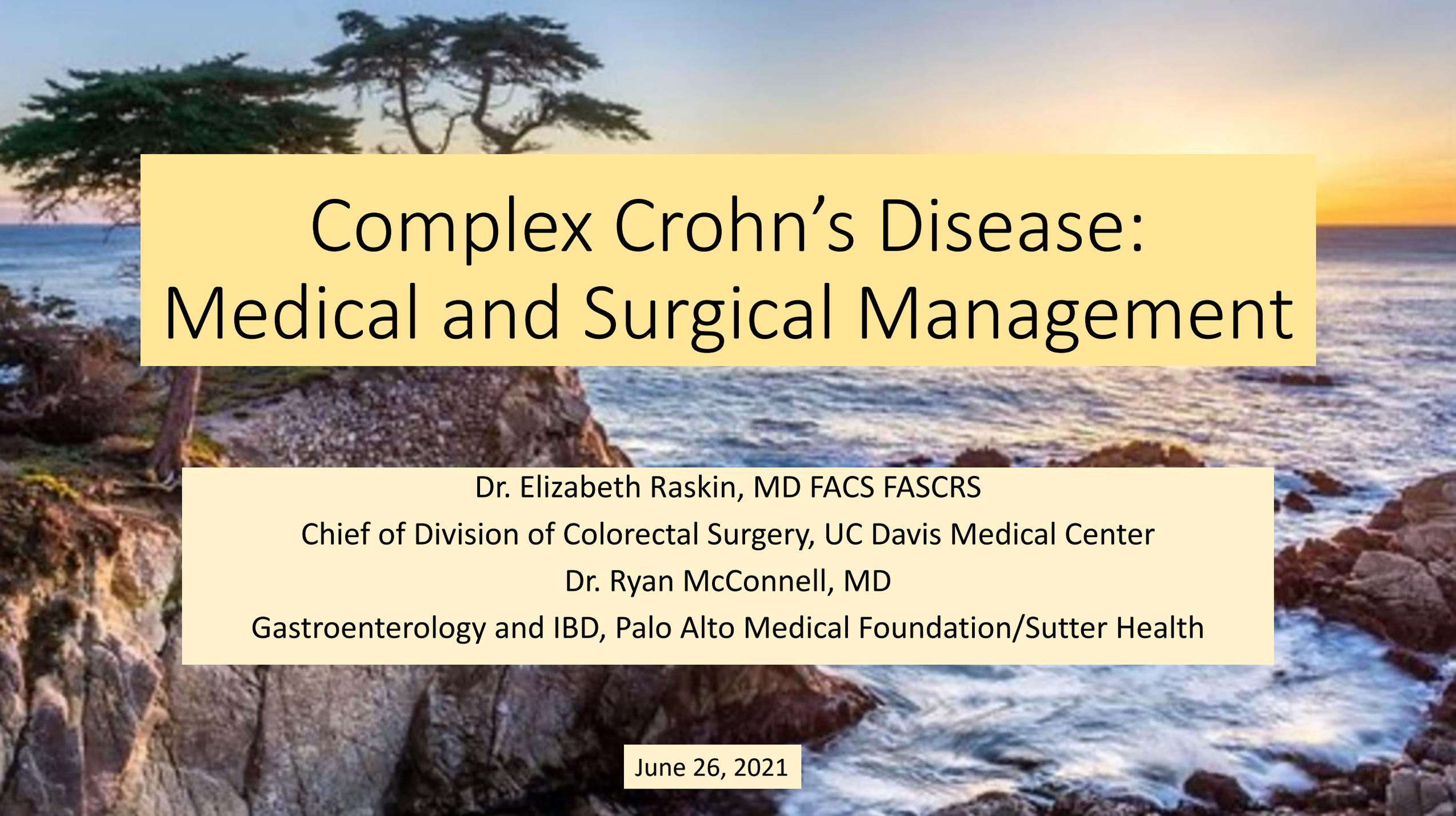




2021 NCSCG
18TH ANNUAL **HYBRID**
GI SYMPOSIUM

June 26-27, 2021



Complex Crohn's Disease: Medical and Surgical Management

Dr. Elizabeth Raskin, MD FACS FASCRS

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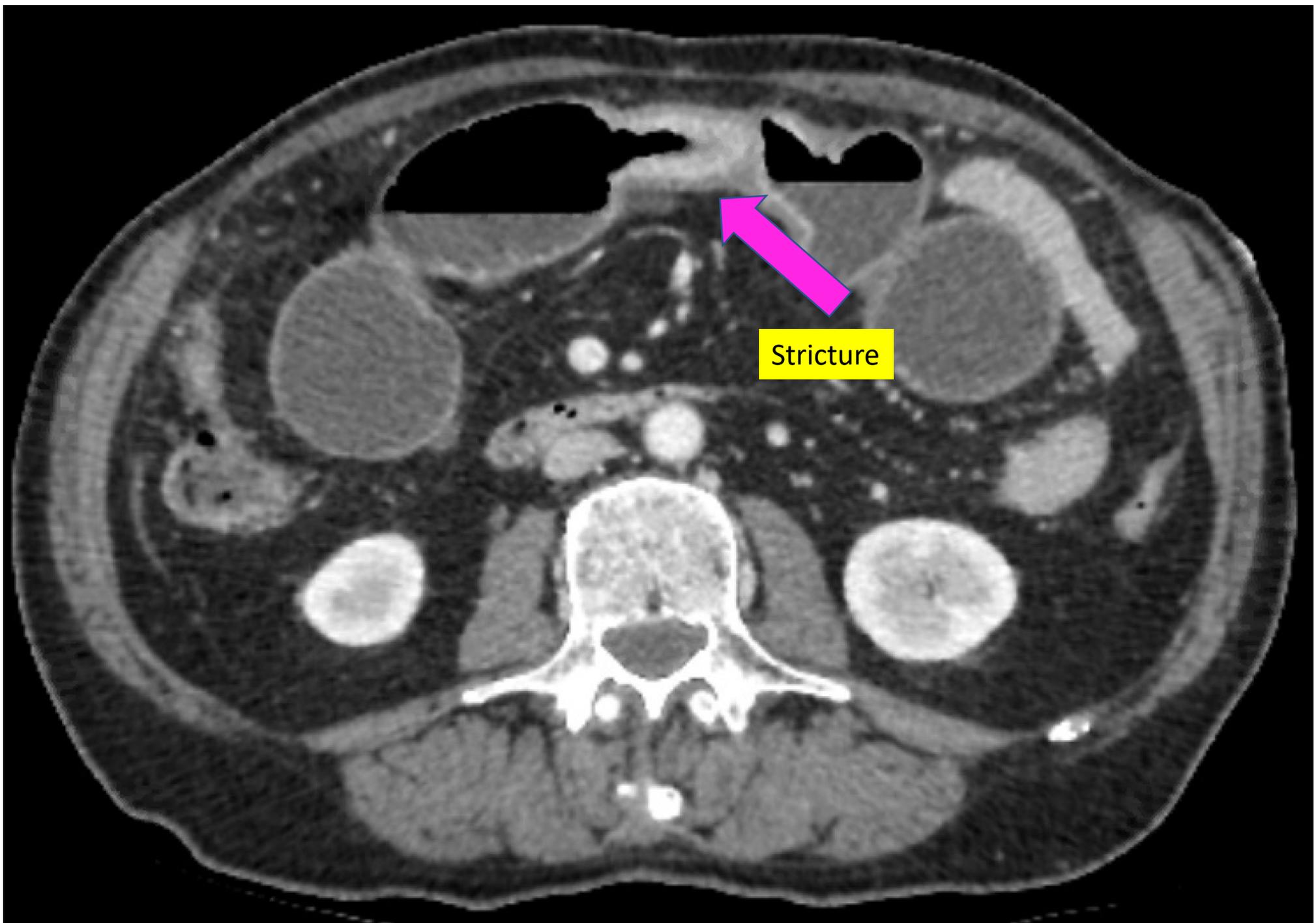
June 26, 2021

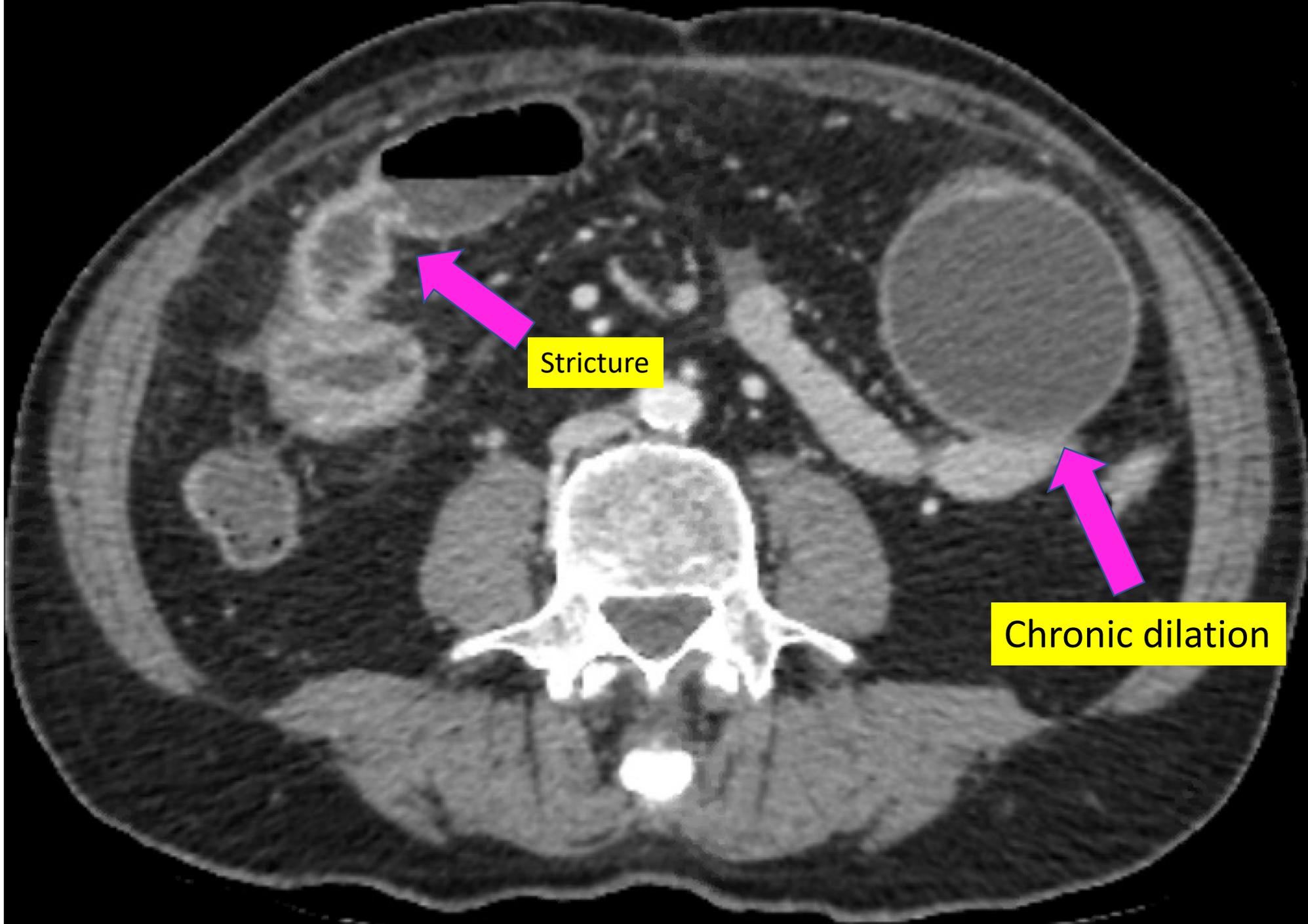
Case Presentation #1

- ▶ 74-year-old male presents with acute on chronic abdominal pain, nausea, vomiting, and weight loss
- ▶ History of Crohn's disease of the small bowel, status-post prior resection of terminal ileum (50 years ago)
 - ▶ No post-operative monitoring or GI follow-up
- ▶ EXAM:
 - ▶ Tachycardic, normotensive
 - ▶ Distended abdomen, focally tender in umbilical region, no peritoneal signs
 - ▶ Prior laparotomy scar

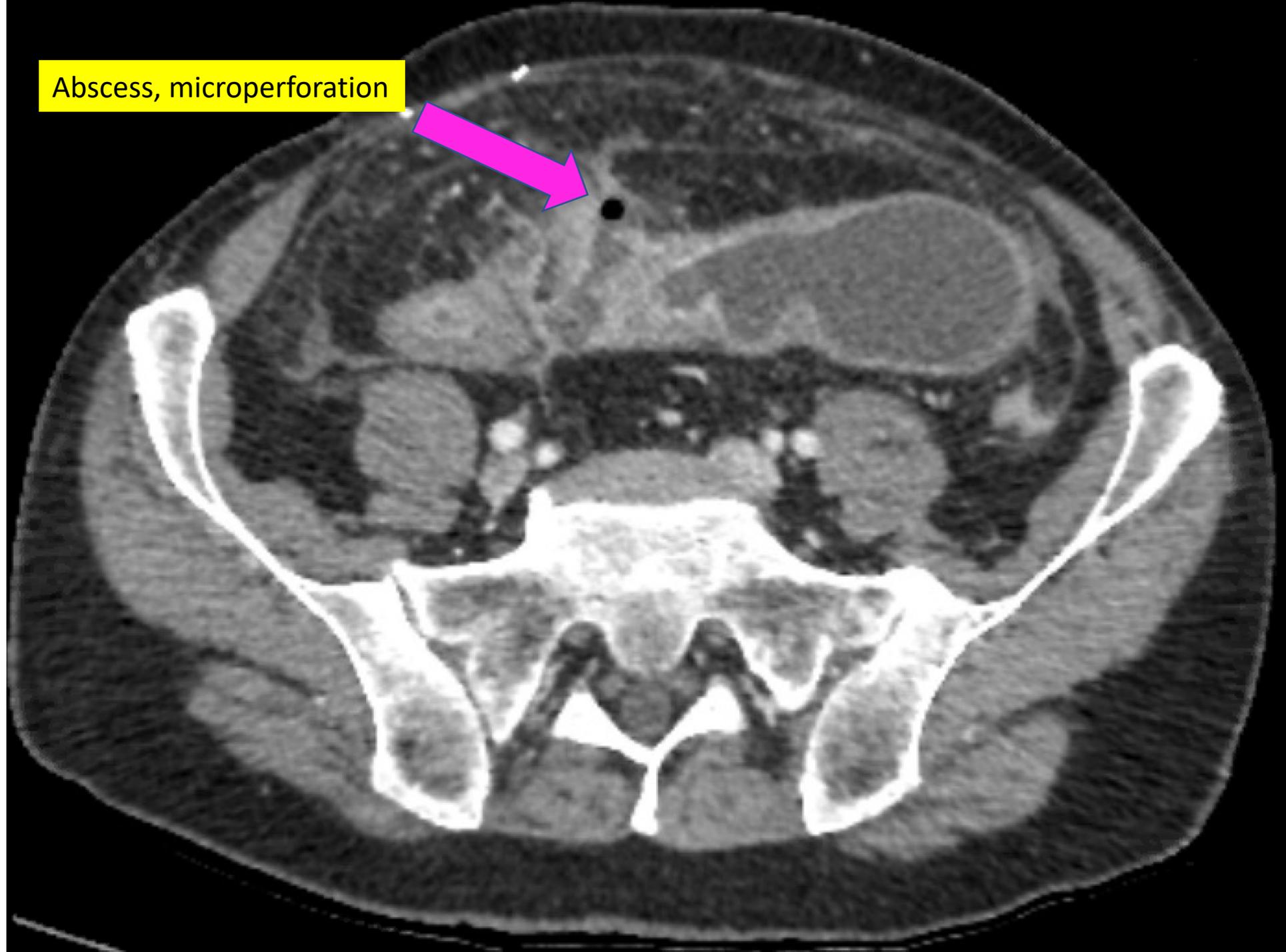
Case Presentation #1

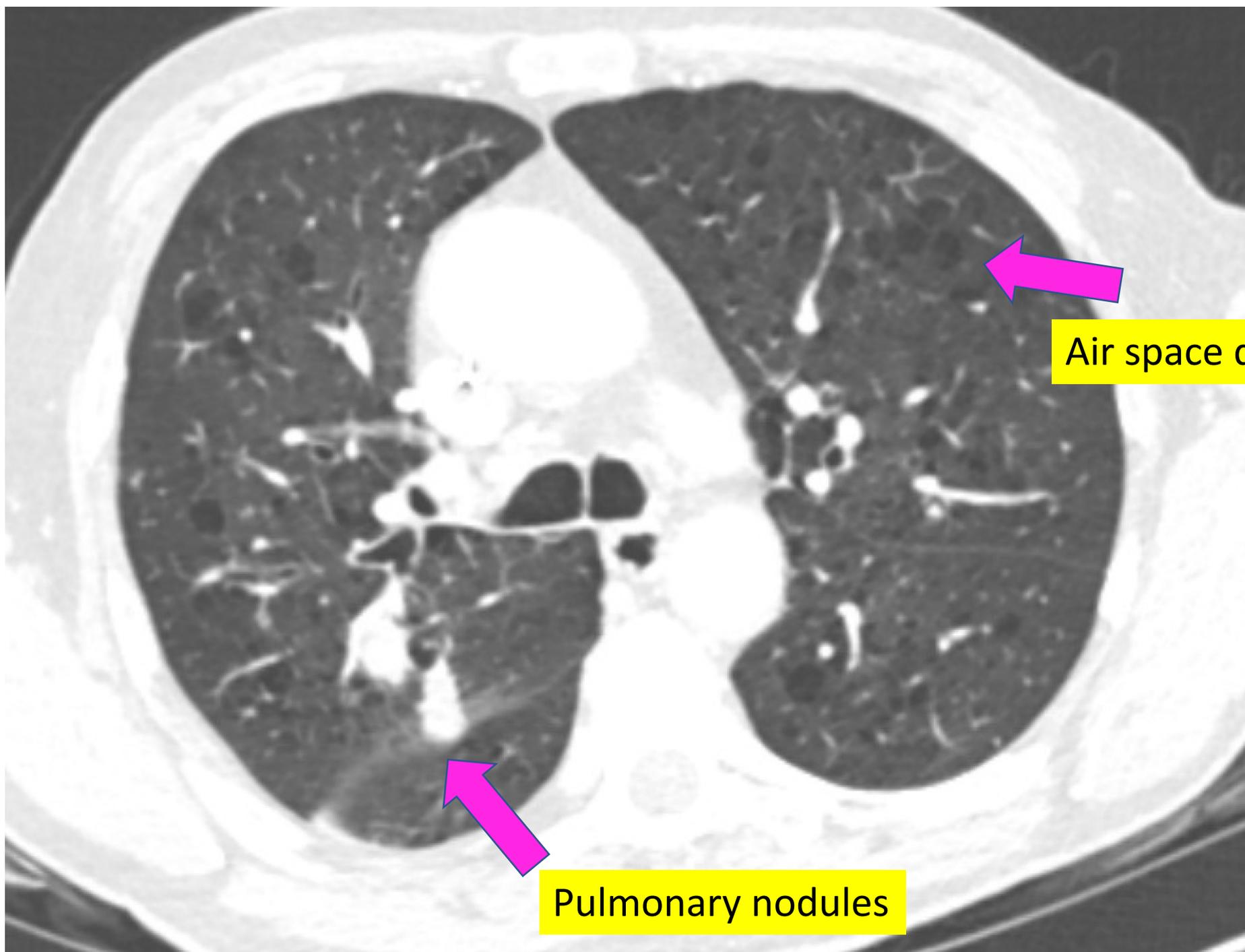
- ▶ LABS:
 - ▶ WBC 21.5
 - ▶ Platelets 328
 - ▶ Cr 1.5
 - ▶ Albumin 2.4, prealbumin 8
 - ▶ Lactate 2.3
 - ▶ ESR 46
 - ▶ CRP 20.8
- ▶ CT chest, abdomen, and pelvis ordered





Abscess, microperforation





Air space disease

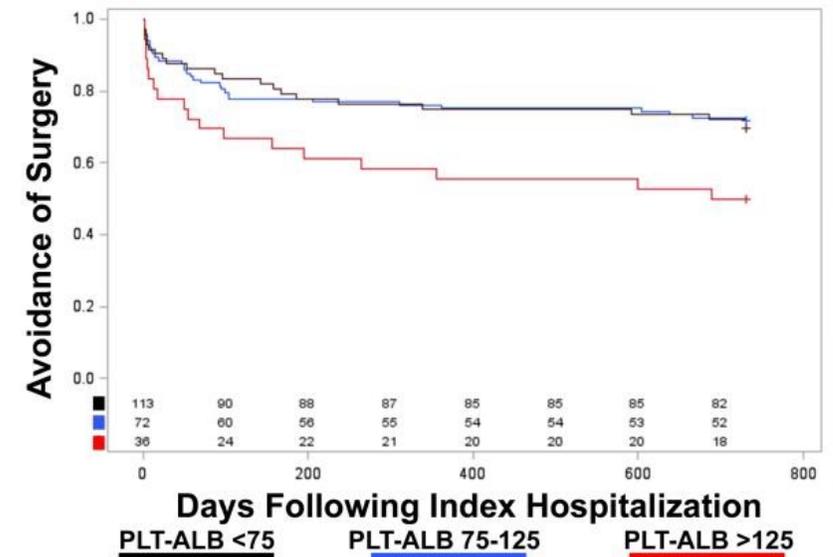
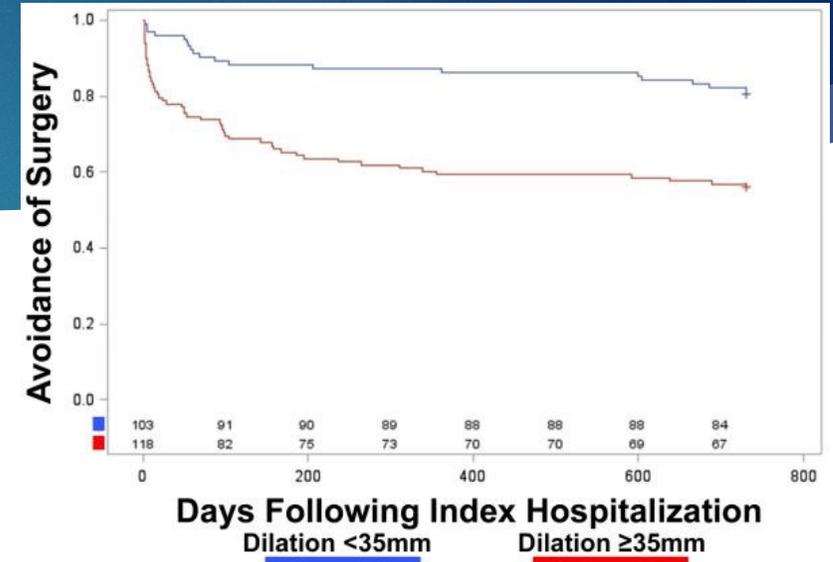
Pulmonary nodules

Case Presentation #1

- ▶ Small bowel obstruction with chronically dilated proximal bowel, evidence of localized microperforation and fluid collection
- ▶ Fluid resuscitation initiated, started on antibiotics
- ▶ **What should be done next?**
 - ▶ Medical therapy for Crohn's?
 - ▶ Surgery?
 - ▶ When?
 - ▶ Resection or stricturoplasty?
 - ▶ What kind of anastomosis?
 - ▶ Ileostomy?

Predictors of Surgery

- ▶ Factors predictive of surgery within 2 years of hospitalization for small bowel Crohn's
 - ▶ n=221 patients hospitalized from 2004-2012
 - ▶ 32.6% had surgery within 2 years of hospitalization
- ▶ Predictors of surgery
 - ▶ Small bowel dilation >3.5 cm (HR 2.92, 95% CI 1.7-4.9)
 - ▶ Platelet/albumin ratio ≥ 125 (HR 2.13, 95% CI 1.2-4)
 - ▶ Our patient's ratio is 136



Predictors of Surgery

- ▶ Additional studies found similar predictors of surgical intervention in ileal Crohn's disease
 - ▶ Prestenotic bowel dilation
 - ▶ Stricturing or penetrating disease phenotype
 - ▶ Age <30

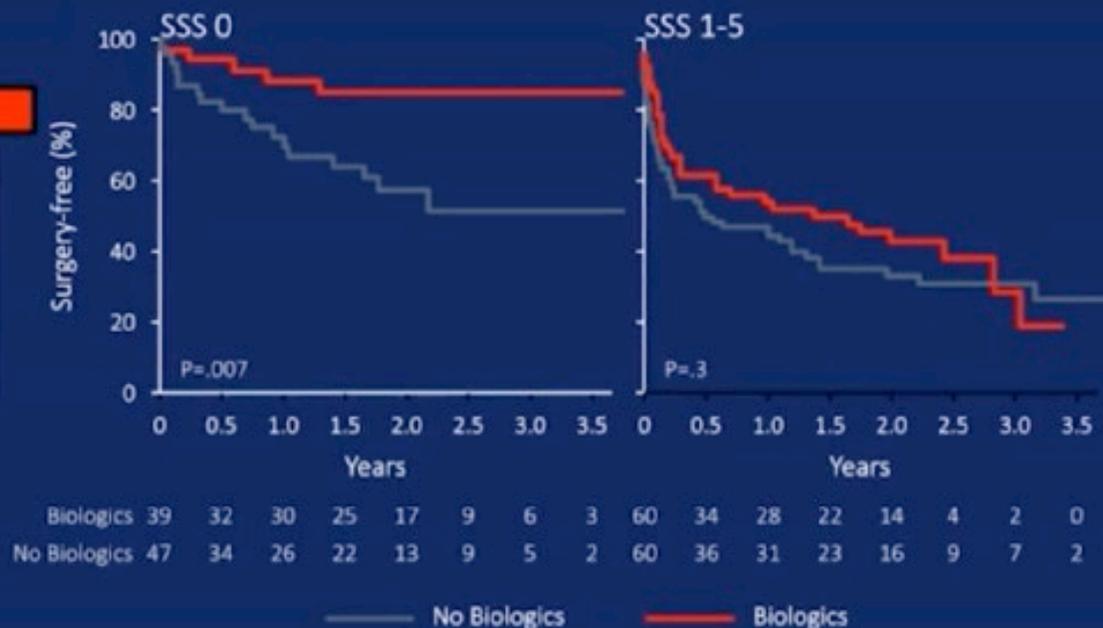
Predictors of Surgery

- Historical cohort study of 241 patients with stricturing CD that had CTE or MRE
- 49% surgery within a median of 1 year

Development SSS Score

Internal Fistula
SBO
Prox. Dilation ≥ 3 cm
Abdominal mass/abscess
Mesenteric stranding

AUC=.7 for predicting surgery at 1 year



Biologics may reduce the risk of surgery by up to 44% in stricturing CD. This benefit is more pronounced in patients with a "low-risk" (SSS=0) enterographic findings.

- ▶ Anti-TNF therapy decreases surgery in "low risk" strictures

SSS = Stricture Severity Score

Nepal, Presented at DDW, 2012

Intra-Abdominal Abscess

- ▶ What about the abscess? Does every Crohn's patient with an abscess require surgery?

Table 2. Factors Associated with Surgery[†] for Intra-abdominal Abscesses in Crohn's Disease

Ileal Disease, Ileocolonic or Upper GI Disease
Perianal Disease
Prior Surgery with Intestinal Anastomosis
Disease Duration > 1 year
Malnutrition
Corticosteroids
Multiple or Multilocular Abscesses
Fistulae
Spontaneous, non-Recurrent Abscess
Larger Abscess Size (>6cm)
Active Disease Segment < 15cm
Stenosis with Pre-stenotic Dilation ≥ 3cm
Bowel Wall Thickening > 6mm

Table 3. Factors Associated with Success of Medical Therapy (Antibiotics along with Percutaneous Drainage)

New Onset Crohn's Disease
Absence of Fibrostenotic Disease
Small Abscess Size (<4 cm)
Absence of Prior Surgery
Inflammatory Phenotype

DISPATCHES FROM THE GUILD CONFERENCE, SERIES #30

Uma Mahadevan MD, Series Editor
guildconference.com

Crohn's Disease Complicated by an Intra-abdominal Abscess: Poke, Prod, or Cut?



Taha Qazi



Miguel Regueiro

Crohn's disease is a chronic, inflammatory bowel disease characterized by transmural bowel inflammation that can involve any segment of the gastrointestinal tract. The natural progression of Crohn's disease results in penetrating complications, including abscesses. In the management of intra-abdominal abscesses, clinicians face a therapeutic dilemma where issues of management of disease activity with immunotherapy must be balanced with the risk of worsening infectious complications. Historically, the management strategies utilized included surgical drainage. Recent data has demonstrated the efficacy of antibiotics and percutaneous drainage followed by therapy with biologics. Considering the therapeutic quandaries associated with management, a multi-disciplinary approach to intra-abdominal abscesses in Crohn's disease is required. Herein, we review the current data regarding the management of intra-abdominal abscess complications in Crohn's disease. We highlight both medical and surgical management strategies. We also present an algorithmic strategy for the management of these complications.

INTRODUCTION

Crohn's disease (CD) is a chronic relapsing and remitting condition exemplified by transmural inflammation involving any part of the gastrointestinal tract. Moreover, the disease appears to be progressive, evolving from primary inflammatory disease to a disease with stenotic or penetrating complications in a majority

of patients.¹⁻³ Penetrating complications related to Crohn's disease include fistulae, perforations, and the development of intra-abdominal or pelvic abscesses.

The rates of intra-abdominal abscess (IAA) described in the literature has been estimated at approximately 20%.⁴ Abscess development can occur spontaneously or as a post-operative complication. In the context of active disease, abscess formation presents a therapeutic challenge for health care providers. The management of disease with immunosuppressive agents must

Taha Qazi, Associate Staff Miguel Regueiro, Chairman, Department of Gastroenterology, Hepatology & Nutrition, Digestive Disease and Surgical Institute, Cleveland Clinic, Cleveland, OH

Intra-Abdominal Abscess

- ▶ Some (highly selected) patients with small abscesses may avoid surgery with anti-TNF therapy*
 - ▶ Multicenter, prospective, observational French cohort (MICA study), n=117
 - ▶ Small bowel Crohn's responsible for abscess in 86%, fistula in 58%
 - ▶ Median age 28 (IQR 24-36), median disease duration **2.4 months** (IQR 0-58.7)
 - ▶ Median abscess size **2.5 cm** (IQR 1.8-4)
 - ▶ **Prestenotic dilation not reported**
 - ▶ 9% had percutaneous drainage, 97% had antibiotics (mean duration 21 days)
 - ▶ Complete abscess resolution confirmed by MR enterography, then start adalimumab
 - ▶ **Primary endpoint:** adalimumab success at week 24
 - ▶ No intestinal resection, no abscess recurrence, no steroid use, no clinical relapse

* published in abstract form only

Pineton de Chambrun, *J Crohns Colitis*, 2019

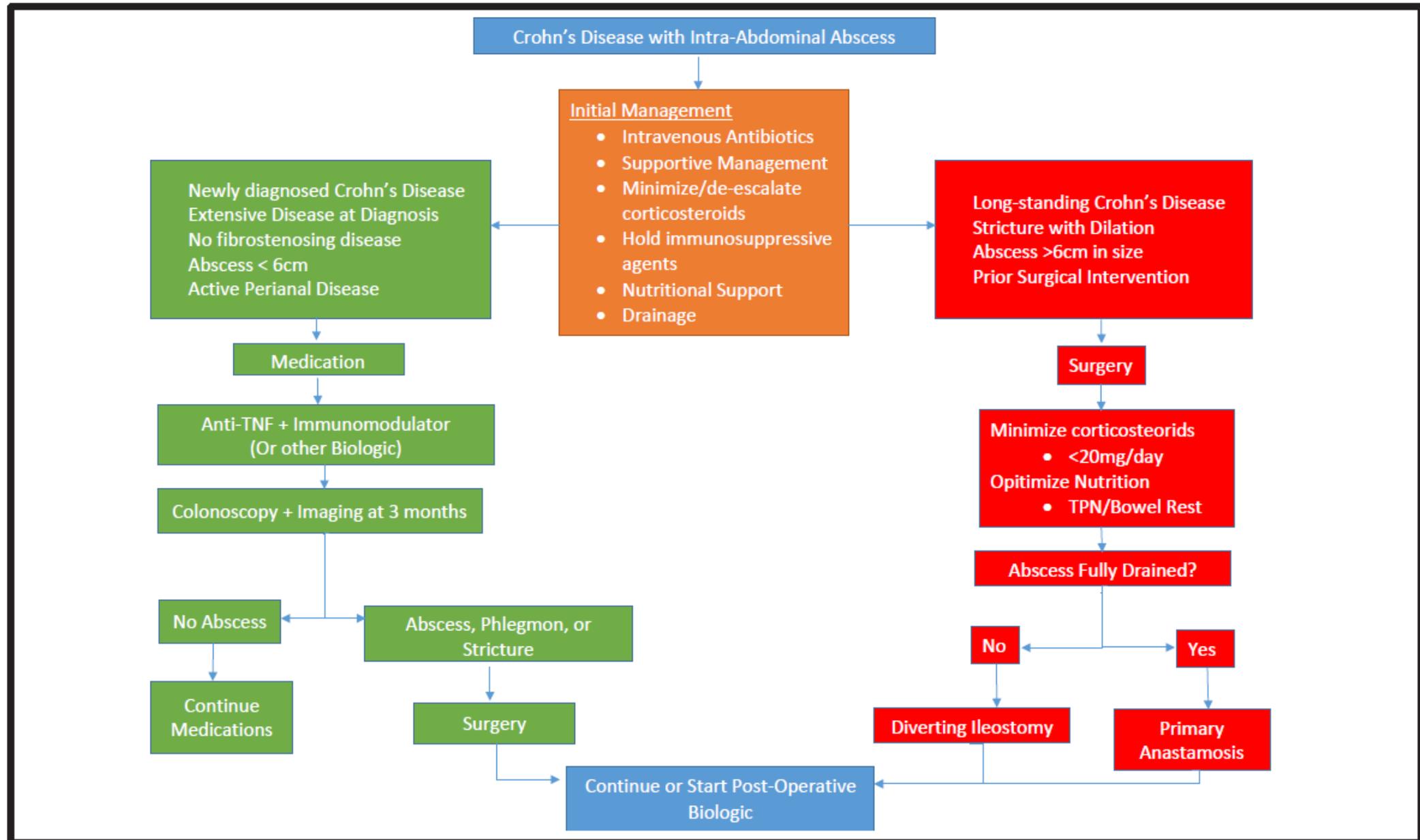
Intra-Abdominal Abscess

- ▶ **Primary endpoint:** adalimumab success at week 24
 - ▶ No intestinal resection, no abscess recurrence, no steroid use, no clinical relapse
 - ▶ 71% met primary endpoint, 9% had recurrent abscess, 9% had intestinal resection
- ▶ Long-term outcomes presented at DDW 2021*
 - ▶ Week 48: 66% met primary endpoint, 15% had intestinal resection
 - ▶ 4 years: 25.6% had intestinal resection
 - ▶ Abscesses that required percutaneous drainage were highly associated with risk of abscess recurrence or intestinal resection (OR 14)
 - ▶ Intestinal dilation >3 cm associated with adalimumab failure
 - ▶ Signs of intestinal or mesenteric fat inflammation on baseline MRI were associated with adalimumab success

* published in abstract form only

Pineton de Chambrun, Presented at DDW, 2021

Figure 1. Proposed Algorithm for the Management of Intra-Abdominal Abscess in Crohn's Disease



Case Presentation #1

- ▶ IR drain of collection
 - ▶ 4+ Enterococcus faecalis, 3+ Candida albicans, 2+ mixed flora
 - ▶ Initiated Zosyn, vancomycin, and fluconazole
- ▶ Plan for surgery
 - ▶ When?

IBD Surgery in the Elderly

Increased Postoperative Mortality and Complications Among Elderly Patients With Inflammatory Bowel Diseases: An Analysis of the National Surgical Quality Improvement Program Cohort

Natasha Bollegala,^{*} Timothy D. Jackson,^{‡,§} and Geoffrey C. Nguyen^{*,§}

- ▶ n=15,495 patients who underwent major IBD-related abdominal surgery from 2005-2012
 - ▶ 1,707 (11%) were “elderly” (age ≥65)
- ▶ Postoperative 30-day mortality, elderly vs non-elderly
 - ▶ Crohn's: 4.2% vs 0.3%* (aOR 11.67, 95% CI 5.99-22.74)
 - ▶ UC: 6.1% vs 0.7%* (aOR 4.39, 95% CI 2.49-7.72)
- ▶ Postoperative complications
 - ▶ Crohn's: 28.0% vs 19.4%*
 - ▶ UC: 39.3% vs 23.6%*
- ▶ Still hospitalized >30 days after surgery: 5.0% vs 1.8%*

* p<0.001

Calculating Surgical Risk



Surgical Risk Calculator



AMERICAN COLLEGE OF SURGEONS
Inspiring Quality: Highest Standards, Better Outcomes

Home

About

FAQ

ACS Website

ACS NSQIP Website

Enter Patient and Surgical Information

i Procedure

Clear

Begin by entering the procedure name or CPT code. One or more procedures will appear below the procedure box. You will need to click on the desired procedure to properly select it. You may also search using two words (or two partial words) by placing a "+" in between, for example: "cholecystectomy + cholangiography"

Reset All Selections

i Are there other potential appropriate treatment options? Other Surgical Options Other Non-operative options None

Please enter as much of the following information as you can to receive the best risk estimates.
A rough estimate will still be generated if you cannot provide all of the information below.

Age Group

Under 65 years

Sex

Female

Functional Status **i**

Independent

Emergency Case **i**

No

ASA Class **i**

Healthy patient

Steroid use for chronic condition **i**

No

Diabetes **i**

No

Hypertension requiring medication **i**

No

Congestive Heart Failure in 30 days prior to surgery **i**

No

Dyspnea **i**

No

Current Smoker within 1 Year **i**

No

History of Severe COPD **i**

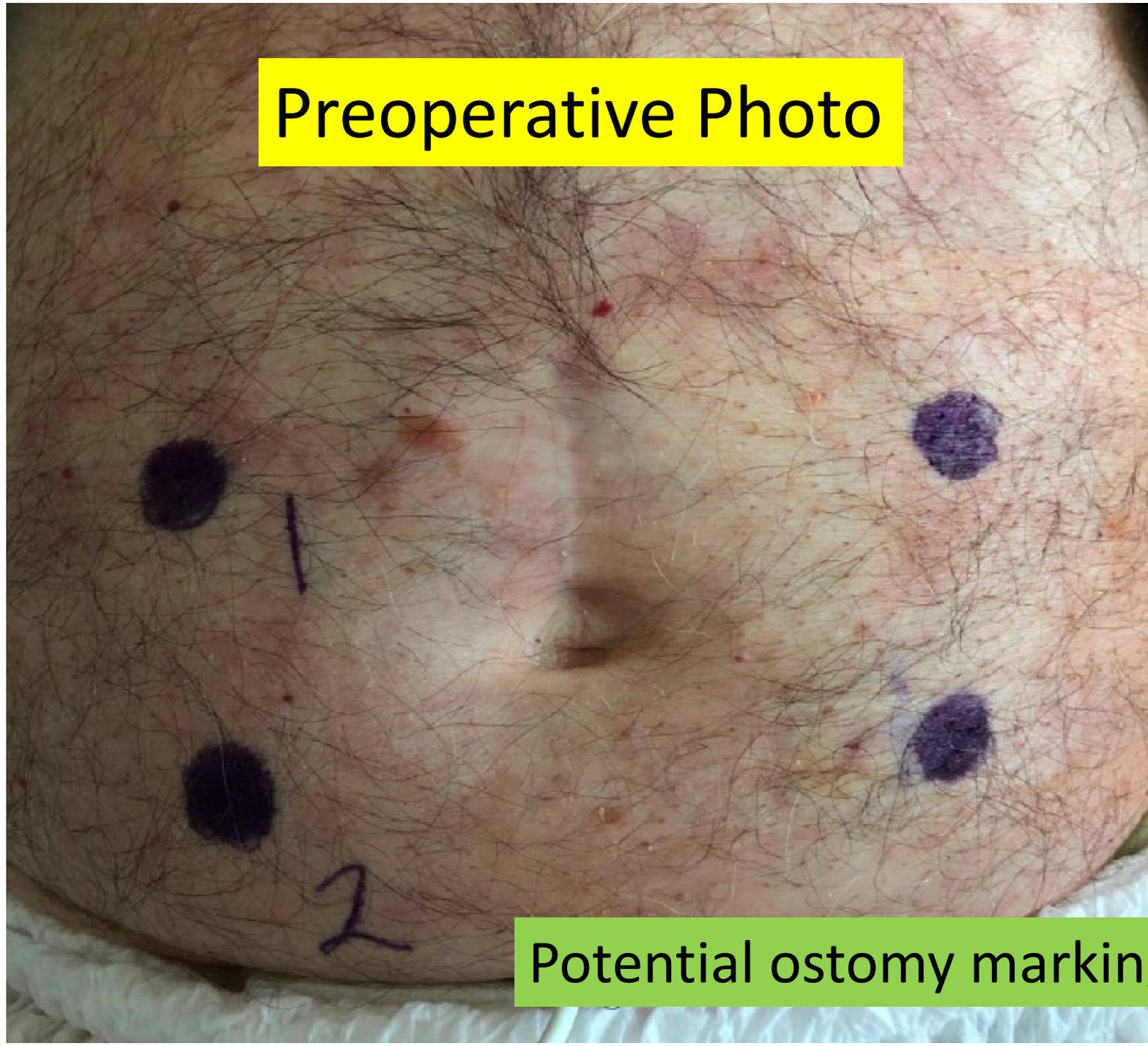
No

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

Surgical “Prehabilitation”

- ▶ Focused on prehabilitation x 3 weeks; discharged home on TPN
- ▶ Presurgical labs:
 - ▶ WBC 11
 - ▶ Albumin 2.4, Prealbumin 20
 - ▶ Cr 0.7
 - ▶ Lactate 1.0
- ▶ Exploratory laparotomy planned
 - ▶ Resection or stricturoplasty? All of the strictures or just the perforated one?
 - ▶ What kind of anastomosis?
 - ▶ Ileostomy?

Preoperative Photo



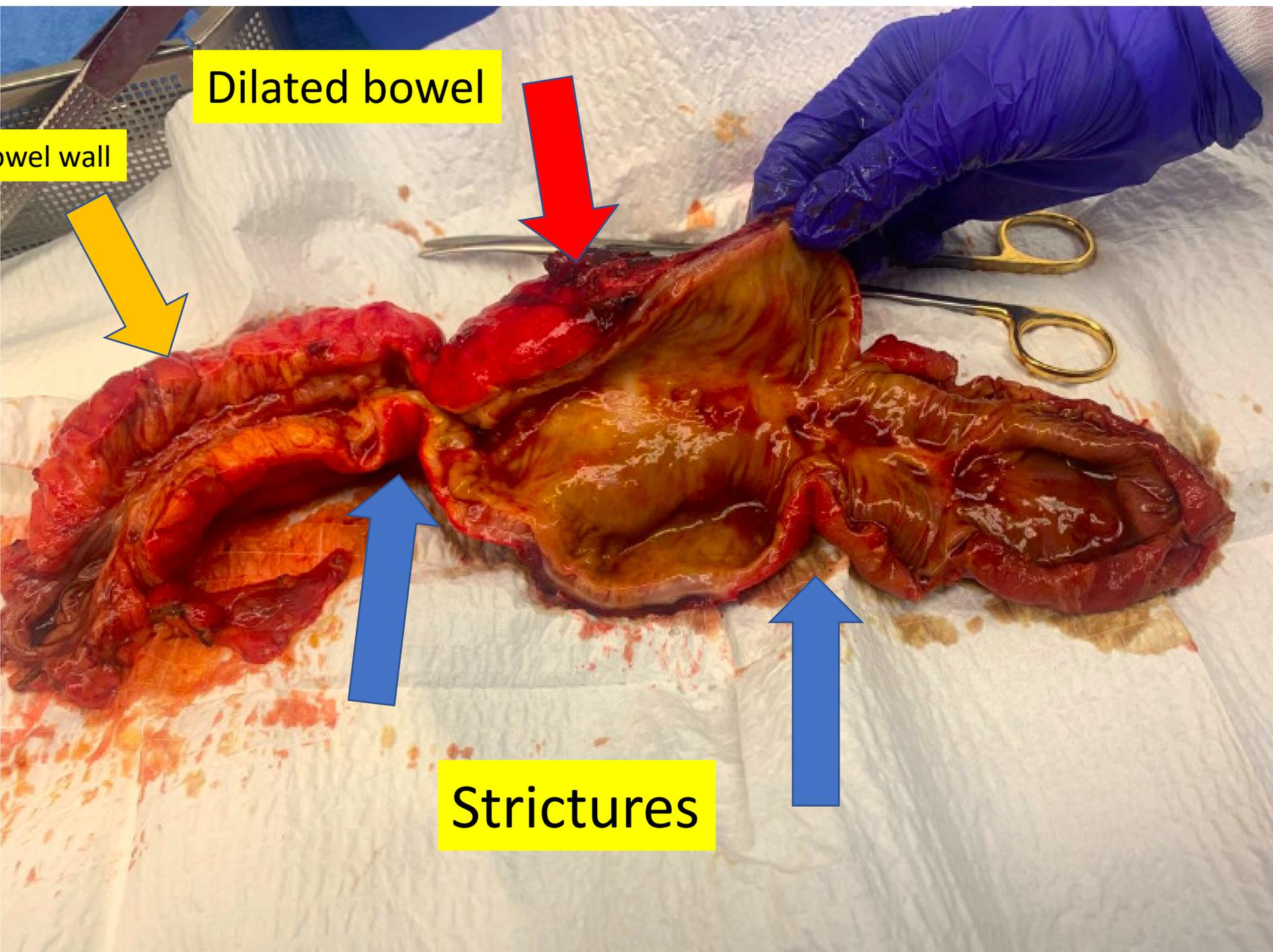
Potential ostomy markings



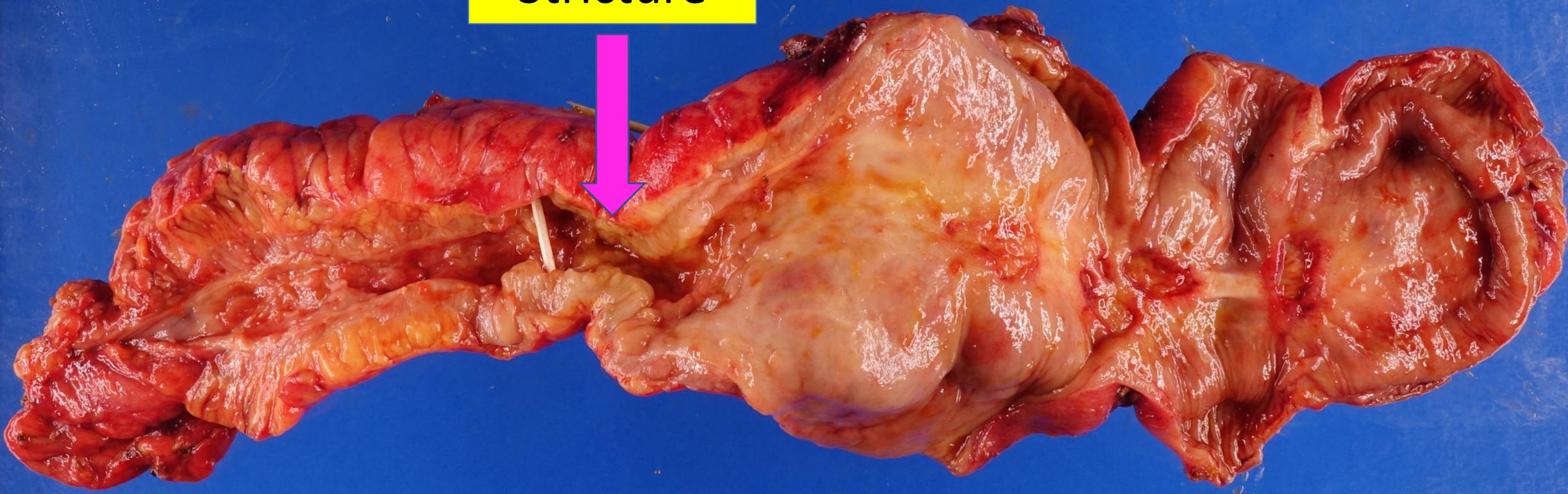
Dilated bowel

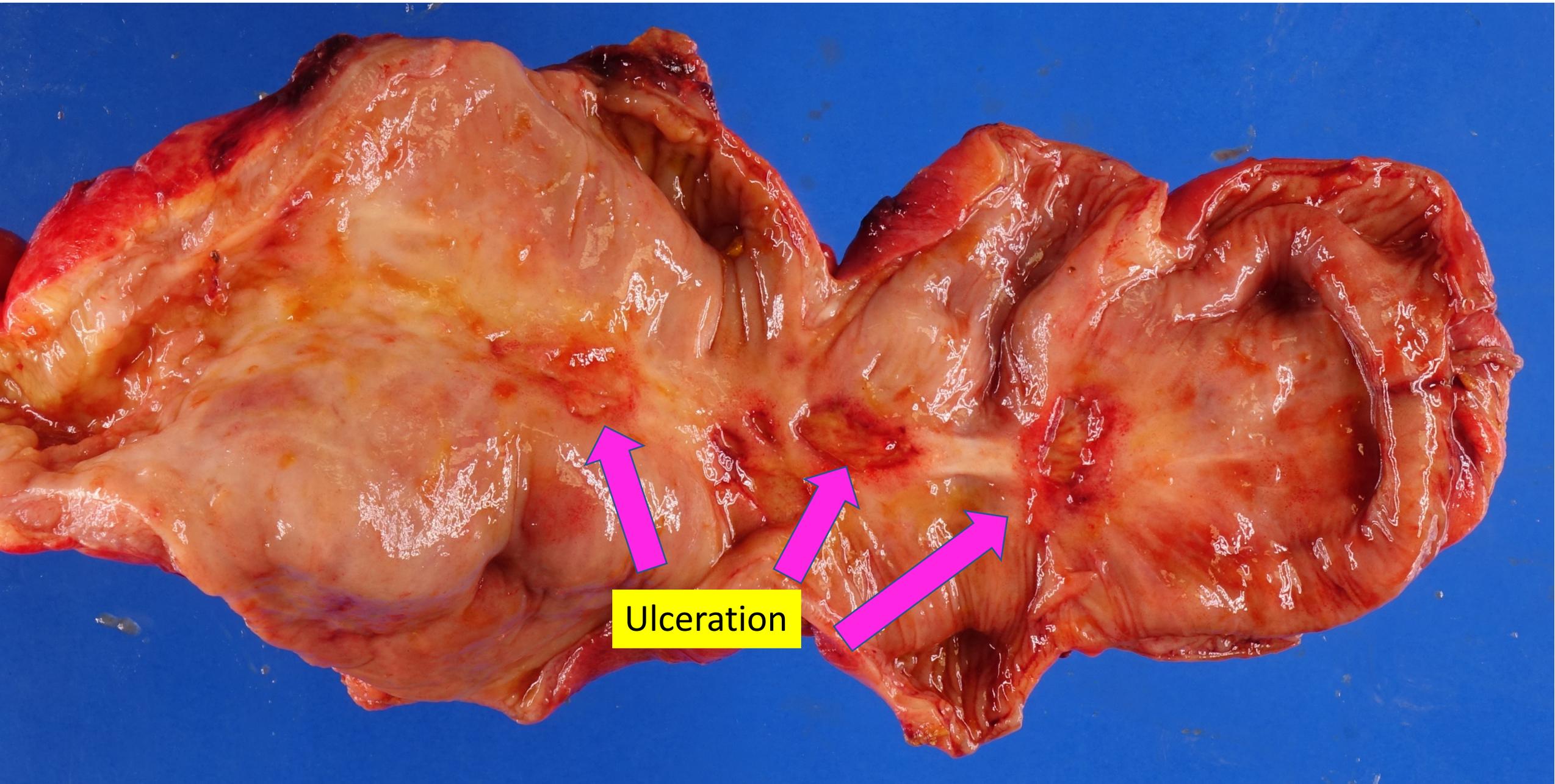
Thickened bowel wall

Strictures



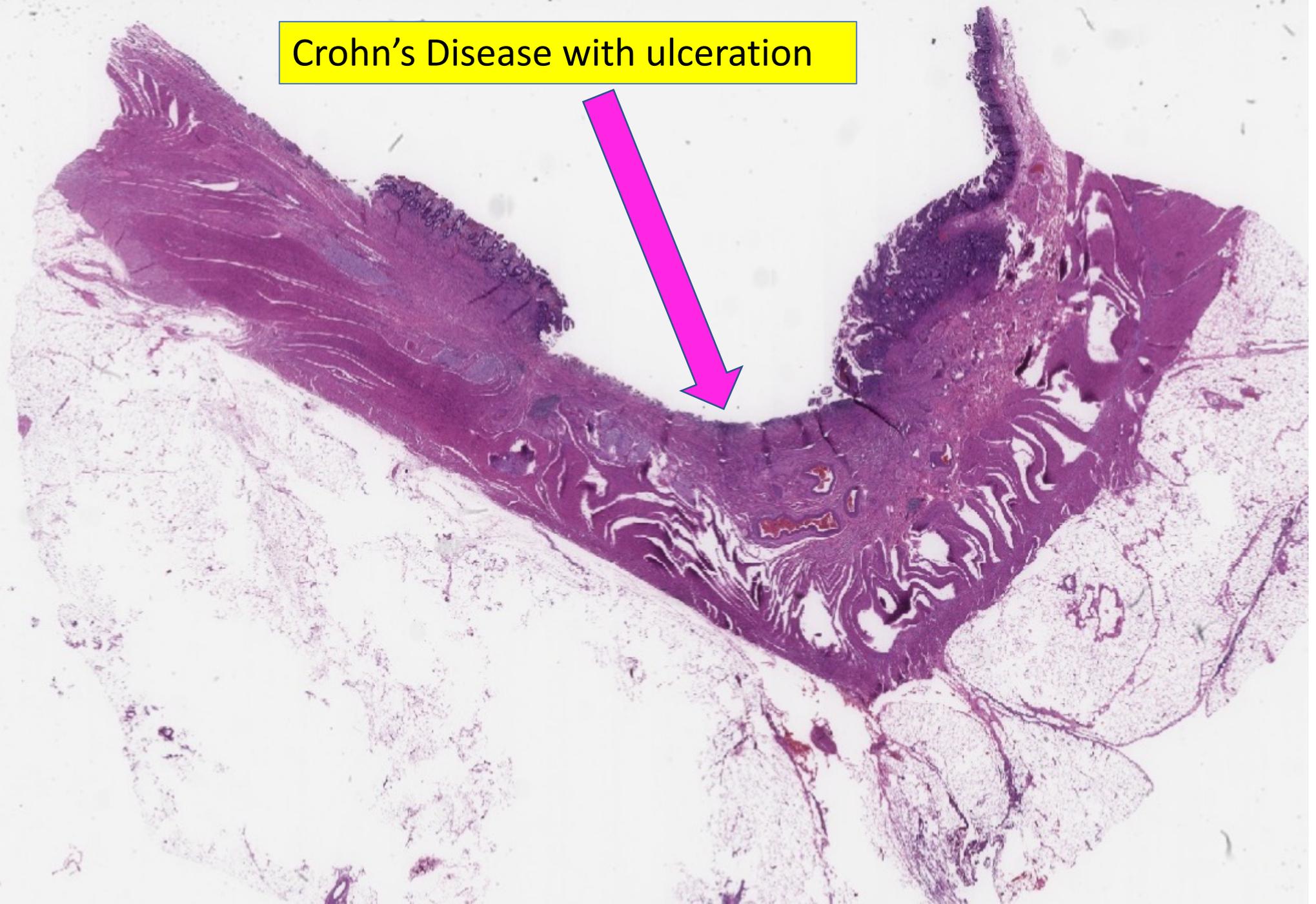
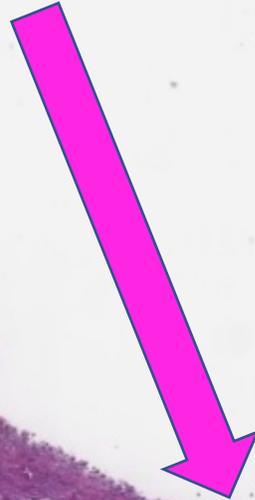
Stricture



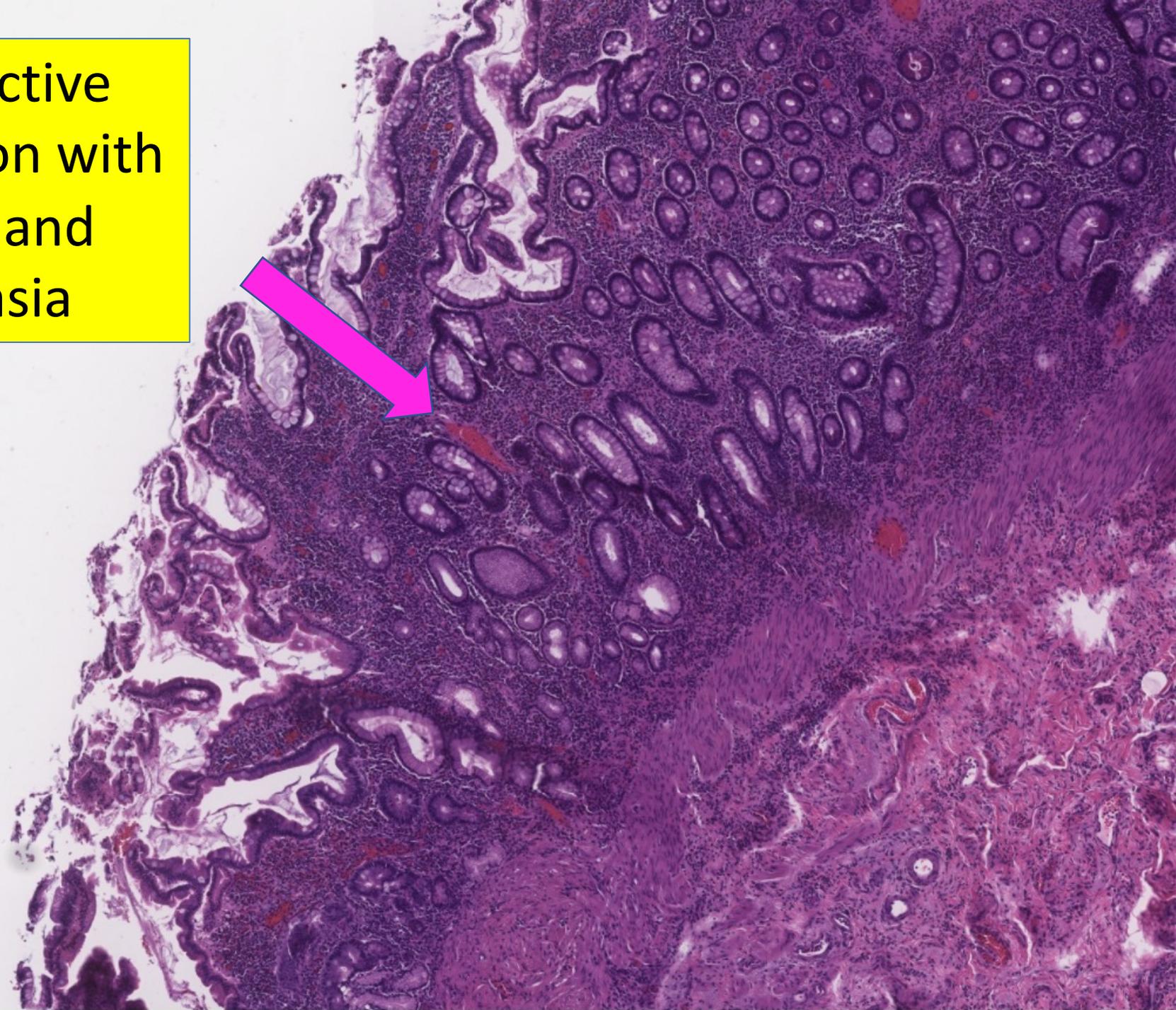


Ulceration

Crohn's Disease with ulceration



Chronic active
inflammation with
pyloric gland
metaplasia



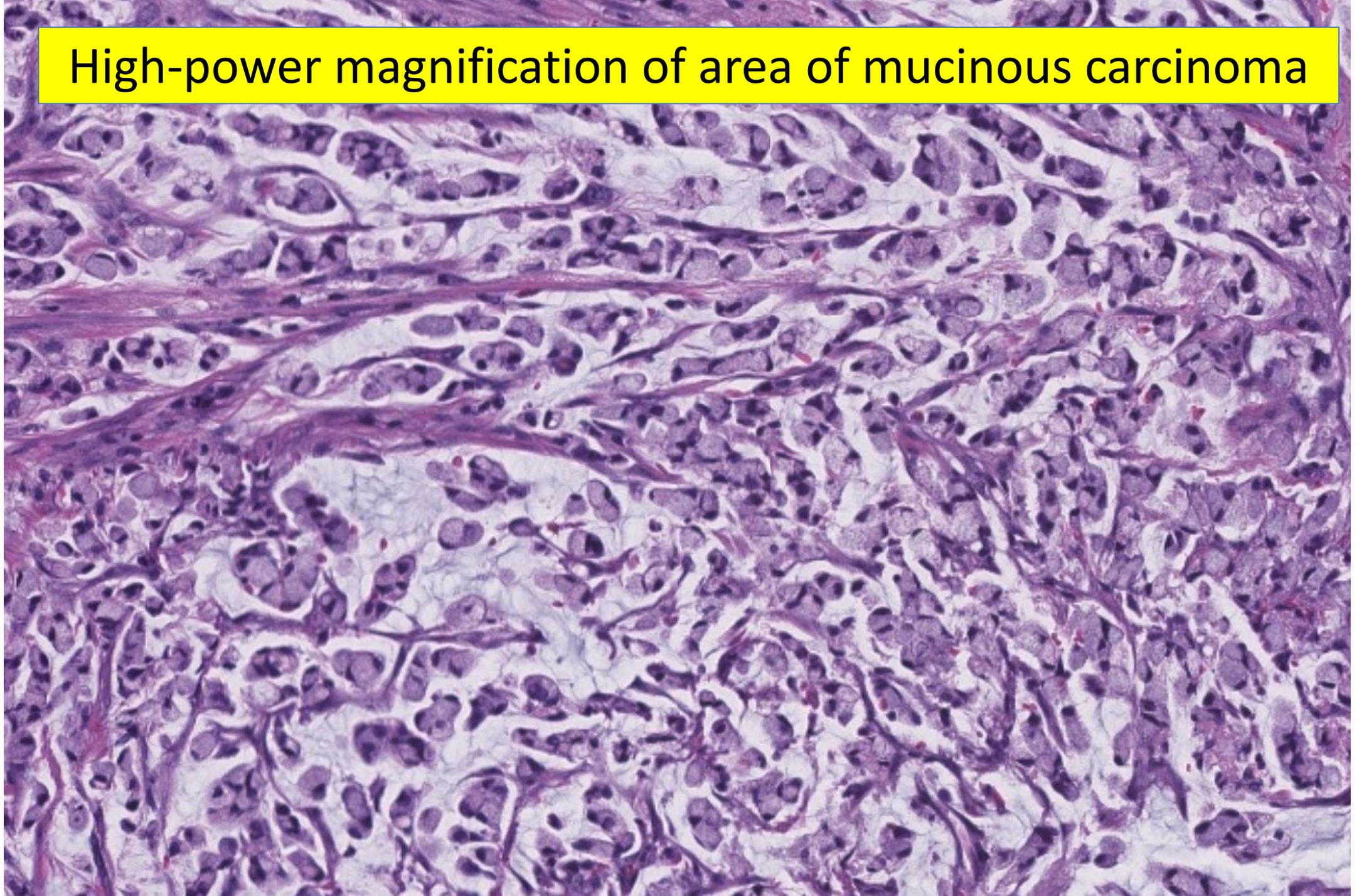


Stricture of small bowel

Cross sections through stricture



High-power magnification of area of mucinous carcinoma

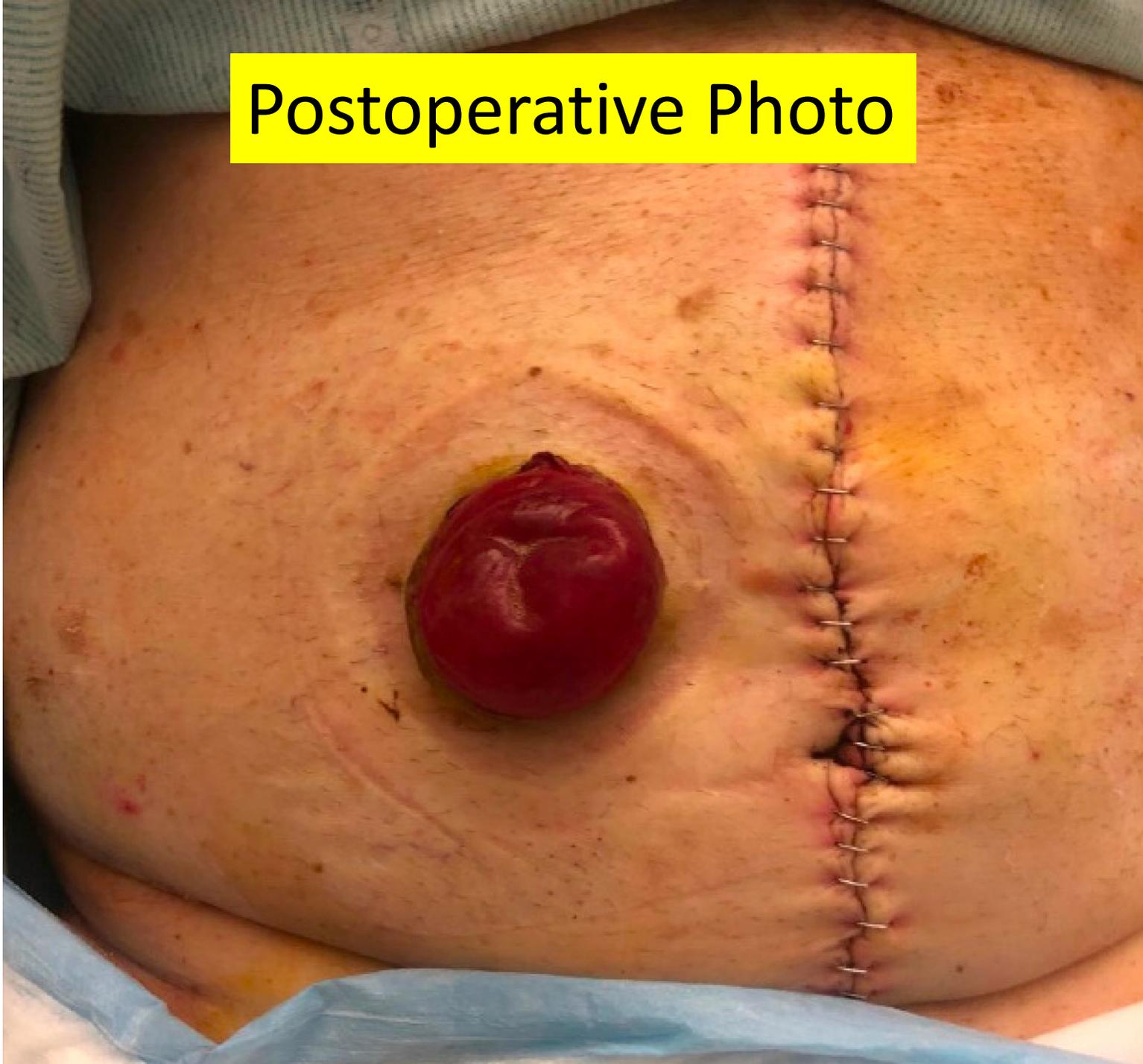


Case #1: Final Pathology

SMALL INTESTINE (RESECTION):

- **Invasive adenocarcinoma, poorly differentiated (signet-ring cell morphology)**
 - **Tumor involves ileo-cecum and anastomotic site/strictured area**
 - **Greatest size of tumor: approximately 15.5 cm**
- **Background changes: consistent with Crohn disease**
- **Lymphovascular invasion: focal present**
- **Nine lymph nodes, negative for metastatic carcinoma (0/9)**
- **Surgical margins: negative for carcinoma**
- **Pathologic Staging (AJCC 8th ed): pT3 pN0**
- **Intact expression of all four DNA mismatch repair proteins by immunostains**

Postoperative Photo



Case #1: Follow-Up

- ▶ Received IV fluids x 3 weeks to balance ileostomy losses
- ▶ Started on loperamide to keep output <1200mL/day

- ▶ CT chest demonstrates concerning lesions for metastatic disease
- ▶ History of Mycobacterium avium complex (MAC) disease
- ▶ CT-guided biopsy of lung lesion consistent with MAC

- ▶ No indication for chemotherapy, surveillance only

Case #1: Hypothetical

- ▶ What if he had been on pre-operative biologic therapy?

Anti-TNF: Surgical Risk

Intra-Abdominal Surgery

(pre-op) Anti-TNF Therapy is Not Associated with Post-Operative Infection (PUCCINI)

Methods

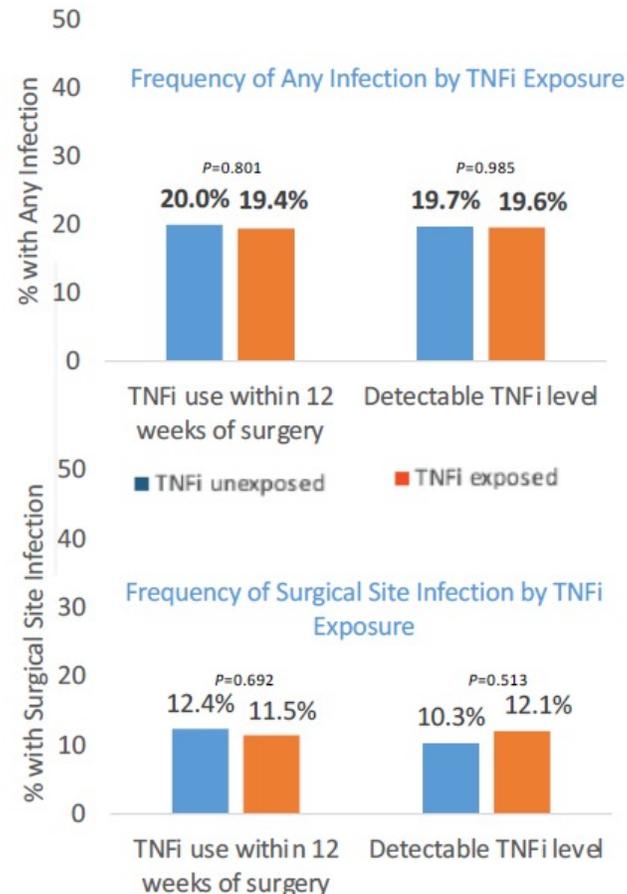
- Prospective trial (2014-2017) at 17 centers
- IBD Patients undergoing intra-abdominal surgery exposed to TNFi within 12 weeks or detectable levels peri-operatively (peri-op) evaluating potential risk factors for 30-day infections

Results

- 955 patients underwent surgery (ileocolic resection= 42.9%, segmental resection=18.3%, subtotal colectomy=17.9%)
- 382/955 (40%) with pre-op TNFi and 223/955 (23.7%) with detectable peri-op drug level

Conclusion

- TNFi within 12 weeks or detectable peri-op drug levels were not associated with post operative infections
- Pre-operative use of TNFi should not affect surgical decisions in IBD patients



Don't stop anti-TNF therapy for intra-abdominal surgery

Drug	Half-Life
Infliximab	8-10 days
Adalimumab	14 days

Vedolizumab: Surgical Risk

Intra-Abdominal Surgery

Vedolizumab Does NOT Increase Risk of 30-Day Perioperative Infections After Intraabdominal Surgery

Methods:

- Multicenter, retrospective study
- N=1433 IBD patients with intraabdominal surgeries from 10/2015 to 2/2020
- Intraabdominal surgeries and infections and IBD diagnosis identified by ICD-10 codes
- All perioperative (30 days post-op) infections recorded

Results:

- Only steroid group with significantly increased risk for perioperative infection ($P=0.03$) (Figure 1)
- VDZ did not have a significantly increased risk for infection ($P=0.932$) (Figure 1)
- When compared to other perioperative medication groups, VDZ did NOT have an increased risk of perioperative infection (Table 1)

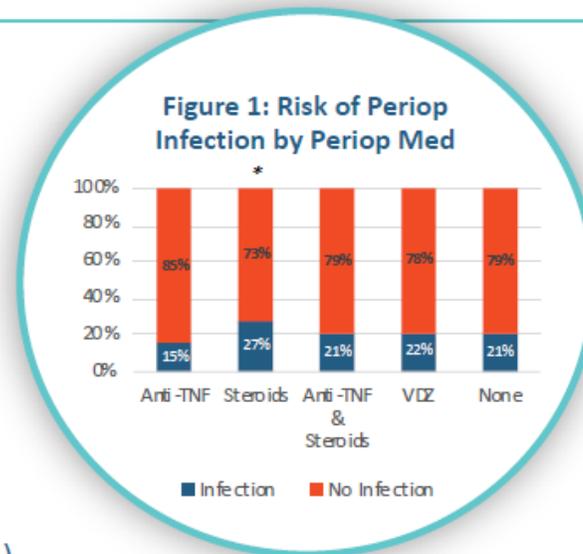


Table 1: Logistic Regression

Effects	P-value
Anti-TNF vs VDZ	0.48
Anti-TNF & Steroids vs VDZ	0.92
Steroids vs VDZ	0.56
None vs VDZ	0.96

Don't stop vedolizumab for intra-abdominal surgery

Drug	Half-Life
Vedolizumab	25 days

CONCLUSION

- Vedolizumab did NOT increase the risk of 30-day perioperative infection after intraabdominal surgery

Tofacitinib: Surgical Risk

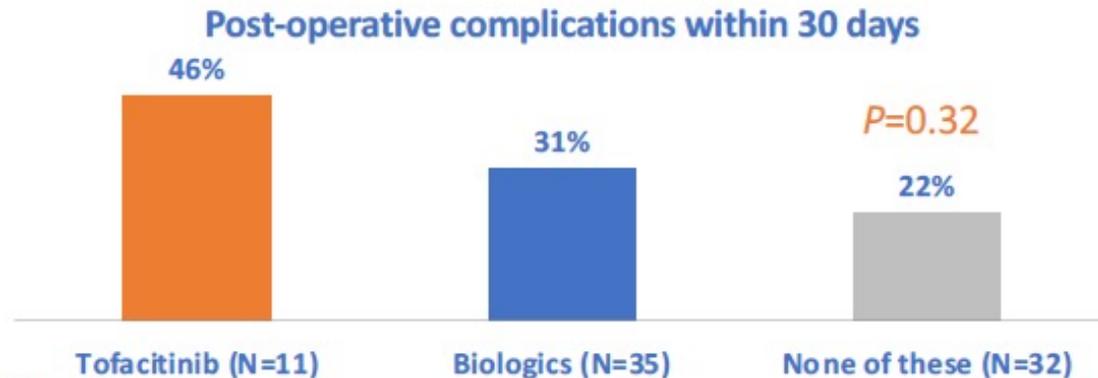
Total Colectomy

Pre-Operative Exposure to Tofacitinib Does Not Increase Post-Operative Complications in Ulcerative Colitis

- **Methods:**

- Postop outcomes of pts with UC who underwent total colectomy at NYU Langone compared between 3 groups: tofacitinib, biologic agents, and none of these therapies in **12 weeks prior to surgery**

- **Results: N=78**



- **Conclusion:**

- Preop exposure to tofacitinib prior to total colectomy in UC conferred no increased risk of 30-day postop outcomes compared to biologic agents or none of these therapies

Table 1: 30d Complications	Tofacitinib N=11	Biologics N=35	None N=32	P-value
Surgical Site Infections (SSI)	1 (9)	4 (11)	2 (6)	0.91
Superficial SSI	1 (9)	4 (11)	2 (6)	0.86
Deep SSI	0	1 (3)	1 (3)	1
Urinary Complications	0	4 (11)	3 (9)	0.76
Mucocutaneous Separation	1 (9)	2 (6)	0	0.27
DVT, N (%)	0	1 (3)	3 (9)	0.37
Ileus, N (%)	1 (9)	0	2 (6)	0.19
Other Infection	0	0	2 (6)	0.43
Cardiopulmonary complication	0	1 (3)	1 (3)	1
pRBC Transfusion Requirement	0	2 (6)	3 (9)	0.69
Acute Kidney Injury	0	1 (3)	1 (3)	1
Right Flank Hematoma	1 (9)	0	0	0.14
Dehydration	1 (9)	1 (3)	2 (6)	0.5

Case #1: Post-Operative Surveillance

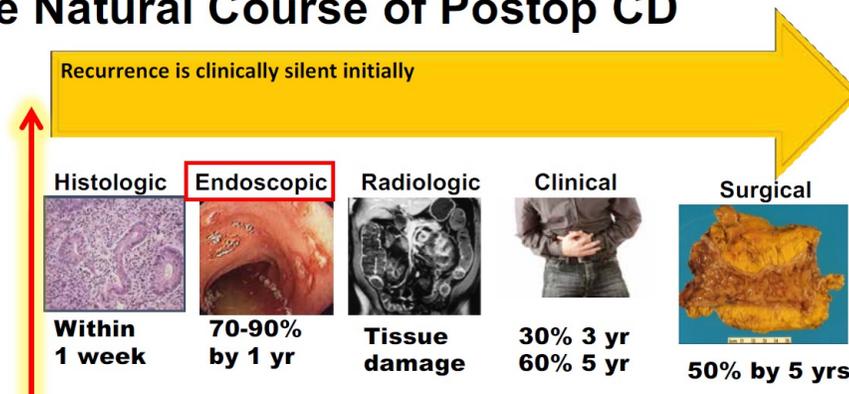
American Gastroenterological Association Institute Guideline on the Management of Crohn's Disease After Surgical Resection



Geoffrey C. Nguyen,¹ Edward V. Loftus Jr,² Ikuo Hirano,³ Yngve Falck-Ytter,⁴ Siddharth Singh,⁵ Shahnaz Sultan,⁶ and the AGA Institute Clinical Guidelines Committee

- ▶ How should he be monitored post-operatively?
 - ▶ Endoscopic recurrence can occur in the neoterminal ileum in up to 90% of patients within 12 months of surgical resection
 - ▶ ~25-50% of patients will require another bowel resection within 5 years of the index surgery

The Natural Course of Postop CD



Courtesy of Miguel Regueiro

Nguyen, *Gastroenterol*, 2017

Case #1: Post-Operative Surveillance

American Gastroenterological Association Institute Guideline on the Management of Crohn's Disease After Surgical Resection



Geoffrey C. Nguyen,¹ Edward V. Loftus Jr,² Ikuo Hirano,³ Yngve Falck-Ytter,⁴ Siddharth Singh,⁵ Shahnaz Sultan,⁶ and the AGA Institute Clinical Guidelines Committee

Table 4. Illustrative Risk Groups for Recurrence of CD After Surgical Resection in the Absence of Any Intervention

Illustrative risk groups	Typical patient characteristics corresponding to risk category	Illustrative risk of clinical recurrence (>18 mo after surgery)	Illustrative risk of endoscopic recurrence (>18 mo after surgery)
Lower risk	Older patient (older than 50 y) Nonsmoker First surgery for a short segment of fibrostenotic disease (<10 to 20 cm) Disease duration >10 y	20%	30%
Higher risk	Younger patient (younger than 30 y) Smoker, ≥2 prior surgeries for penetrating disease, with or without perianal disease	50%	80%

Case #1: Post-Operative Surveillance

American Gastroenterological Association Institute Guideline on the Management of Crohn's Disease After Surgical Resection



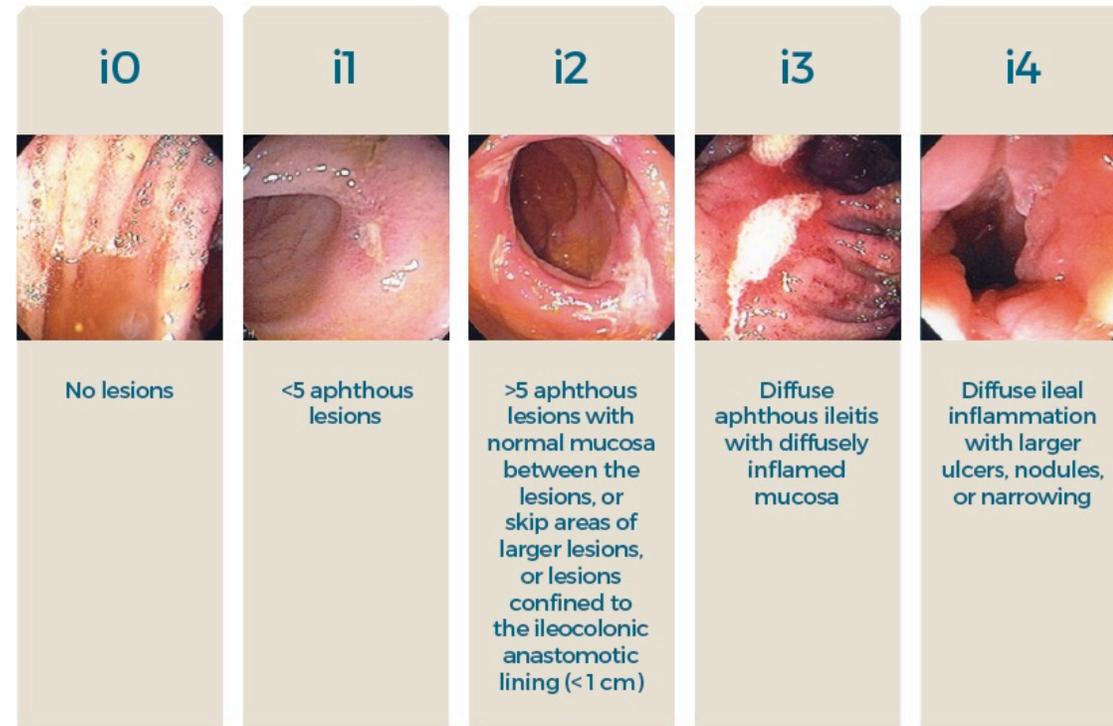
Geoffrey C. Nguyen,¹ Edward V. Loftus Jr,² Ikuo Hirano,³ Yngve Falck-Ytter,⁴ Siddharth Singh,⁵ Shahnaz Sultan,⁶ and the AGA Institute Clinical Guidelines Committee

- ▶ AGA suggests **early pharmacological prophylaxis** over endoscopy-guided treatment
- ▶ AGA suggests using **anti-TNF and/or thiopurines** over other agents
- ▶ AGA suggests **against** using 5-aminosalicylates, budesonide, or probiotics
- ▶ If patient is not receiving pharmacologic prophylaxis, AGA **recommends** postoperative endoscopic monitoring **6-12 months** after surgical resection over no monitoring
- ▶ If patient is receiving pharmacologic prophylaxis, AGA **suggests** postoperative endoscopic monitoring 6-12 months after surgical resection over no monitoring
- ▶ If patient has asymptomatic endoscopic recurrence (Rutgeerts score ≥ 2), AGA suggests initiating or optimizing anti-TNF and/or thiopurine over continued monitoring alone

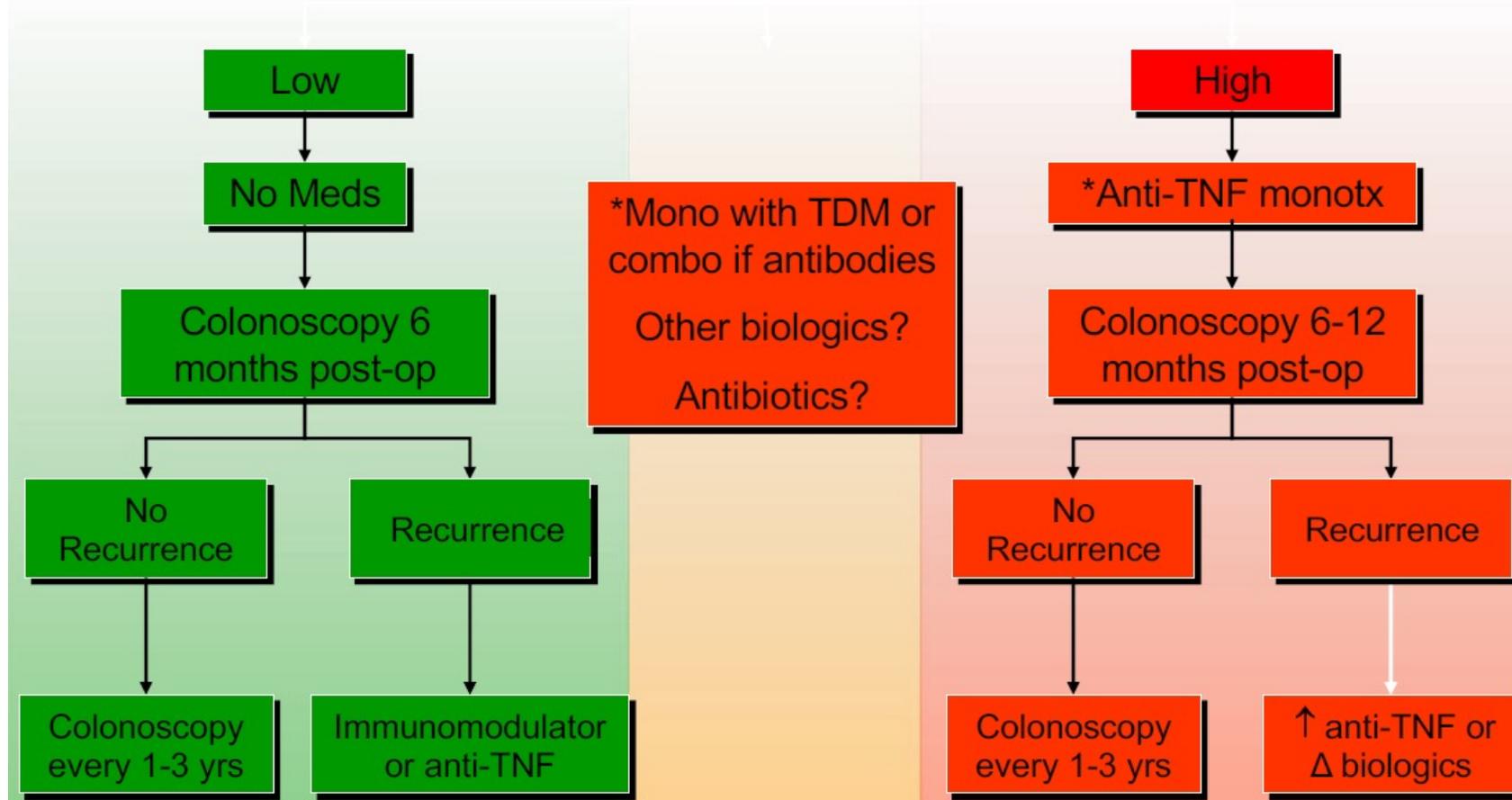
Case #1: Post-Operative Surveillance

Rutgeerts grade	Endoscopic finding	Risk of symptomatic recurrence at 5 years	Probability of absence of symptoms at 5 years
i0	No lesions in the distal ileum	6%	94%
i1	Not more than 5 anastomotic aphthous lesions in the distal ileum	6%	94%
i2	More than 5 aphthous lesions with normal mucosa between the lesions, or skip areas of larger lesions or ulcers up to 1 cm confined to ileocolonic anastomosis	27%	73%
i3	Diffuse aphthous ileitis with diffusely inflamed mucosa between the multiple aphthae	63%	37%
i4	Diffuse inflammation, with larger lesions: large ulcers and/or nodules/cobble and/or narrowing/stenosis	100%	0%

Cornerstones Health IBD Tools



Case #1: Post-Operative Surveillance

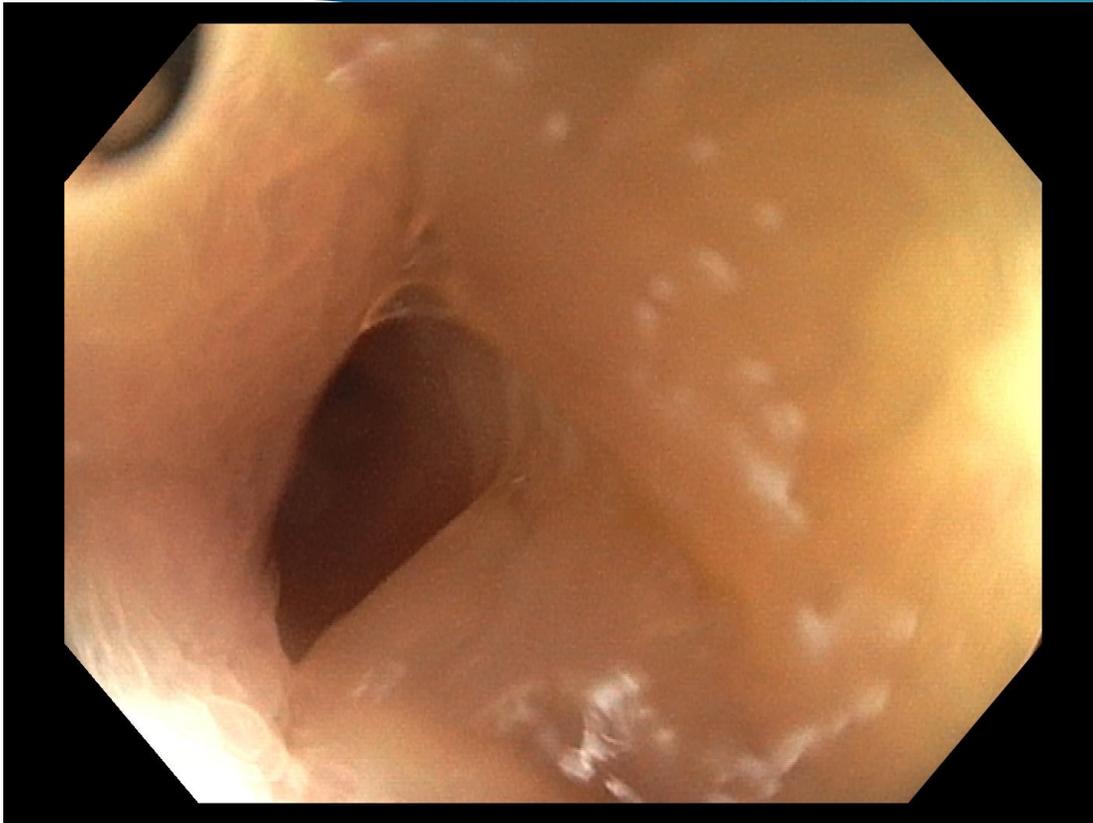


Courtesy of Miguel Regueiro

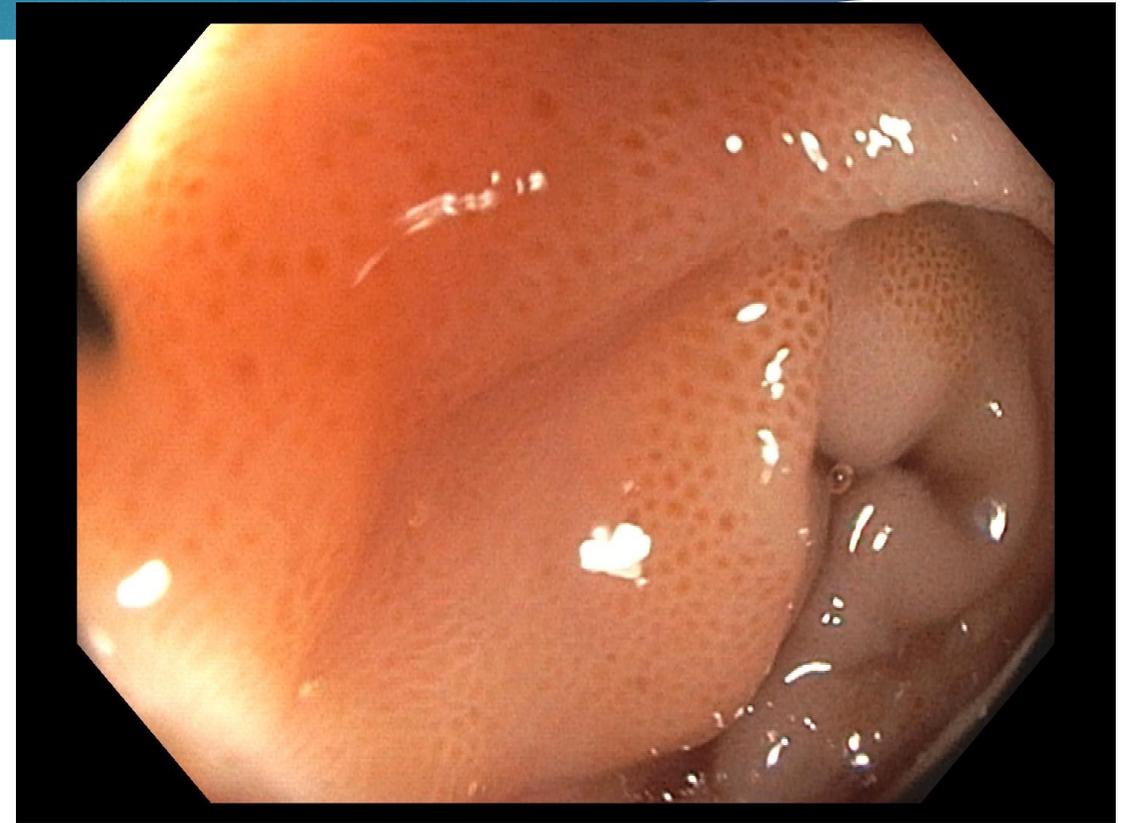
Case Presentation #2

- ▶ 75-year-old woman with recurrent abdominal pain, nausea, constipation, unintentional 20-lb weight loss
- ▶ Multiple hospitalizations: 2017, August 2020, February 2021 (x2)
 - ▶ CT: distended loops of bowel with air-fluid levels, phlegmon near the terminal ileum, possible entero-enteric fistulae, right hydronephrosis and ureteral obstruction
 - ▶ Diagnosed with SBO, resolved with conservative management
 - ▶ Colonoscopy: tortuous; stricture 10 cm proximal to terminal ileum
 - ▶ Surgical evaluation delayed by stroke
- ▶ 5/1/21: re-admitted, transferred to UC Davis for colorectal surgery evaluation

Colonoscopy (February 2021)



Small bowel stricture



Tortuous sigmoid colon

Case Presentation #2

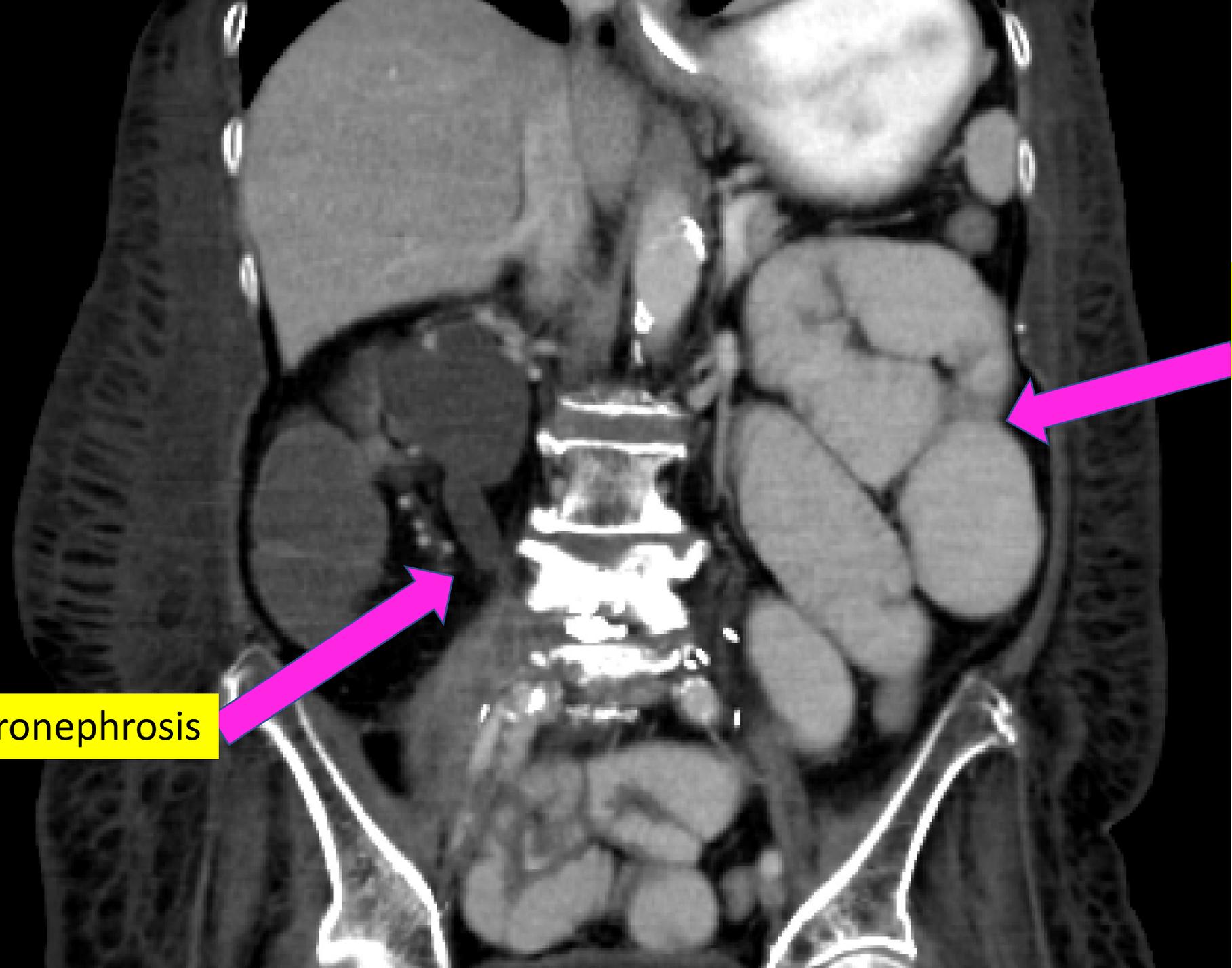
- ▶ PMH/PSH:
 - ▶ GERD
 - ▶ Chronic anemia
 - ▶ Rheumatoid arthritis (not on steroids or DMARDs)
 - ▶ Endometrial cancer s/p hysterectomy/salpingo-oophorectomy w/lymph node dissection
 - ▶ >50 pack-year nicotine use
 - ▶ Ruptured cerebral aneurysm, subarachnoid hemorrhage, coils placed

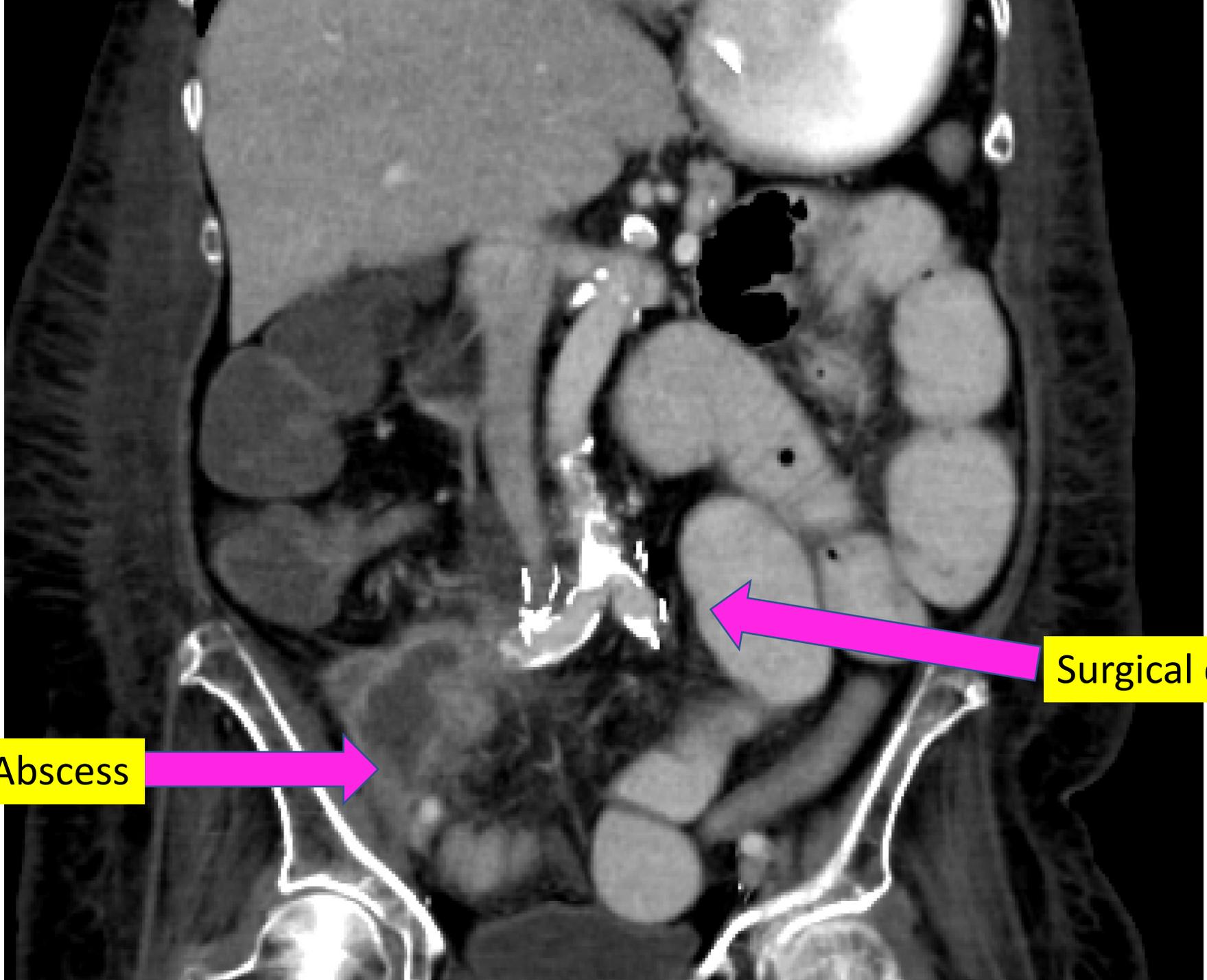
Case Presentation #2

- ▶ Physical: Abdomen soft, slightly distended, tympanic. Diffuse 2/10 tenderness to deep palpation
- ▶ Labs:
 - ▶ Hgb 9.0, Hct 28.3
 - ▶ albumin 1.3, prealbumin 6
 - ▶ CA 125 141.3
 - ▶ fecal calprotectin >3000

Chronic hydronephrosis

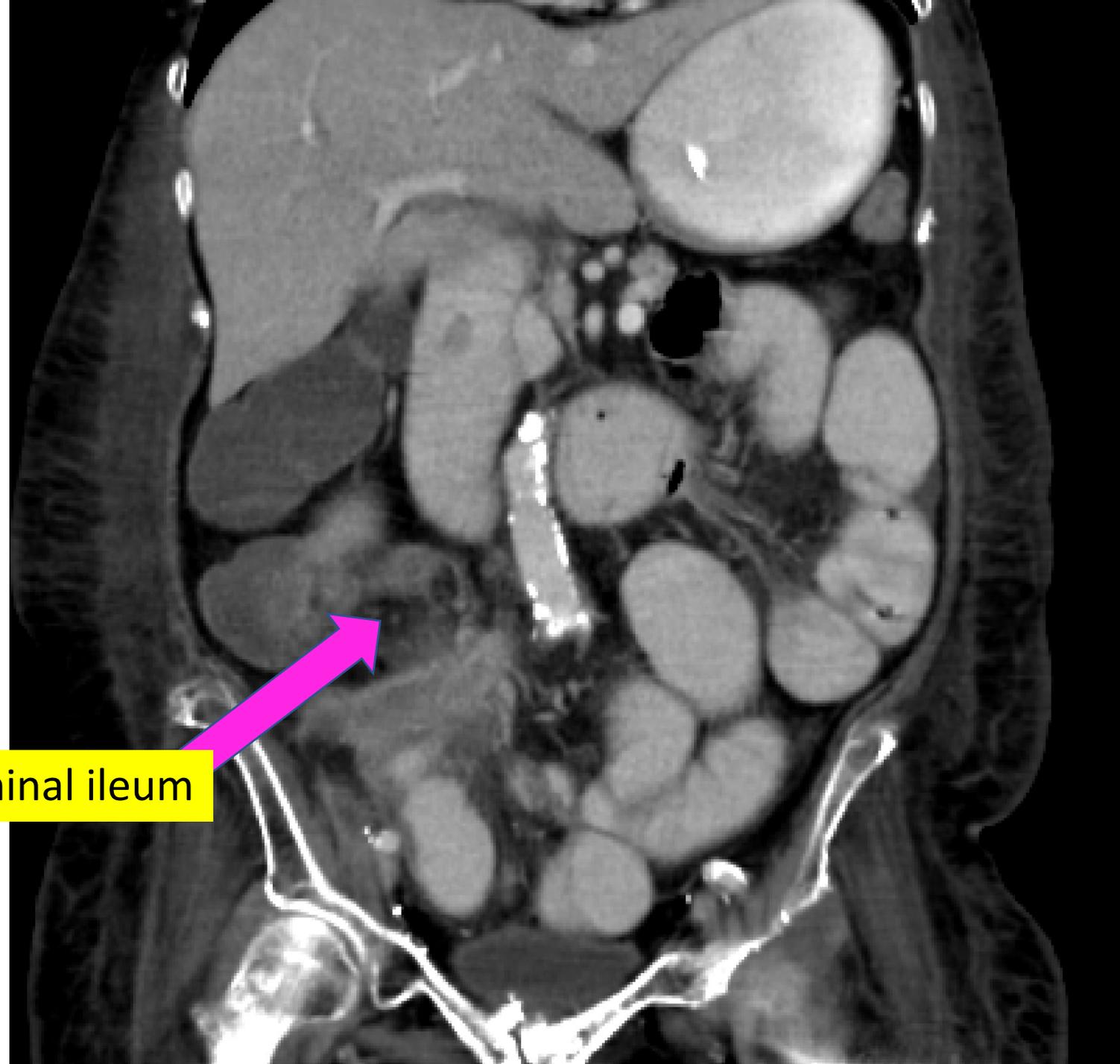
Small bowel
Dilation





Abscess

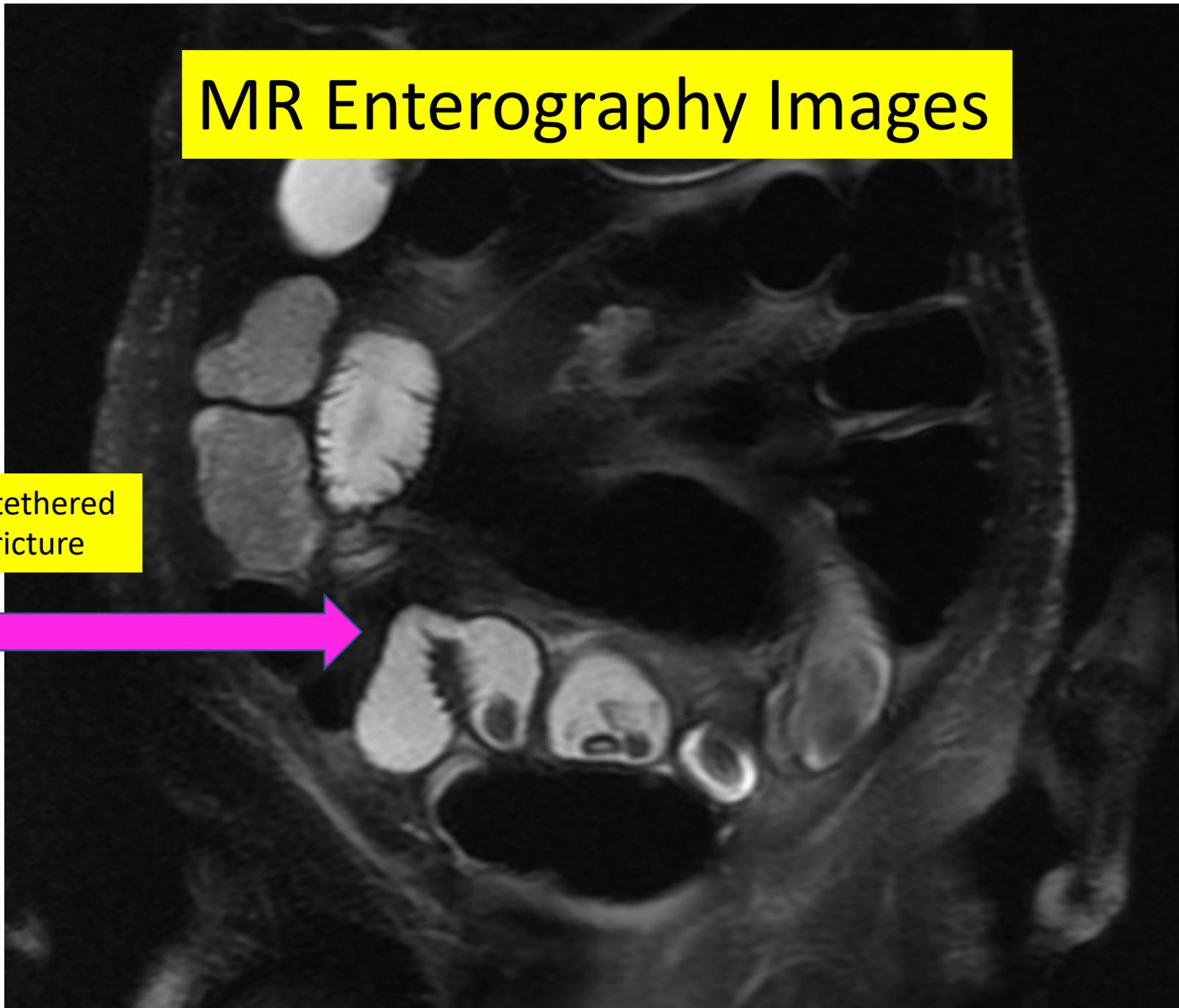
Surgical clips



Stenotic terminal ileum

MR Enterography Images

Small bowel loop tethered to abscess with stricture

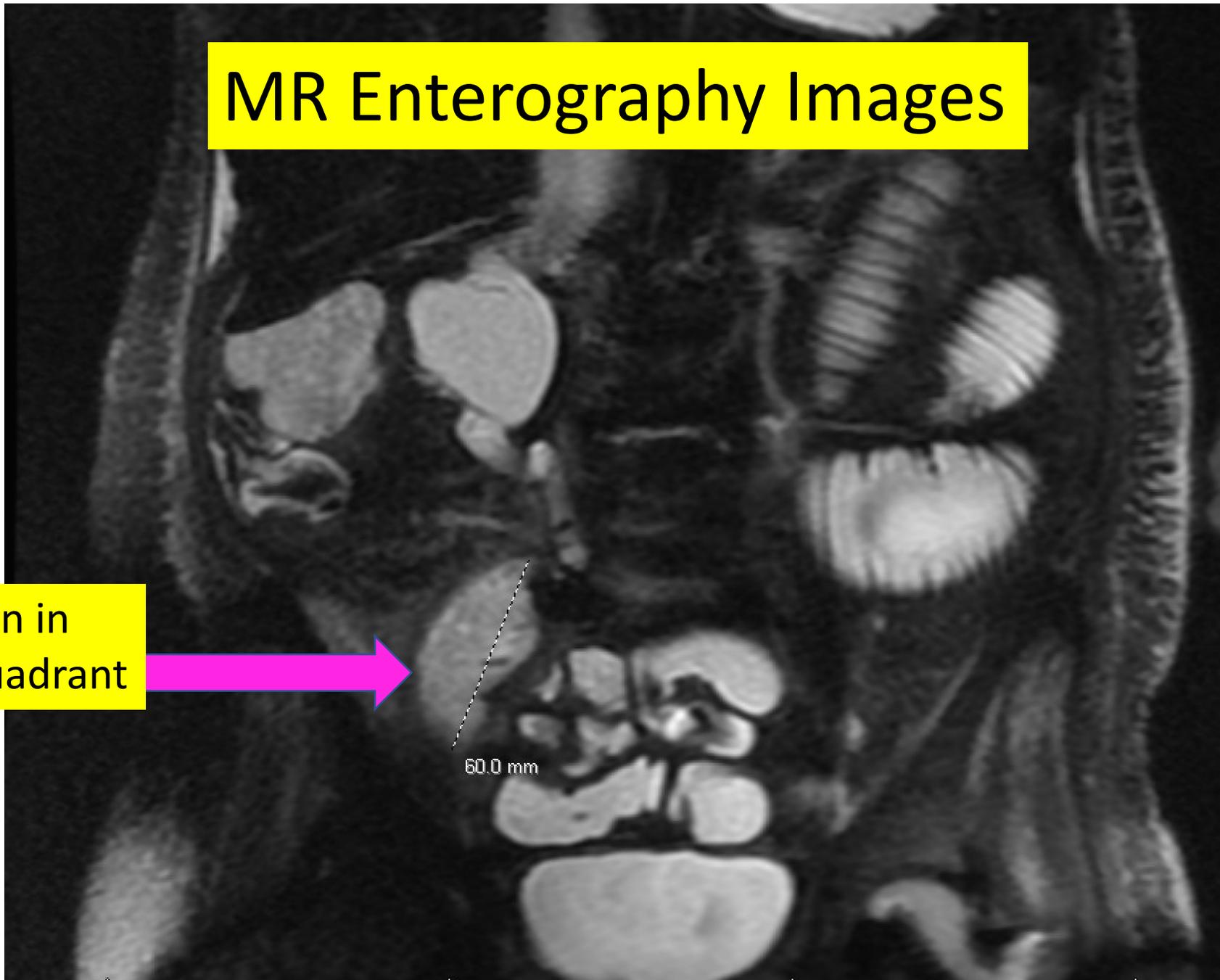


MR Enterography Images

Fluid collection in
right lower quadrant



60.0 mm



Case Presentation #2

- ▶ Is this Crohn's disease?

IBD in the Elderly

AGA Clinical Practice Update on Management of Inflammatory Bowel Disease in Elderly Patients: Expert Review

Ashwin N. Ananthakrishnan,¹ Geoffrey C. Nguyen,² and Charles N. Bernstein³

Progression of Elderly Onset Inflammatory Bowel Diseases: A Systematic Review and Meta-Analysis of Population-Based Cohort Studies

Jacob J. Rozich,^{*} Parambir S. Dulai,[‡] Mathurin Fumery,[§] William J. Sandborn,[‡] and Siddharth Singh^{‡,||}

- ▶ 15% of new IBD diagnoses are in patients over age 60 (“elderly onset IBD”)
- ▶ Prevalence of IBD among elderly individuals is increasing by 5.2% per year
- ▶ Similar 5-year risk of surgery as adult-onset IBD
 - ▶ 23% for elderly onset Crohn’s, 8% for elderly onset ulcerative colitis
- ▶ Less likely to receive steroid-sparing medications
 - ▶ Steroid exposure in the elderly is comparable to that of adult-onset IBD
 - ▶ Exposure to immunomodulators and biologics is 38-64% lower in patients with elderly onset IBD
- ▶ Increased risks with certain medications
 - ▶ Higher infection rate with anti-TNF therapy (frailty more predictive than age)
 - ▶ Higher lymphoma and NMSC rate with thiopurines

Rozich, *Clin Gastroenterol Hepatol*, 2020

Ananthakrishnan, *Gastroenterol*, 2021

IBD in the Elderly

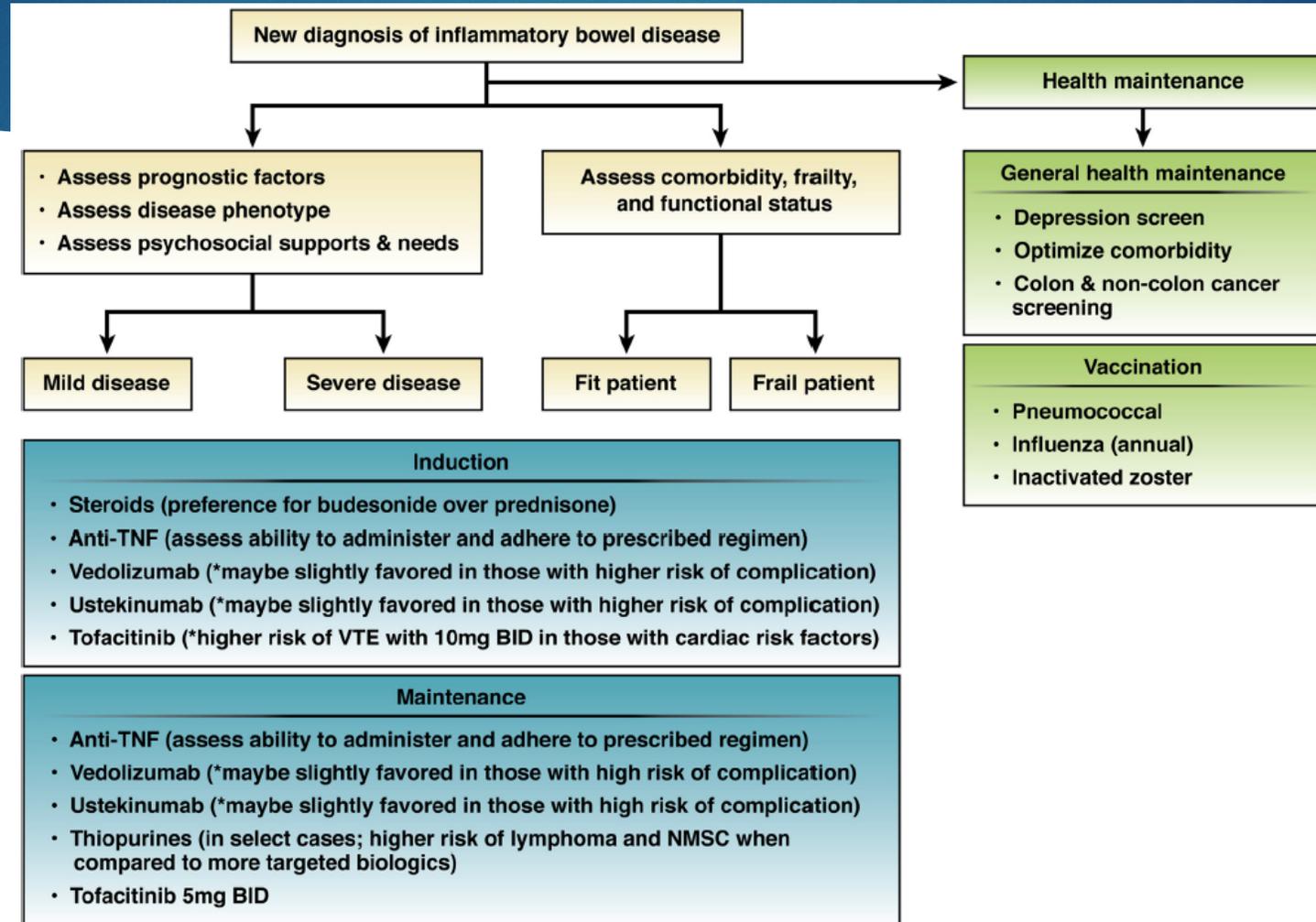
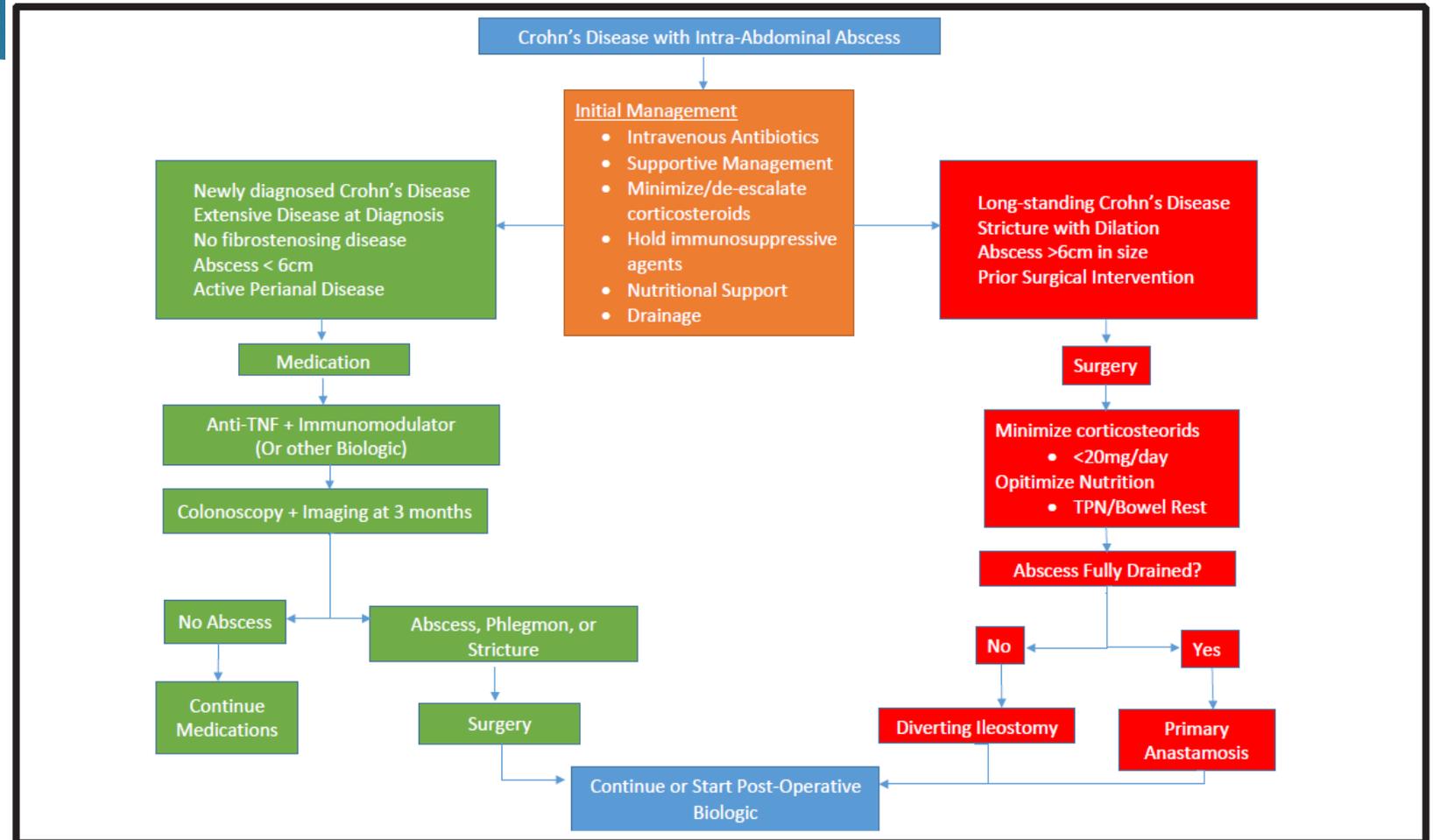


Figure 2. Treatment algorithm for elderly patients with inflammatory bowel disease. BID, twice daily; VTE, venous thromboembolism.

Case #2: Management

Figure 1. Proposed Algorithm for the Management of Intra-Abdominal Abscess in Crohn's Disease

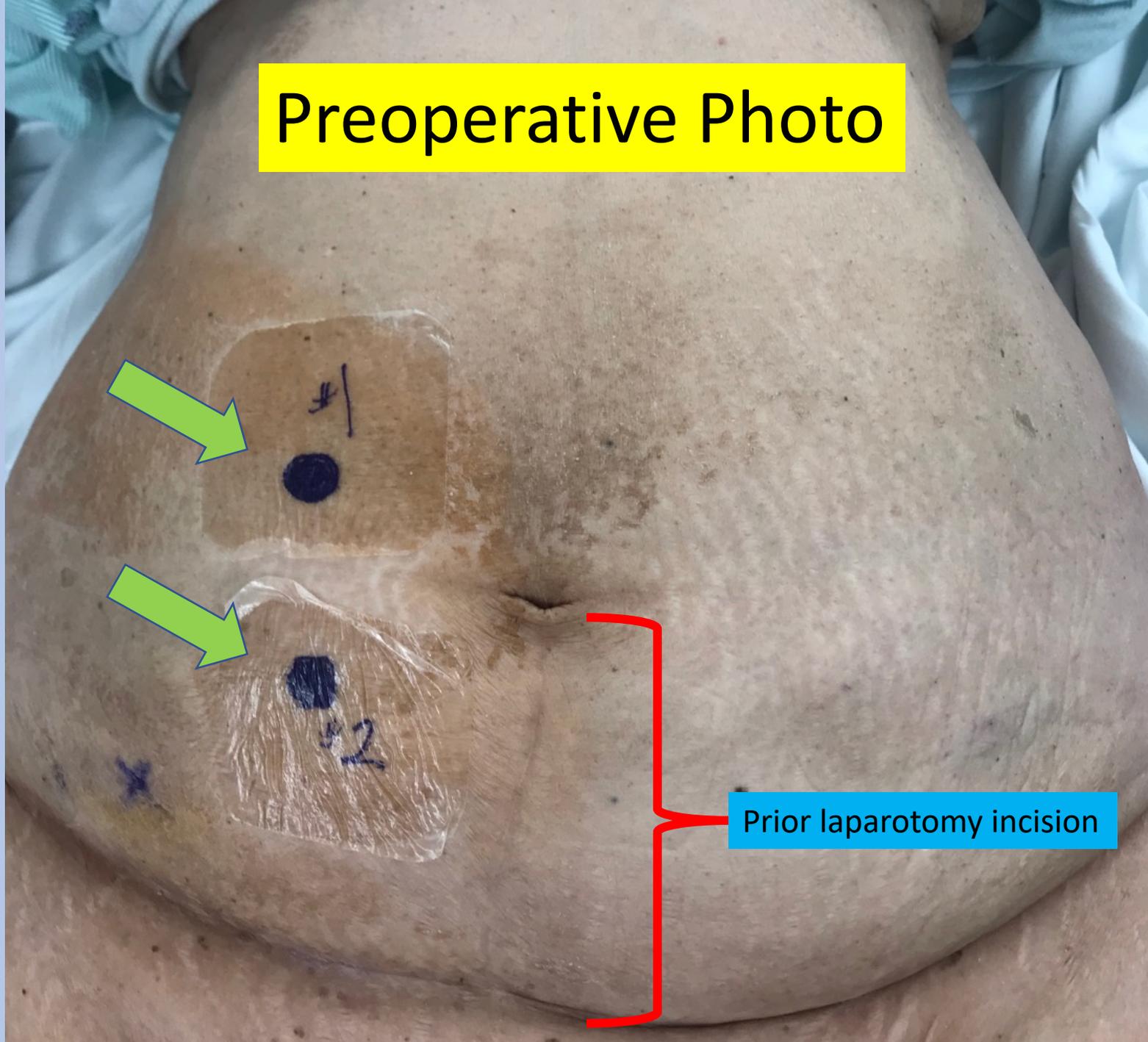
► Address the abscess



Case #2: Management

- ▶ Management
 - ▶ IR aspiration of abscess (Hospital day #17): serosanguinous fluid + *C. albicans*, *E. faecium*
 - ▶ IV ceftriaxone, vancomycin, and fluconazole
 - ▶ SBO partially resolved, tolerated small amounts of clears, had BMs
 - ▶ Nutritional status improved with TPN; prealbumin = 19
- ▶ Surgery planned to alleviate obstruction
 - ▶ Resection vs bypass?
 - ▶ What kind of anastomosis?
 - ▶ Ileostomy?

Preoperative Photo

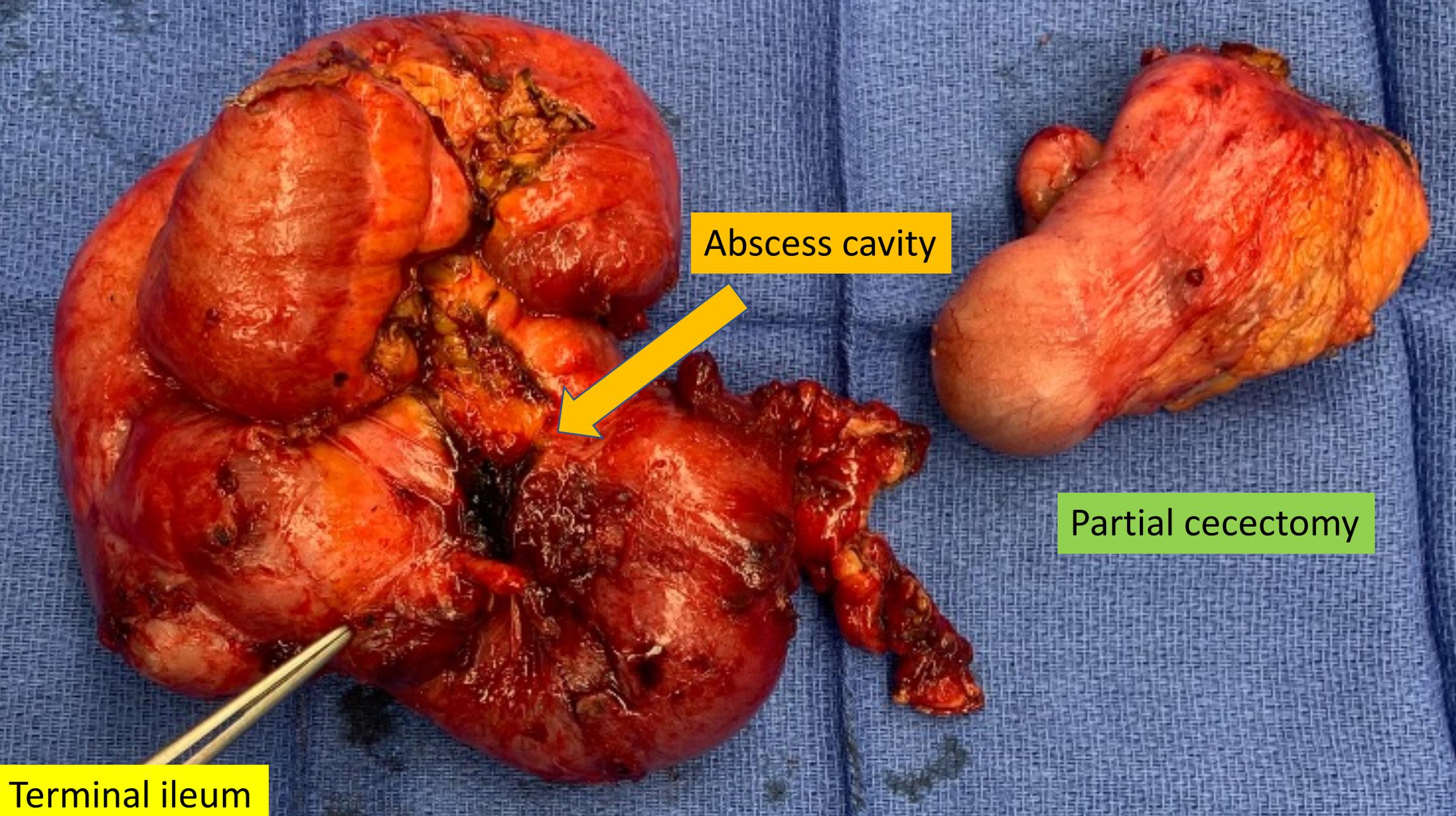


Prior laparotomy incision

Terminal ileum

Abscess cavity

Partial cecectomy



Case #2: Final Pathology

- ▶ Chronic inflammation, ulceration, entero-enteric fistula
- ▶ Creeping fat
- ▶ No granulomas
- ▶ No dysplasia or malignancy

Postoperative Photo



A Word About Anastomoses

- ▶ What factors determine the type of anastomosis created?
 - ▶ Side-to-side anastomosis
 - ▶ End-to-end anastomosis
 - ▶ Stapled vs handsewn
- ▶ Do outcomes differ by anastomosis type?
 - ▶ Conflicting literature
 - ▶ End-to-end: better quality of life, less healthcare utilization
 - ▶ Side-to-side: fewer postop complications and leaks, reduced Crohn's recurrence

Ileocecal Anastomosis Type Significantly Influences Long-Term Functional Status, Quality of Life, and Healthcare Utilization in Postoperative Crohn's Disease Patients Independent of Inflammation Recurrence

Mahesh Gajendran, MD, MPH¹, Anthony J. Bauer, PhD^{2,3,4}, Bettina M. Buchholz, MD, PhD², Andrew R. Watson, MD⁵, Ioannis E. Koutroubakis, MD, PhD², Jana G. Hashash, MD, MSc², Claudia Ramos-Rivers, MD², Nilesh Shah, PhD⁶, Kenneth K. Lee, MD⁷, Ruy J. Cruz, MD, PhD⁸, Miguel Regueiro, MD², Brian Zuckerbraun, MD², Marc Schwartz, MD², Jason Swoger, MD², Arthur Barrie, MD, PhD², Janet Harrison, MD², Douglas J. Hartman, MD¹⁰, Javier Salgado, MD⁹, William M. Rivers, RN², Benjamin Click, MD², Alyce M. Anderson, PhD², Chandraprakash Umopathy, MD, MS¹, Dmitry Babichenko¹¹, Michael A. Dunn, MD² and David G. Binion, MD²

Dig Dis Sci (2014) 59:1544–1551
DOI 10.1007/s10620-014-3039-0

REVIEW

Stapled Side-to-Side Anastomosis Might Be Better Than Handsewn End-to-End Anastomosis in Ileocolic Resection for Crohn's Disease: A Meta-Analysis

Xiaosheng He · Zexian Chen · Juanni Huang ·
Lei Lian · Santosh Rouniyar · Xiaojian Wu ·
Ping Lan

A Word About Anastomoses

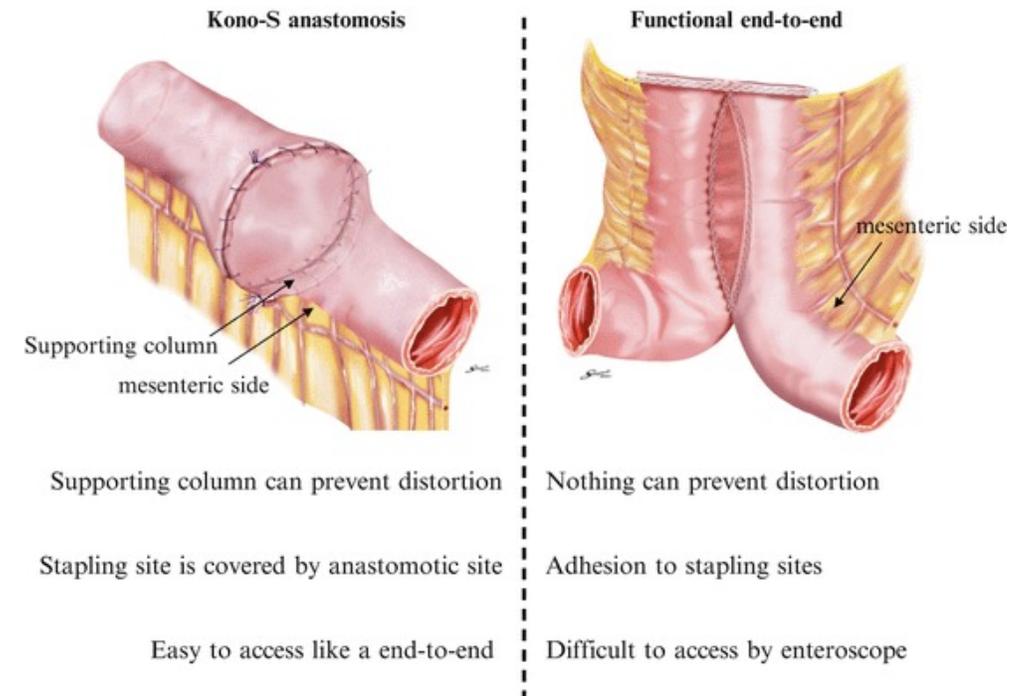
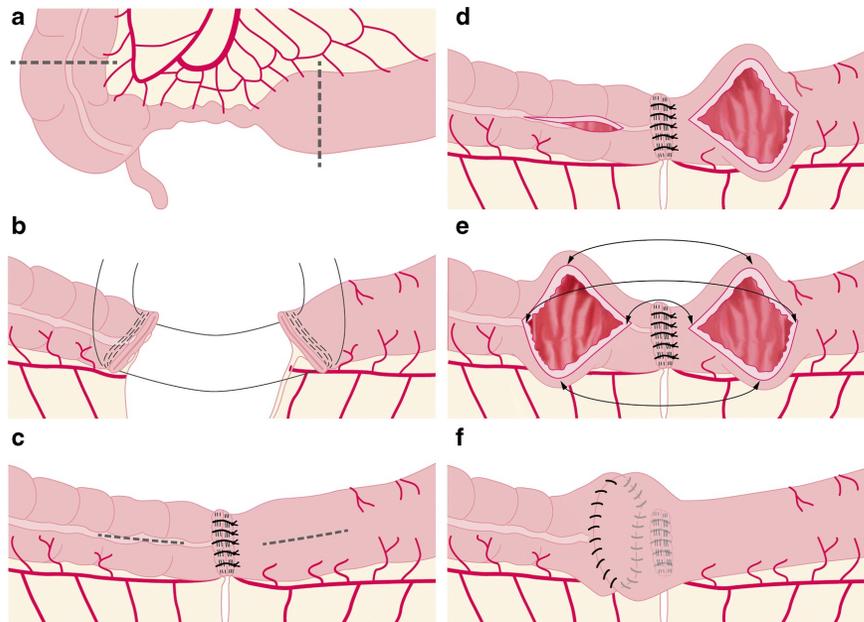
Systematic review

doi:10.1111/codi.15136

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

A. Alshantti*, D. Hind* , L. Hancock† and S. R. Brown* 

- ▶ What is the Kono-S anastomosis?
 - ▶ May reduce post-operative Crohn's recurrence



Case #2: Postoperative Course

- ▶ NG tube removed, began diet on POD#2
- ▶ TPN tapered off
- ▶ Discharged to skilled nursing facility on POD#9
- ▶ Now home from SNF and doing well

Case #2: Follow-Up

- ▶ Post-operative Crohn's surveillance plan
- ▶ Smoking cessation