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2020 Third Annual National Conference

November 19-21, 2020

Red Rock Hotel – Las Vegas, NV

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IBD Surgeries

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Disclosures

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No financial relationships to disclose.


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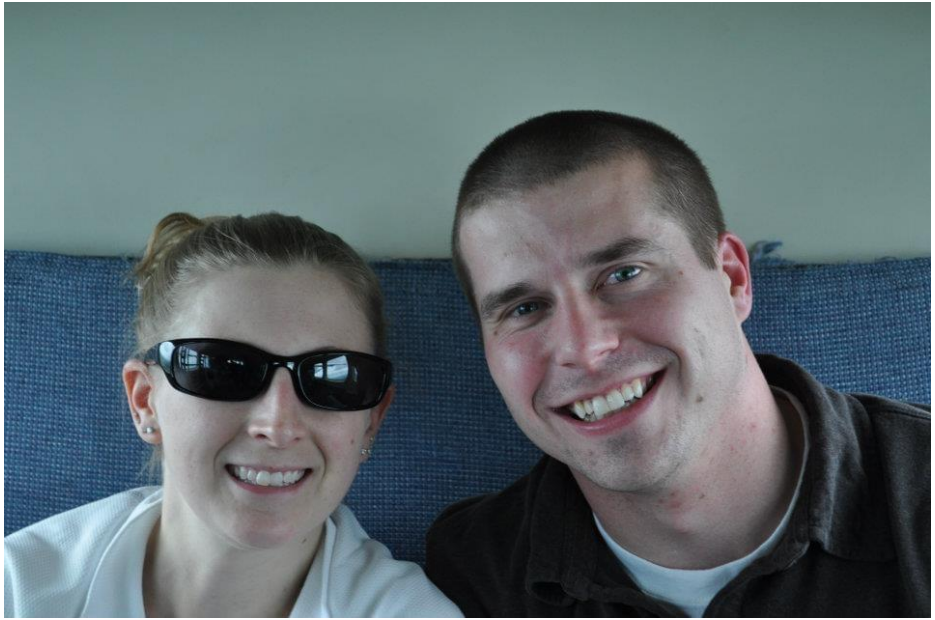
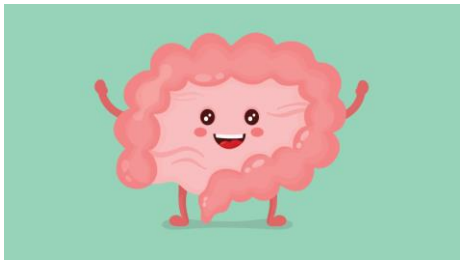


Objectives

- Identify post operative management for IBD provider
- Key features of IBD Surgeries
- Indications for Surgery: UC and CD
- IBD Surgeries in the setting of UC
- IBD Surgeries in the setting of CD
  - Small bowel CD
  - Colonic CD



Discussion Points for the IBD Provider and Patient

- IBD meds postoperatively
- Recent steroid use prior to surgery
- Nutritional management
- ERAS protocol
- DVT prophylaxis
- Ostomy management
- Close postoperative outpatient clinic appointment

Key Features to Identify in IBD Surgeries

- Type of Surgery
- Open vs Lap vs Robotic
- Type of Stoma
- Anastomotic technique
- Measurement of length of remaining SB
- Pathology
- Extent of resection

Ulcerative Colitis Quick Stats

- Mortality rate related to severe attacks < 1%
- Estimated 20-30% rate of colectomy in UC after 20 years
- It has been recommended that about 85% of patients who do not respond to conventional steroid treatment within 6 days of hospitalization should undergo colectomy

1. Langholz E. et al. *Gastroenterology.*1992;103:1444-1451. 2. Turner D et al. *Clin Gastroenterol Hepatol.* 2007;5:103-110.
3. Sica GS, Biancone L. *World J Gastroenterol.* 2013; 19(16): 2445-2448.

Indications for Surgery in Chronic UC

Emergency situations

Fulminant disease activity unresponsive to maximal medical therapy

Toxic megacolon

Perforation

Hemorrhage

Elective situations

Disease activity refractory to medical therapy

Complications related to adverse effects of chronic medical therapy

Intestinal dysplasia or mass lesion

Cancer

Chronic disease

Growth retardation in children

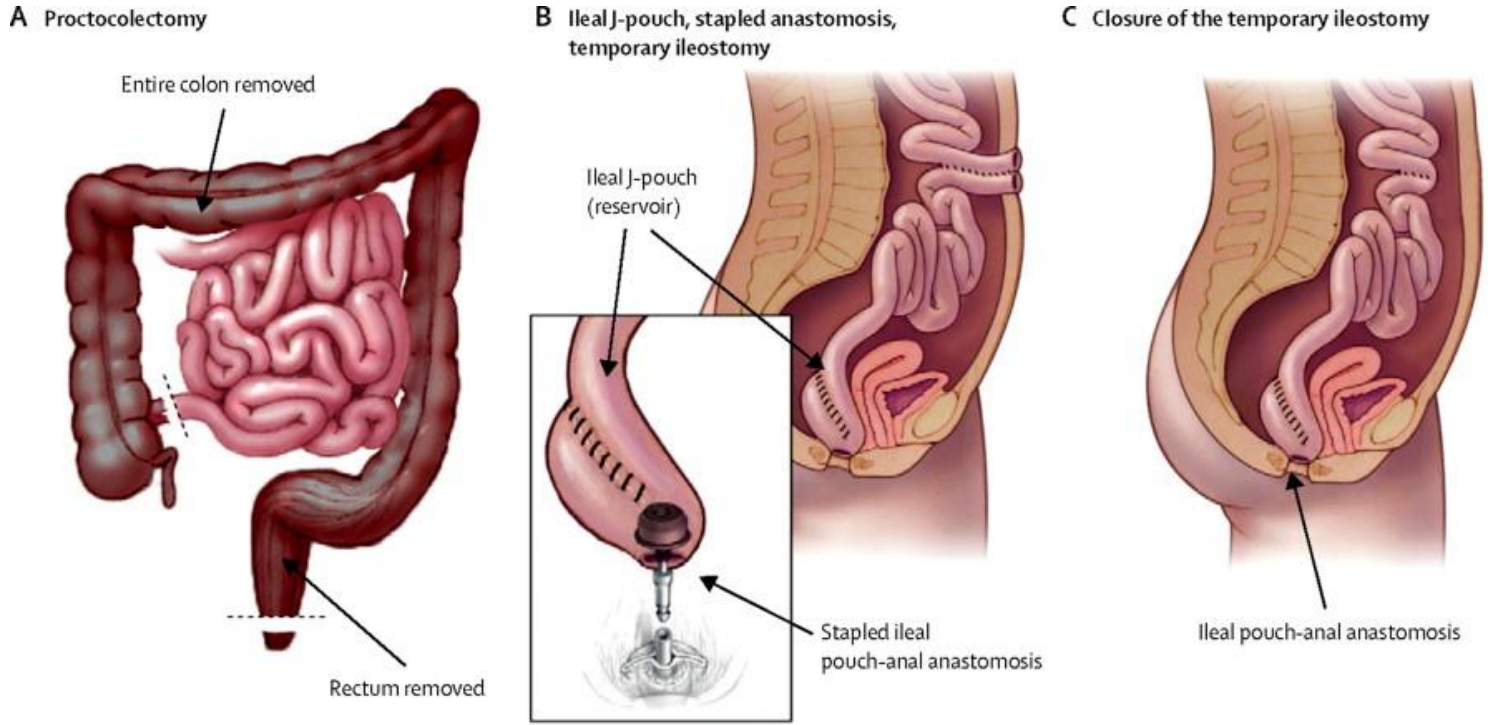
Cima RR, Pemberton JN. *Arch Surg.* 2005; 40(3):300.

Surgical Management for Refractory Ulcerative Colitis

Total Proctocolectomy with End Ileostomy: **Option for those at risk for pouch failure, such as patients with impaired anal sphincter muscle, previous anoperianal disease, or limited physiologic reserve secondary to comorbid conditions.**
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

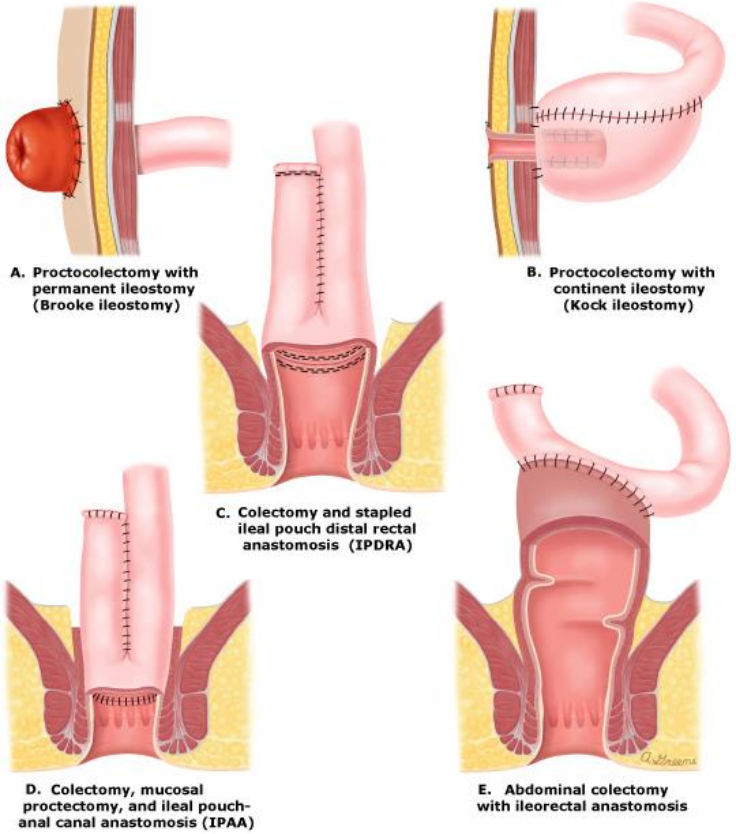
1. Cohen JL et al. *Dis Colon Rectum.* 2005;48:1997-2009. 2. Browning SM, Nivatvongs S. 1998.

Surgical Management for Refractory Ulcerative Colitis



Ordás I et al. *Lancet.* 2012; 80(9853):1606-1619.

Surgical Management for Refractory Ulcerative Colitis



UpToDate. Retrieved October 5, 2020.

Complications of IPAA

Short-term

- Small-bowel obstruction – 15%
- Pouch Leak
- Pelvic Sepsis – 20%
- Anastomotic Stricture

Long-term

- Small bowel obstruction
- Anastomotic stricture – 8-14% within 10 yrs
- Fistula of the pouch
- Pouch dysfunction
- Pouchitis – 50% by 3-4 yrs
- Sexual dysfunction/Female infertility – 3x increased risk

Cima RR, Pemberton JN. *Arch Surg.* 2005; 40(3):300.

Crohn's Disease Quick Stats

- Surgical intervention is individualized
- Surgery rates over time: 1 year: 15% 5 yrs: 30% 10 yrs: 50%
- 5 years following initial surgery:
  - 80% endoscopic/radiologic recurrence
  - 50% clinical recurrence
- The most significant factor affecting postoperative CD recurrence was found to be smoking
- Fibrotic stricture of Crohn's Disease affects approximately half of all patients

1. Frolkis et al. *Gastroenterology.* 2013;145:996-1006. 2. Rieder F et al. *Gastroenterology.* 2017;152(2):340-350.e6.
3. Yamamoto T. *World J Gastroenterol*. 2005; 11:3971-3979.

Indications for Surgery in Crohn's Disease

- Bowel perforation
- Intra-abdominal, retroperitoneal, or abdominal wall abscess refractory to nonoperative management
- Gastrointestinal bleeding refractory to nonoperative management
- Symptomatic fibrotic stricture causing intestinal obstruction
- Enteric fistula refractory to medical therapy
- Small bowel or colorectal cancer
- Persistent inflammation refractory to medical therapy
- Free or contained perforation of the small bowel

Strong S et al. *Dis Colon Rectum*. 2015; 58(11):1021-1036.

Laparoscopic vs Open Abdominal Surgery

	Laparoscopic[1,2]	Open[1]
Surgery Time		✓
Return of Bowel Function	✓✓	
Duration of Hospitalization	✓✓	
Morbidity	✓✓	
Cost	✓	
Rate of disease recurrence	Results similar	

Tan et al. 2007. Meta analysis: 14 studies, 818 pts.[1]
Lee et al. 2012. Retrospective study: 1917 patients (644 laparoscopic).[2]

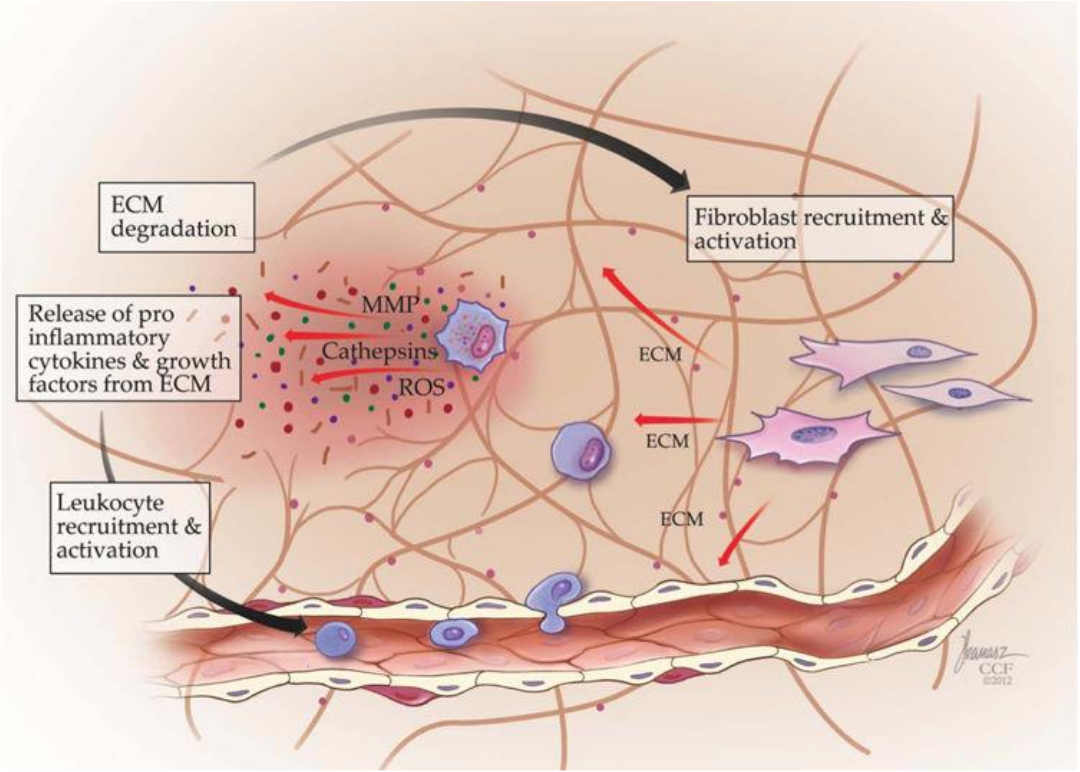
1. Tan et al. *Dis Colon Rectum.* 2007; 50(5):576-585. Lee Y et al. *Colorectal Dis.* 2012;14(5):572-7.

Small Bowel Resection

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

Gardiner KR, Dasari BV. *Surg Clin N Am*. 2007; 87(3):587-610.

Fibrotic Development in Crohn's Disease



Rieder F et al. *Gut*. 2013 62(7):1072-1084.

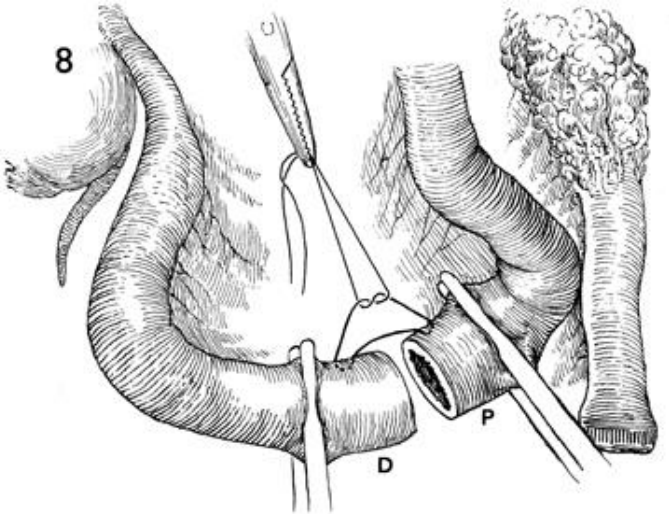
Small Bowel Resection and Anastomotic Technique

- **End-to-end**: bowel naturally reposition into it's normal orientation and often sutured end-to-end
- **Side-to-side**: unnaturally reconnected in an anti-peristaltic fashion and most often stapled
  - Quick resection time
  - Risk of fecalization leading to concern for bacterial overgrowth

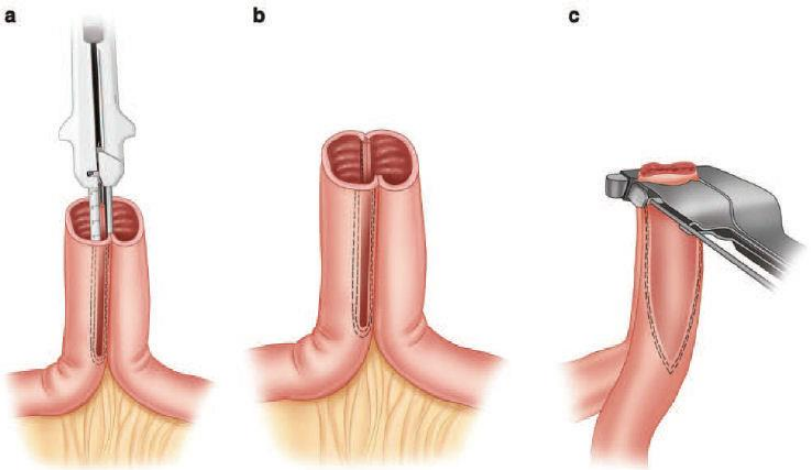
Zurbuchen et al. *Lang Arch Surgery*. 2013. (Randomized trial in CD patients found no difference in leak rate between end-to-end or side-to-side anastomosis)

Anastomotic Technique

End-to-end Anastomosis



Side-to-side anastomosis



Chapter 55. Intestinal Stomas. In: *The ASCRS Textbook of Colon and Rectal Surgery, 3e*.

Strictureplasty

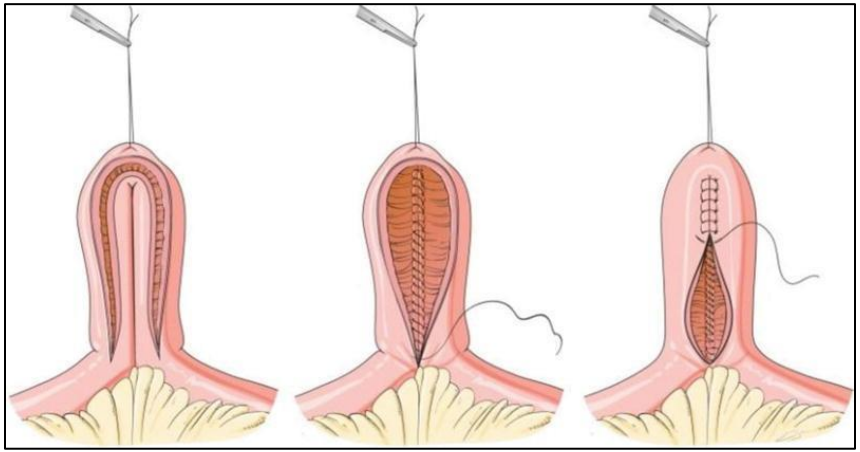
Considerations:

- Diffuse involvement of the bowel with multiple strictures
- Stricture in a patient who has undergone previous major resection of small bowel (>100 cm)
- Rapid recurrence of Crohn’s Disease manifested as obstruction
- Stricture in a patient with short bowel syndrome
- Nonphlegmonous fibrotic stricture

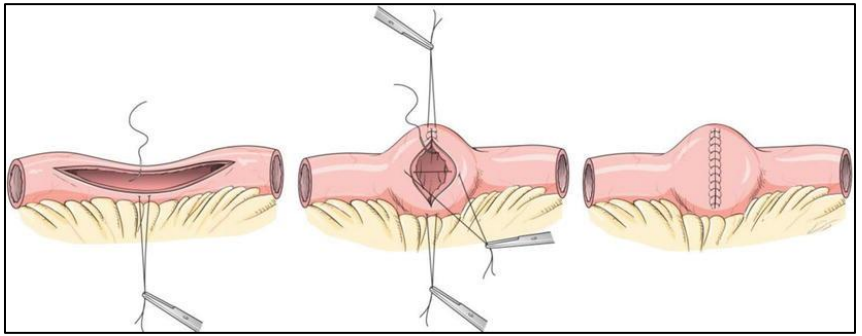
Rieder F et al. *Gut*. 2013 62(7):1072-1084.

Type of Strictureplasty

Heineke-Mikulicz



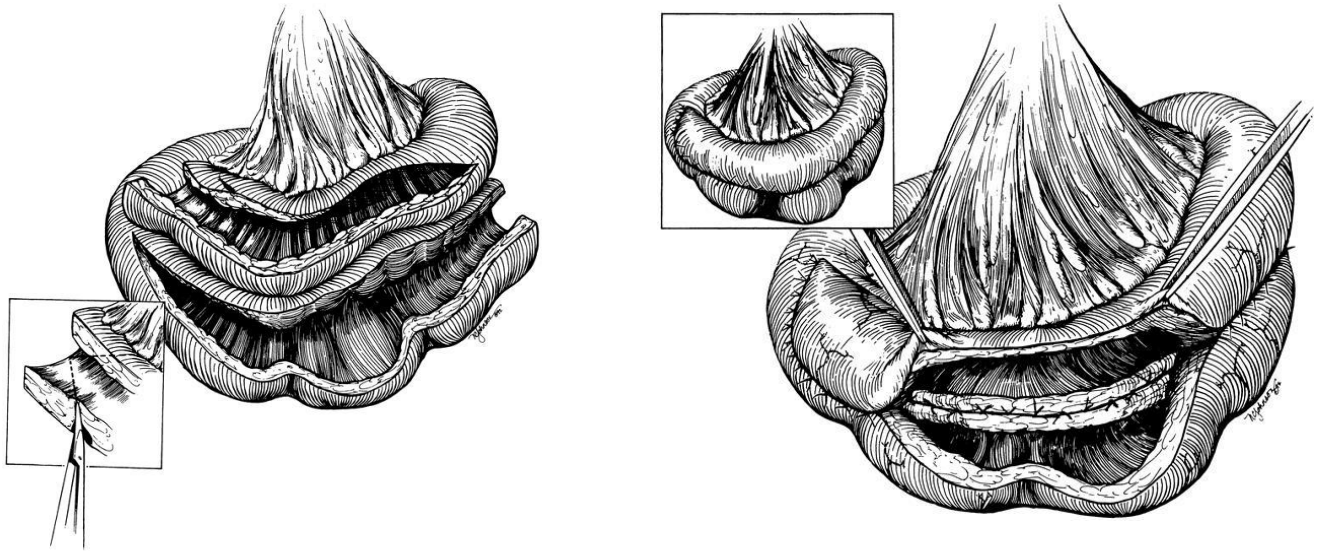
Finney



Yamamoto et al. *Dis Colon Rectum*. 2007; 50:1968-85.

Type of Strictureplasty

Side-to-Side Isoperistaltic (Michelassi)



Michelassi F et al. *Annals of Surgery.* 2000;232(3):401-408.

Complications of Strictureplasty

- Recurrence of stricture
- Abscess
- Fistula
- Obstruction
- Postoperative ileus

Yamamoto et al. *Dis Colon Rectum*. 2007; 50:1968-85.

Surgical Interventions: Colonic Crohn's Disease

- Identify extent of colonic involvement: pancolonic vs rectal sparing disease.
- **Segmental colectomy**: isolated CD of colon; colonic stricture.
- **Total colectomy with ileorectal anastomosis**: Colonic, rectal-sparing disease.
- **Pancolonic CD:** Total proctocolectomy with end ileostomy and proctectomy.

Bernell O et al. *Diseases Colon Rectum*. 2001; 44(5): 647-654.

Summary

- Reviewing post operative management before and after surgery is an essential role for the IBD provider.
- Surgical management of UC most often is curative, but routine monitoring by IBD provider is recommended.
- Surgical intervention for Crohn’s Disease is individualized.

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4. Frolkis et al. Gastroenterology 2013; 145: 996-1006
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