

Understanding Surgery For Ulcerative Colitis

Joshua A. Katz, MD FACS, FASCRS
Montgomery Colorectal Surgery LLC
Rockville, Maryland

MUC: ELECTIVE SURGERY

INDICATIONS FOR SURGERY IN MUC

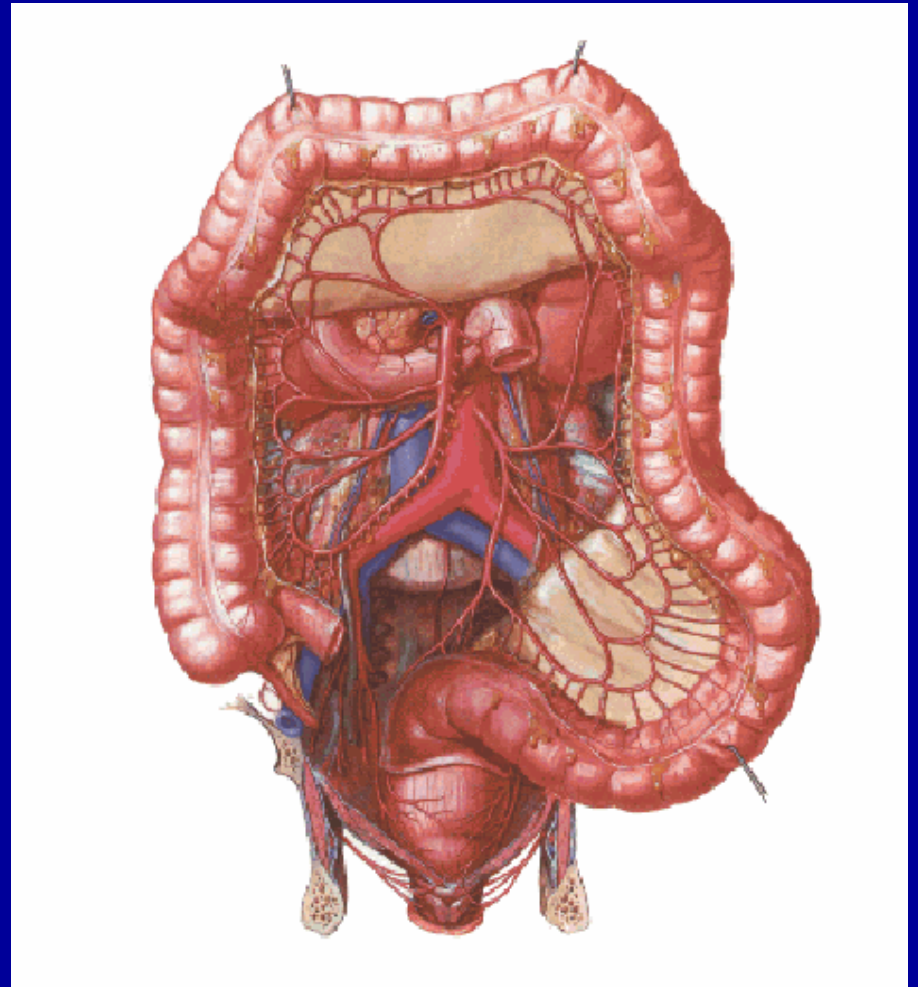
- Persistent active disease >3 months
- Recurrent disease
- Steroid Dependence > 12 months
- Urgency/Poor Bowel control
- Growth Retardation
- Complications of Medical Therapy
- Presence of Dysplasia and Cancer

SURGICAL THERAPY OF MUC

- Remove the entire colon and rectum
- Preserve/Restore Continence

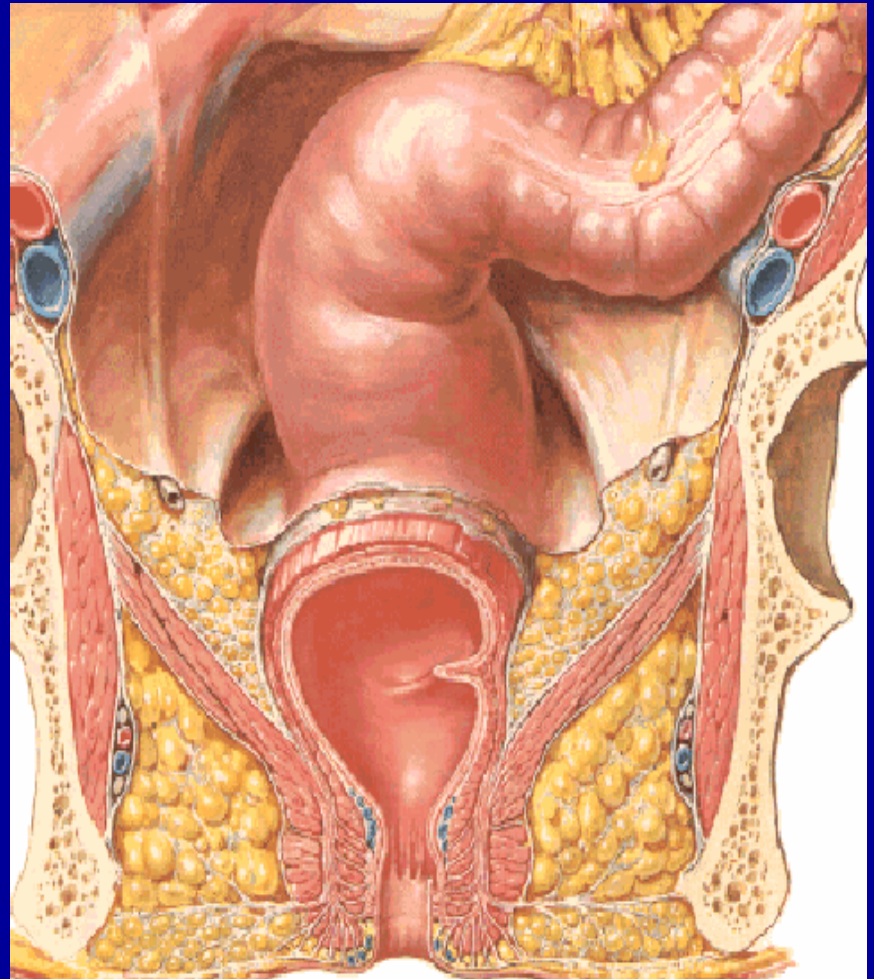
Colorectal Procedures

- Partial Colectomy
- Total Abdominal Colectomy
- Proctectomy
- Proctocolectomy



Removing the Rectum Carries Increased Risk and Morbidity

- Rectum must be dissected out of pelvis
- Presacral Venous Plexus
- Ureters
- Sympathetic Nerves controlling
 - Continence
 - Ejaculation
 - Sexual function



Options After Resection

Anastomosis

- Colo-colic
- Ileo-colic
- IRA: Ileo-rectal anastomosis
- IPAA: Ileal-pouch anal anastomosis

No Anastomosis

- End Ileostomy
- End Colostomy

Stoma Based Procedure

- Proctocolectomy with Ileostomy
 - Permanent stoma
 - Perineal wound
- Continent Ileostomy (Kock, 1969)
 - Intraabdominal pouch with a valve
 - Continent Stoma- empty with intubation
 - 50% Morbidity
 - Uses 40 cm of small intestine

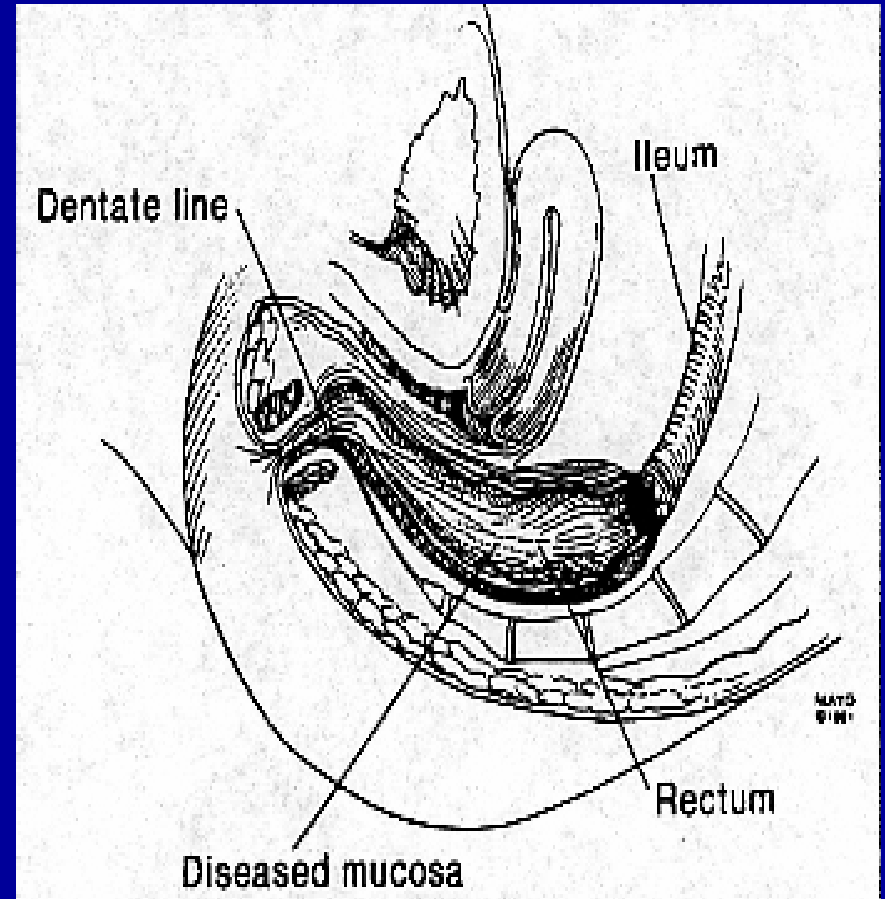
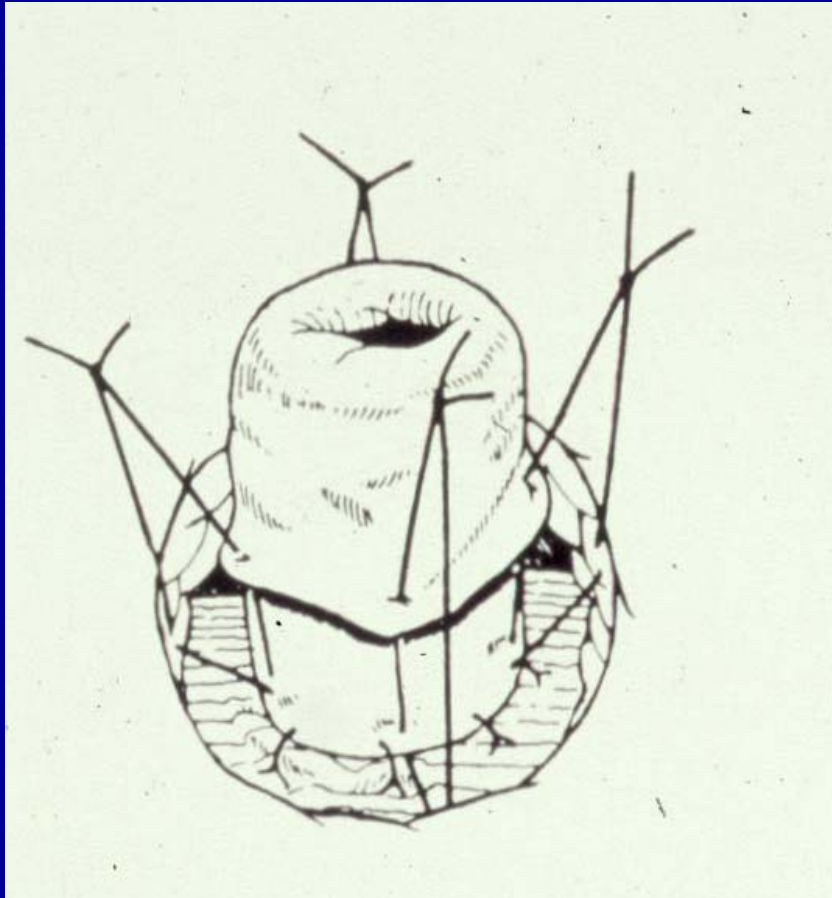
SPHINCTER PRESERVATION

- 1947 Anal Ileostomy with Preservation of Sphincter (Ravitch and Sabiston)
- 1977 Total Colectomy and Mucosal Proctectomy with Ileal-Anal Pull Through (Martin)
- 1980 Proctocolectomy with Ileal Reservoir and Anal Anastomosis (Parks and Nicholls)
 - Used S shaped pouch created from terminal ileum
- 1980 J Pouch (Utsunomiya)
 - Improved voluntary evacuation

Subtotal Colectomy

- Removes the Colon Only
- Indicated for Emergencies
 - Bleeding and Toxic Colitis
- For Indeterminate Colitis (15%)
- No proctectomy and pelvic dissection
- Faster, Less morbidity
- Leaves all options open.

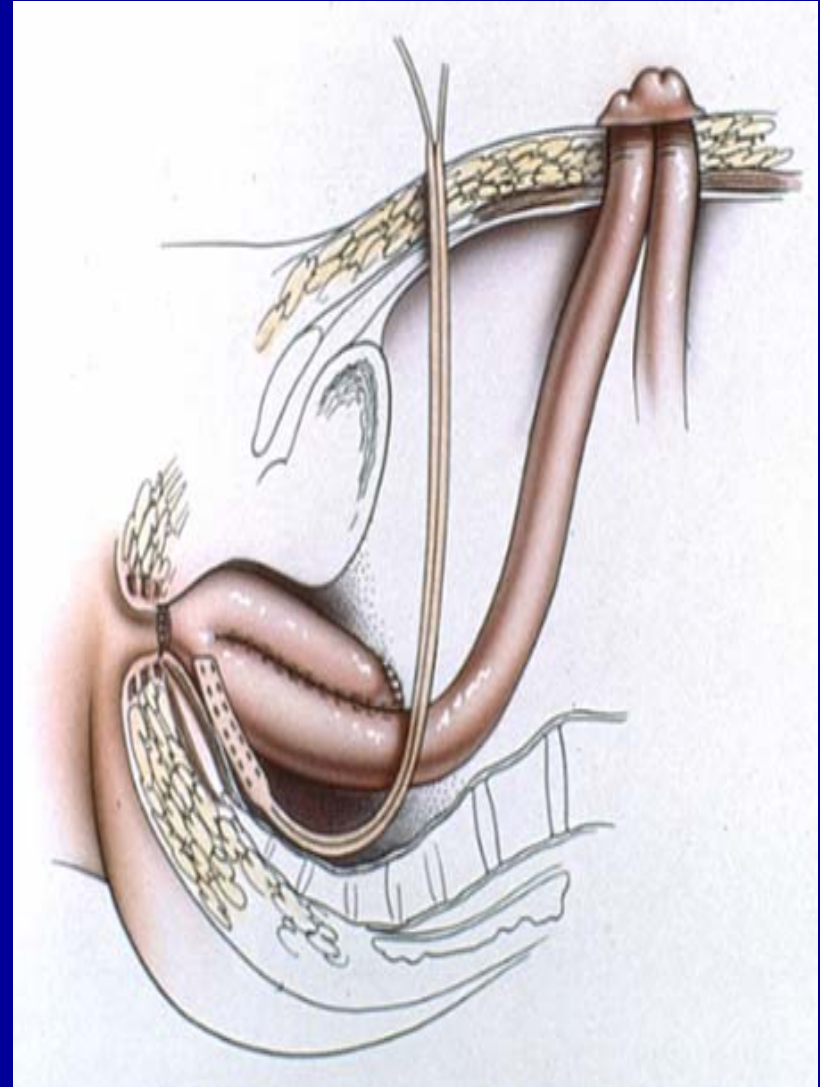
Subtotal Colectomy with End Ileostomy OR Ileorectal Anastomosis



OPERATION	BENEFITS	MORBIDITY
Proctocolectomy/ Ileostomy	Removes all diseased tissue	Permanent Ileostomy Pelvic Dissection Perineal Wound
Proctocolectomy/ IPAA	Removes all diseased tissue Restores Continuity	Pelvic Dissection 30-50% Morbidity Uses 30 cm SI
Proctocolectomy/ Kock Pouch	Removes all diseased tissue Stoma does not need appliance	Pelvic Dissection 30-50% Morbidity Uses 40 cm SI Perineal Wound
Abdominal Colectomy/ IRA or Ileostomy	No Pelvic Dissection One Stage Procedure No sacrifice of SI	Leaves Rectum in place Requires surveillance

IPAA: The Procedure

- Proctocolectomy
- Create an Ileal J Pouch
- Construct Pouch-Anal Anastomosis
- Diverting Ileostomy
- Closure of Ileostomy in a second stage



Morbidity and Mortality

Mortality	0-1%
Morbidity	13-63%
Sepsis/Leak	5-18%
Small Bowel Obstruction	6-20%
Stricture	1-23%
Pouchitis	15-50%
Bleeding	1-5%
Pouch Failure	3-13%

IPAA: Functional Outcome

Bowel Movements per day	6-8
Bowel Movements per night	1-2
<u>Percentage of Patients</u>	
able to discriminate stool from gas	58-77
with daytime incontinence	9-20
with nighttime incontinence	6-25
using antidiarrheal medication	30-79

Contraindications

- Poor sphincter tone and function
- Frequency and urgency socially or professionally unacceptable to patient
- Coextant medical illness limits tolerance of pouch related complications
- Rectal Carcinoma requiring radiation therapy Crohn's Disease
- Prior history of small bowel resection
- Failed IPAA

Ileostomy

- Pelvic Sepsis from anastomotic leak can lead to pouch loss.
- Ileostomy does not prevent leaks, but decreases the severity of abscess.
- Delay adjustment to pouch function until patient has recovered from surgery
 - Malnourished, steroid dependent patient
 - Hemodynamic instability
 - Blood loss
 - Tenuous vascular supply
 - Difficult anastomosis

Morbidity of Ileostomy Creation (%)	
Necrosis	1-5
Retraction	3-17
Stenosis	2-10
Prolapse	0-11
Peristomal fistula	7-10
Small Bowel Obstruction	6-23
Parastomal Hernia	2-16
Dermatitis	5-34
Diarrhea,	5-20

Morbidity of Ileostomy Closure (%)	
Wound Infection	0.5-6
Anastomotic leak, fistula, abscess	0-10
Obstruction	1-15
Hernia	Rare

Temporary Stomas May Prove Otherwise

Source	Closure Rate
Saghir, Eur J. Surgery, 2001	66%
Sakai, Arch Surg, 2001	40%
Gooszen, Br J. Surg, 1998	95%
Belmonte (Literature)	64-84%
Belmonte, Arch Surg 1996	70 %
Khoury GA, Ann Royal Coll. Surg Eng, 1987	85%

IPAA: Summary

- Complex multistage procedure performed on a chronically ill population
- Two often conflicting goals
- Significant Morbidity