



GHAPP

Gastroenterology & Hepatology
Advanced Practice Providers

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Pre, Post and Intra Operative IBD Surgery/Care

Erica Heagy, CNS, FNP
The Oregon Clinic
Portland, Oregon

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Disclosures:

Erica Heagy, CNS, FNP

Speakers Bureau: AbbVie, Clinical Area – CD/UC

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Objectives:

- Indications for surgery: UC and CD
- IBD surgeries: UC and CD
- Potential complications from surgery
- Perioperative check list
- Postoperative management

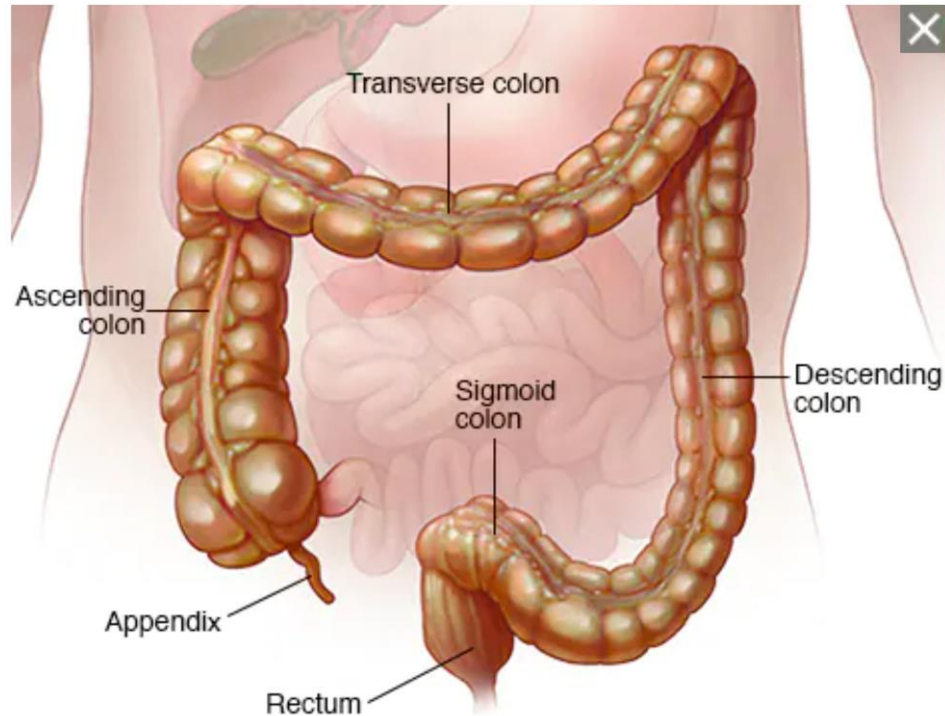
Ulcerative Colitis Surgery Stats:

- Approximately **20-30 % of patients with UC will require surgery** during their disease course.
- The rate of colectomy after a **disease duration of 10 years is ~16%.**
- An estimated **15 to 50% of patient hospitalized for UC flare undergo surgery** during that admission.

Crohn's Disease Surgery Stats:

- According to ACG Clinical Guidelines, up to **80% of patients with CD will have progressive disease** requiring active intervention to control inflammation.
- Cumulative risk for **major abdominal surgery** in CD:
 - 40-55% over 10 years.
- 5-year cumulative risk for **postoperative recurrence** in CD:
 - Clinical recurrence 40-50%.
 - Endoscopic recurrence is 90%.
- **Fibrotic stricture** of CD affects approximately half of all patients.
- The most significant risk factor for CD recurrence postop is **smoking!**

Surgery in Ulcerative Colitis:



Indications for Surgery in Ulcerative Colitis:

Emergency Surgery:

- Colonic perforation
- Life-threatening GI hemorrhage
- Toxic Megacolon

Urgent Surgery:

- Acute fulminant colitis refractory to medical treatment.
 - Acute fulminant colitis= > 10 stools daily; continuous bleeding; abd pain; distention; systemic inflammatory response syndrome (SIRS) → fever, anorexia, tachycardia, elevated CRP, anemia.
 - Refractory= Failing IV steroids and infliximab.

Elective Surgery:

- Cancer
- Intestinal dysplasia or mass lesion
- Long standing disease
- Refractory disease to medical therapy
- Complication's r/t adverse effects of chronic medically therapy
- Growth retardation in children

Surgical Options in Ulcerative Colitis:

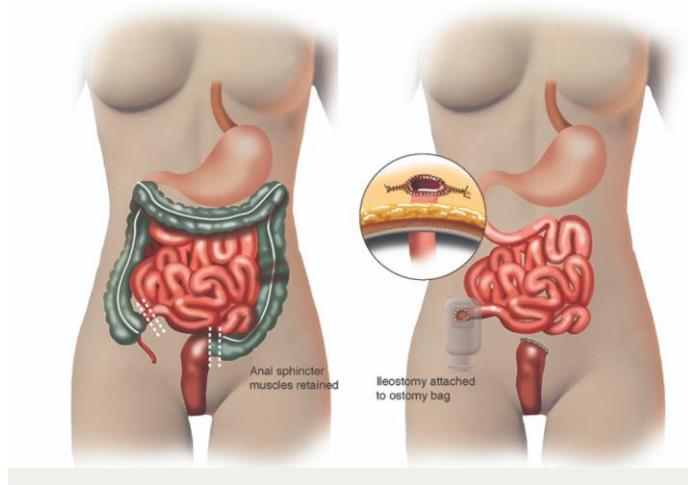
Operation	Description	Advantages	Disadvantages
1. Restorative Proctocolectomy with ileal pouch-anal anastomosis (RPC-IPAA) **Most common**	Removes entire colon and rectum.	<ul style="list-style-type: none">• Good bowel function• No permanent stoma	<ul style="list-style-type: none">• Staged approach• At risk for pouchitis• Not ideal for those with poor sphincter function
2. Total abdominal colectomy with ileorectal anastomosis (TAC-IRA)	Removes entire colon, connects the distal small bowel to rectum.	<ul style="list-style-type: none">• Normal bowel function.• Alternative to those not suitable for IPAA.	<ul style="list-style-type: none">• Infrequently used in UC as it does not remove diseased rectum.• Requires surveillance of rectum.

Surgical Options in Ulcerative Colitis:

Operation	Description	Advantages	Disadvantages
3. Total abdominal colectomy with end ileostomy	Removes entire colon, leaves rectum→ Hartman's pouch.	<ul style="list-style-type: none">• Emergent/urgent situations	<ul style="list-style-type: none">• Stoma present• Additional operations may be required
4. Total proctocolectomy with end ileostomy	Removes entire colon and rectum without reestablishing GI continuity.	<ul style="list-style-type: none">• Cure of UC• Can be performed laparoscopically as "scarless" or "incisionless"	<ul style="list-style-type: none">• Permanent end ileostomy

Emergent Surgical Options in Ulcerative Colitis in:

- **Emergent or Urgent Surgery:** Typically, a total abdominal colectomy with end ileostomy.



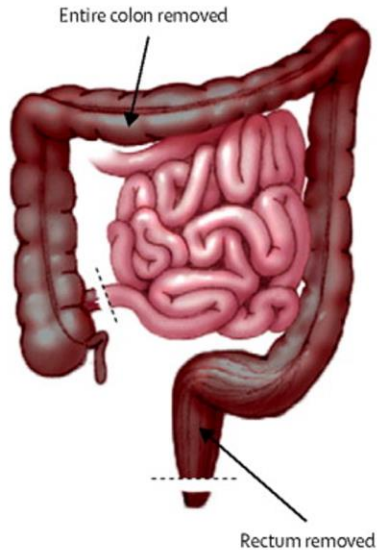
Colon is removed with retention of the anal sphincter muscles and rectum, which effectively serves as a “placeholder” in the pelvis preventing adhesions and scarring. After stabilization, a completion proctectomy with reconstruction can be performed.

Elective Surgical Options in Ulcerative Colitis:

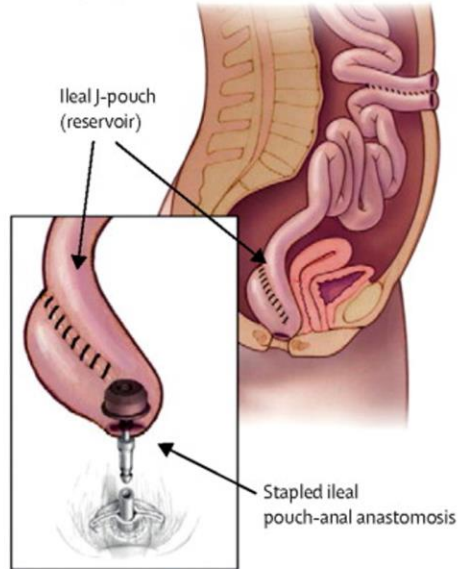
- **Elective Surgery:** Restorative proctocolectomy with ileal pouch anal anastomosis (**RPC-IPAA**) is the procedure of choice.
- All surgeries can be performed open or minimally invasive (laparoscopic or robotic).
- Advantages to minimally invasive surgery is less surgical site for infection, less adhesion formation, better cosmesis and decrease LOS.

RPC-IPAA

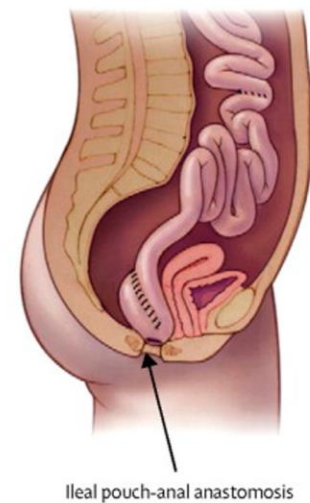
A Proctocolectomy



B Ileal J-pouch, stapled anastomosis, temporary ileostomy



C Closure of the temporary ileostomy



IPAA Step Approach:

IPAA Step Approach:

1-Step IPAA:

- Ileal pouch is made and anastomosed to the anus
(Used less often in order to optimize nutritional status.)

2-Step IPAA:

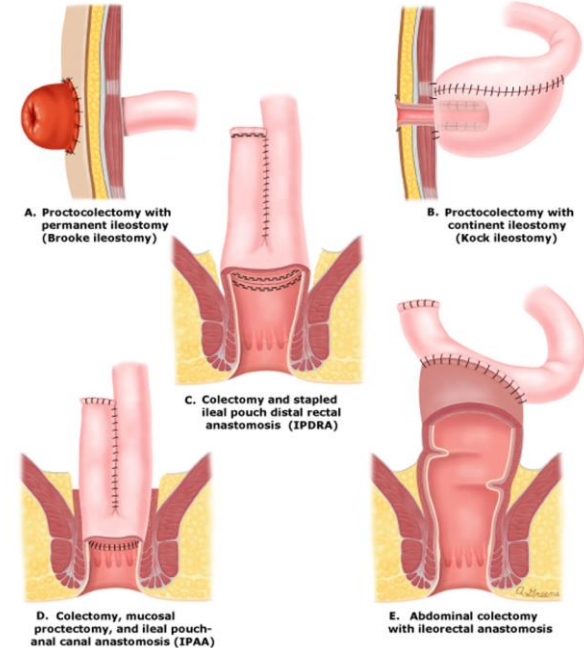
- Total proctocolectomy with creation of Ileal Pouch Anal Anastomosis (IPAA)
- Reversal of ileostomy

3-Step IPAA:

- Abdominal colectomy with ileostomy
- Complete proctectomy with creation of IPAA
- Reversal of Ileostomy

Special Populations:

- **Less ideal candidates for IPAA:**
 - **Patients with poor anal sphincter function:** IPAA predisposes to fecal incontinence thus consider total proctocolectomy with end ileostomy (if they except a stoma) or total abdominal colectomy with ileorectal anastomosis.
 - **Patients who are medically ill:** E.g., elderly, sig comorbid diseases, concurrent rectal cancer. Proctocolectomy with end ileostomy is best surgical option due to shorter operative time and fewer potential complications (such as pouch failure or fecal incontinence).



Special Populations:

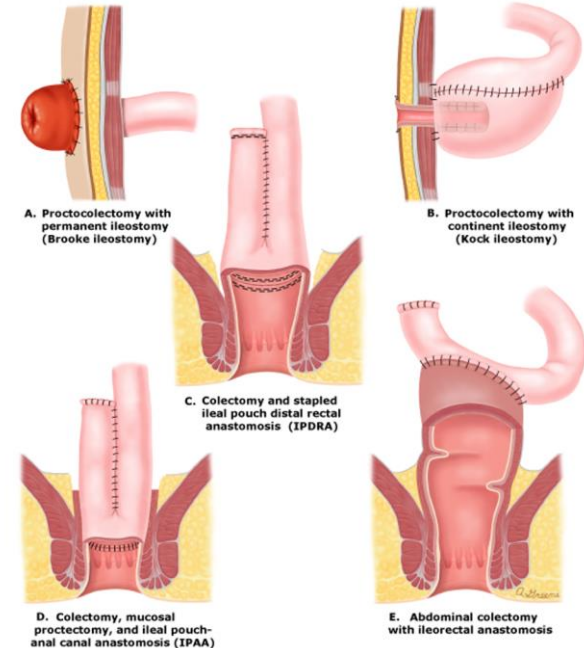
- **Less ideal candidates for IPAA:**

- **Young woman:**

Open IPAA is associated with infertility in female's d/t pelvic adhesions. Options: Total abdominal colectomy with ileorectal anastomosis (TAC-IRA) and delay completion proctocolectomy until no longer desires pregnancy OR laparoscopic IPAA with adhesion barrier around ovaries and fallopian tube.

- **Indeterminant Colitis:**

10-15 % of IBD. Majority resembles UC vs CD. ** Possible increased risk for perineal complications and pouch failure. Generally, IPAA, other option TAC-IRA if no significant rectal disease. Indeterminant colitis → CD 50% pouch failure.



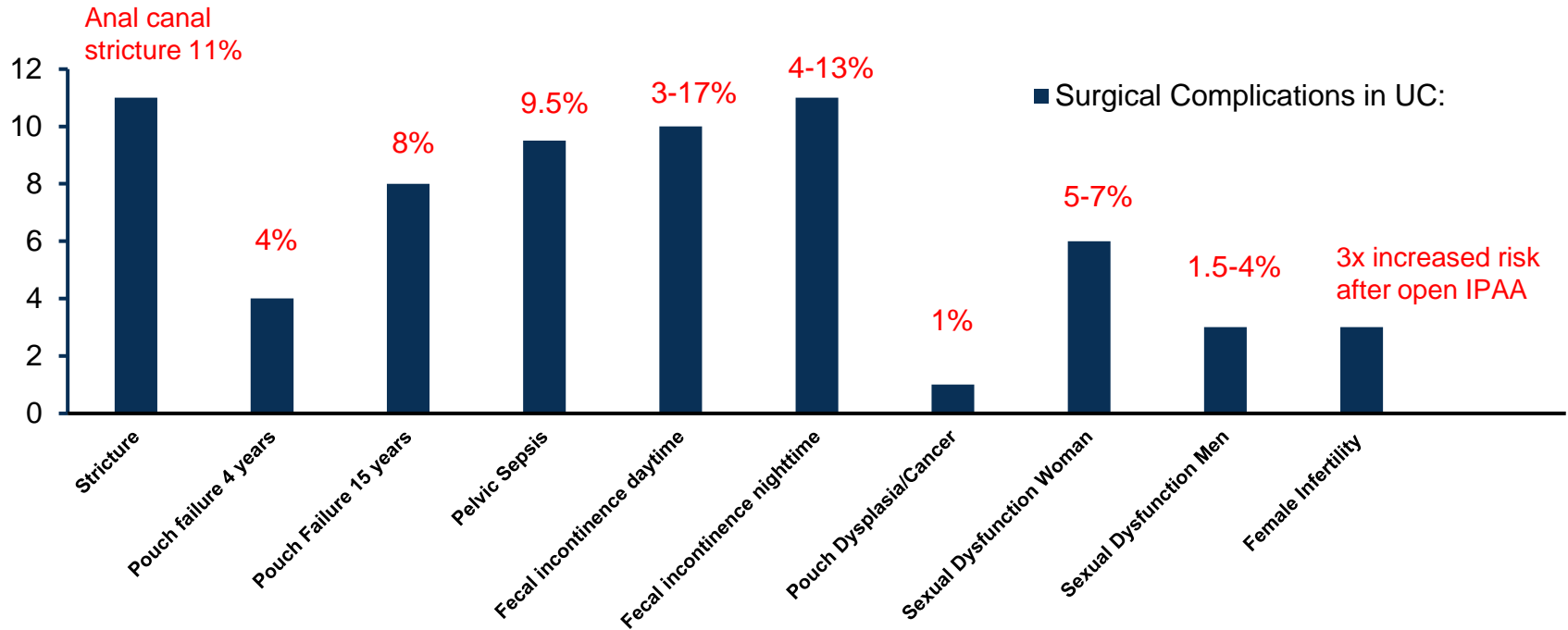
Perioperative Considerations in UC and CD:

- Optimize medical condition when possible!
- R/O *C. diff* and CMV
- Correct anemia, hypercoagulability, hypovolemia, electrolytes and nutritional deficiencies
- Stoma therapist
- Bowel prep
- Prophylactic antibiotics
- Standard venous thromboembolism (VTE) prophylaxis
- Stop smoking
- Updated Abdominal imaging: CD → CTE or MRE.
- Limit steroids if possible.

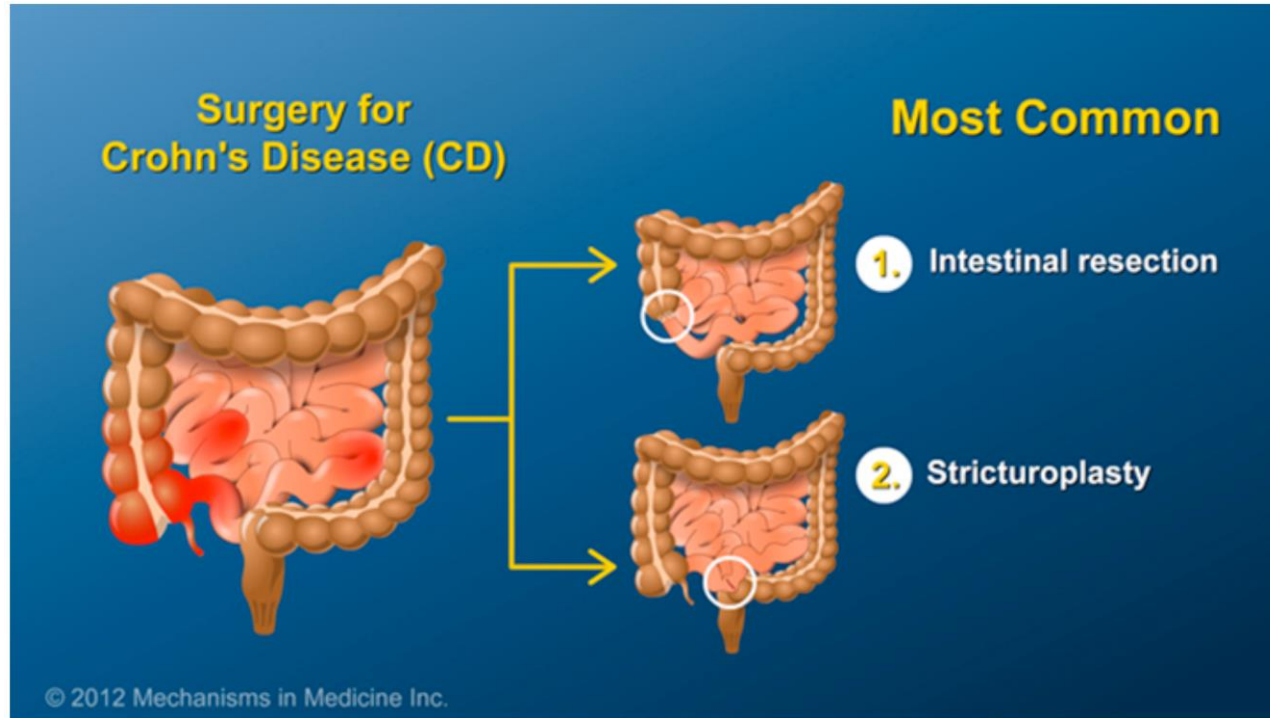
Perioperative Biologic Considerations:

- **The Postoperative Infection in Inflammatory Bowel Disease (PUCCINI)** was landmark trial examining postop infection complications in pts with CD and UC treated with biologics preop.
- **Recommendations:**
 - Continue all biologic therapy preop in both CD and UC.
 - No benefit in measuring serum anti-TNF levels preop.
 - Small molecules (tofacitinib)- we need more data. Recommend holding 7 days prior to surgery and resume 14 days after surgery. Note: emergent surgery never to be delayed based on therapy.

Surgical Complications in UC:



Surgery in Crohn's Disease:



Indications for Surgery in Crohn's Disease:

Bowel perforation

Intra-abdominal,
retroperitoneal or
abdominal wall abscess
refractory to
nonoperative management

GI bleeding refractory to
nonoperative management

Symptomatic fibrotic
stricture causing intestinal
obstruction

Enteric fistula refractory to
medical therapy

Small bowel or colorectal
cancer arising from
longstanding CD

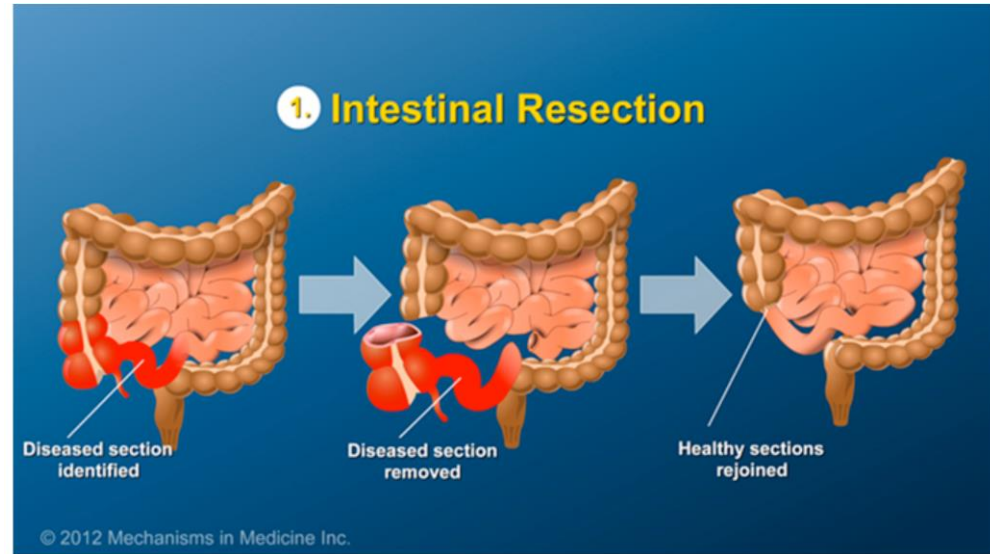
Persistent inflammation
causing symptoms
refractory to medical
therapy

Growth retardation in
children

Surgery in Crohn's Disease: Small Bowel Resection

Small bowel resection:

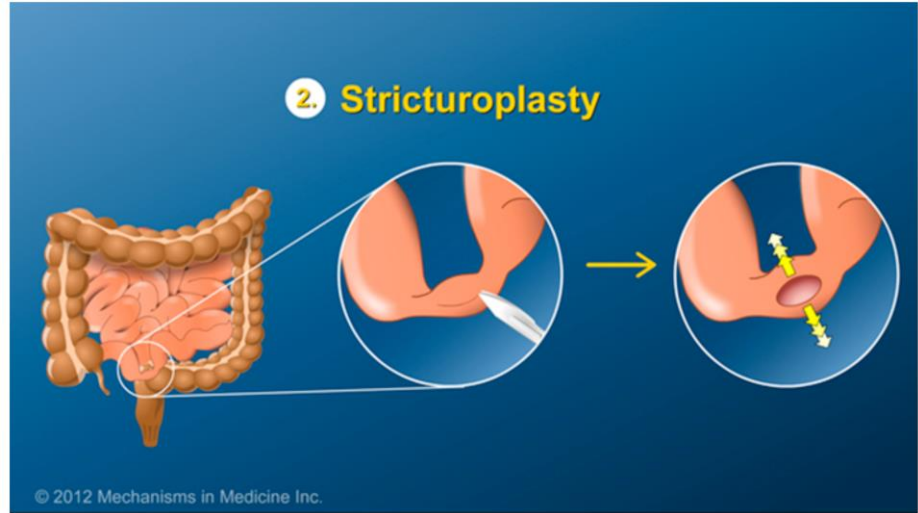
- Most common procedure is ileocecal resection
- Indicated for short segment structuring or fistulizing disease
- Recurrence of the disease occurs most often proximal to the anastomosis after ileocolonic resection
- Gross inspection of margins



Surgery in Crohn's Disease: Strictureplasty

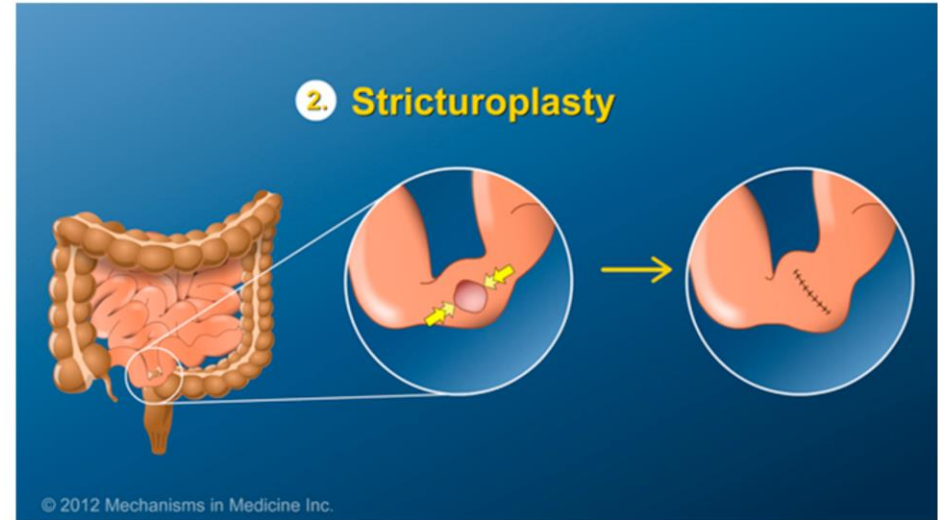
When to consider small bowel strictureplasty:

- Preserves small bowel in those with previous small bowel resections
- Not to be performed in acutely inflamed bowel or fistula
- Diffuse involvement of the bowel with multiple strictures



Surgery in Crohn's Disease: Strictureplasty

- **When to use small bowel strictureplasty:**
 - Rapid recurrence of CD manifested as obstruction
 - Nonphlegmonous fibrotic stricture
- **Complications:**
 - Recurrence of stricture
 - Abscess
 - Fistula
 - Obstruction
 - Postop ileus



Postoperative Management of CD:

Recurrence Rates:

- 5-year rate of reoperation 24%
- 10-year rate of reoperation 35%



Risk Factors for Recurrence

- Smoking
- Genetics
- Disease duration
- Disease extent
- Prior surgery for CD
- Penetrating or fistulizing disease
- Stricturing disease
- Surgery-related risk factors

Postoperative Management of CD:

AGA Guidelines on the Management of Crohn's Disease after surgical resection.

- Ileocolonoscopy at 6-12 months post op.
- Disease monitoring- fecal calprotectin, CRP every 6 months for 2 years.
- Early (4-8 wks postop) use of thiopurines/anti-TNF in * high risk patients*.
- Postop therapy with anti-TNF or thiopurines reduces risk of clinical recurrence.
- General care following surgery: Smoking cessation, health maintenance, screening for osteoporosis, infection risk, nutrition.

- **High risk patients:** Smokers, <30 yo, perforating/penetrating/fistulizing/long segment inflammatory disease, Hx of ≥ 2 surgeries, shorter disease duration prior to surgery.
- **Low risk patients:** Nonsmokers, Older patients (> 50 yo), First operation, short structuring CD (< 10-20 cm), long hx of CD (> 10 yrs).

Practice Pearls:

- 10-year risk of surgical resection for CD is nearly 50%.
- Postoperative management requires disease monitoring especially if the patient isn't on therapy.
- Smoking is a significant risk factor for disease recurrence in CD.
- PUCCINI was landmark trial. Recommends continuing biologic therapy pre-op.
- Surgical intervention for CD is individualized.



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Thank you!

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