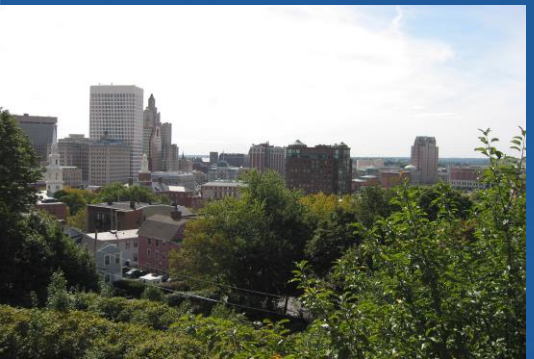
Managing Crohn's Disease and Ulcerative Colitis

Samir A. Shah, MD, FACG, FASGE, AGAF
Clinical Professor of Medicine, Brown University
Chief of Gastroenterology, The Miriam Hospital
Gastroenterology Associates, Inc
44 West River Street, Providence RI 02904
401-274-4800 samir@brown.edu

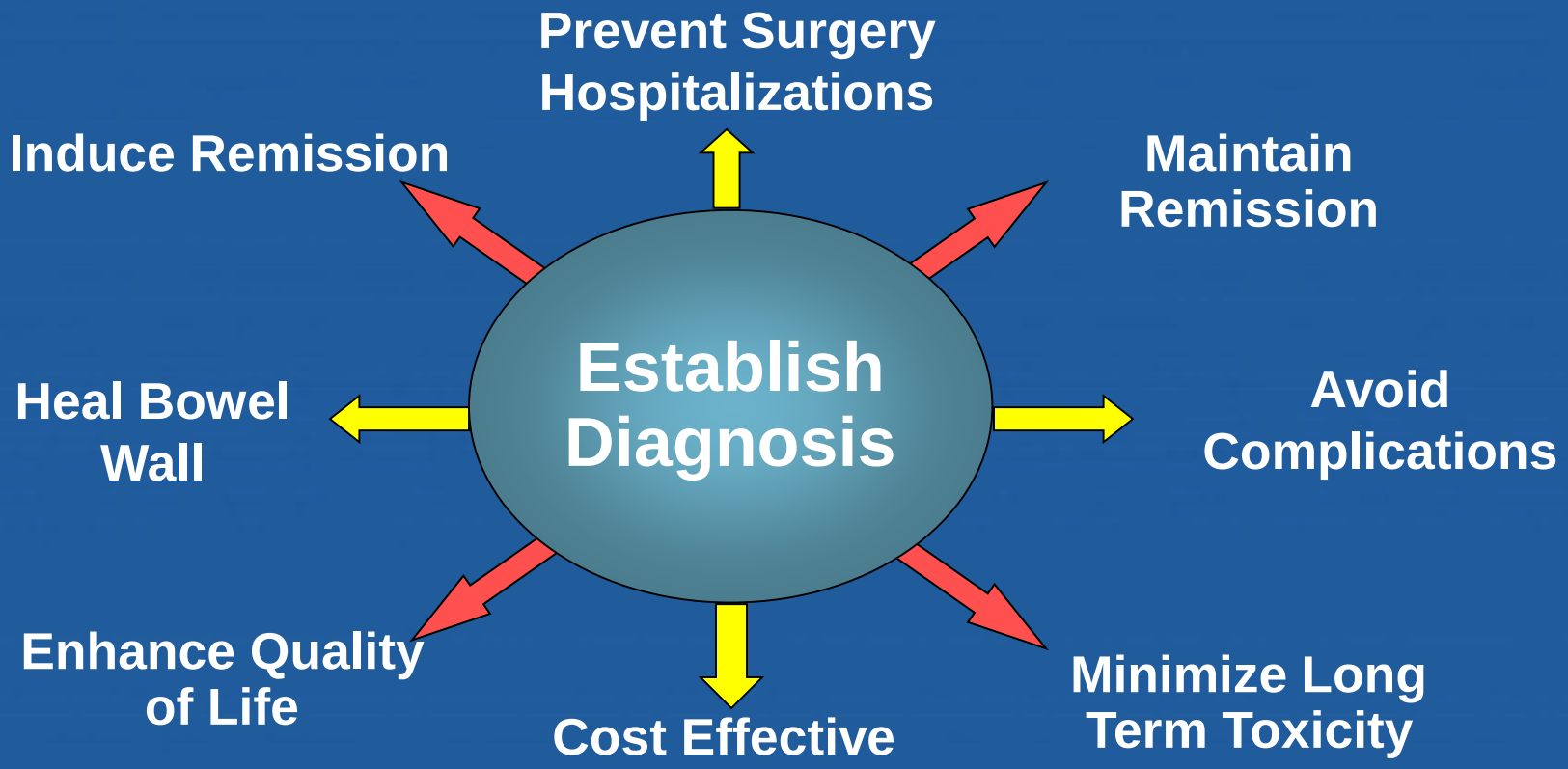


Disclosures: none in 2018
2017: Speaker's Bureau: AbbVie, Janssen and Takeda

Learning objectives:

- Understand the importance of accurate diagnosis, staging
  - Montreal Classification
  - Risk stratification: Mild vs. Moderate/Severe
- Current Treatment options and approach
  - Matching treatment to disease severity
  - Avoiding steroids and narcotics
  - Therapeutic Drug Monitoring/ Treat to Target
  - Surgery is not failure
- Treating the whole patient
  - Anemia, Nutrition, Bone disease, Sexual function
  - Pain control, Depression

IBD Management Goals



The First Goal of Management in IBD: Obtain a Clear and Accurate Diagnosis

- A clear diagnosis should provide information that:
  - Explains the patient's current symptoms and problems
  - Is accurate now and withstands the test of time
  - Provides prognostic information
  - Makes a distinction in the management decisions such that therapy chosen now affects both short- and long-term outcomes
  - May have implications for the care of others (ie. family members)
- Includes disease extent and current severity, and some element of longitudinal prognosis

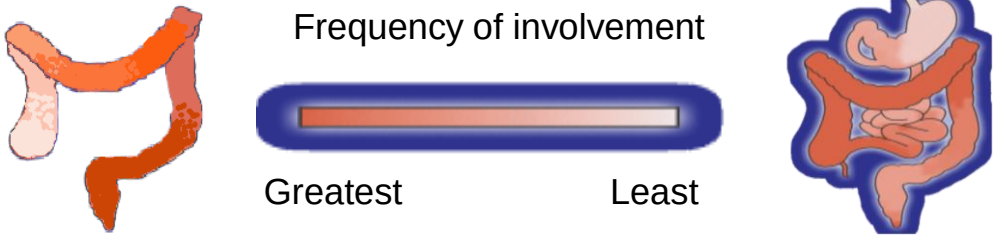
Clinical Features of UC and CD

UC

- Continuous inflammation
- Colon only
- Superficial inflammation
- Variable extent
- Risk of cancer
- EIM

CD

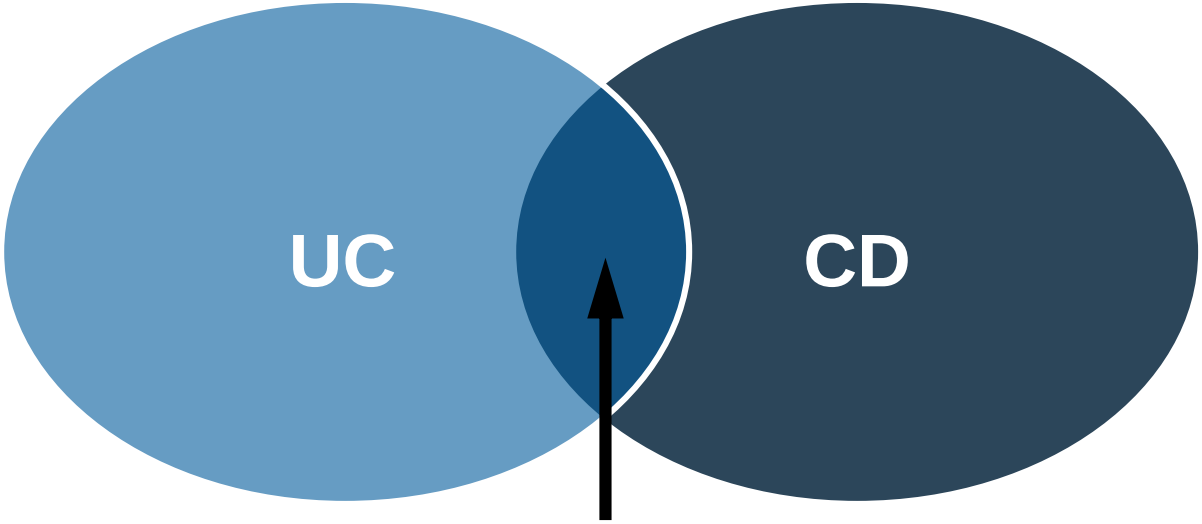
- Patchy inflammation
- Mouth-to-anus involvement
- Full-thickness inflammation
- Fistulas and strictures
- Risk of cancer
- EIM



Diagnosis of IBD

- Clinical context critical as no one test diagnostic
- EIM, supporting lab, exam (perianal exam: skin tags, fistula)
- Antibody tests, imaging, endoscopy
- Pathology critical but not stand alone
  - GI trained pathologist
  - Be aware of mimics

Classification of IBD: 1950s to the Present

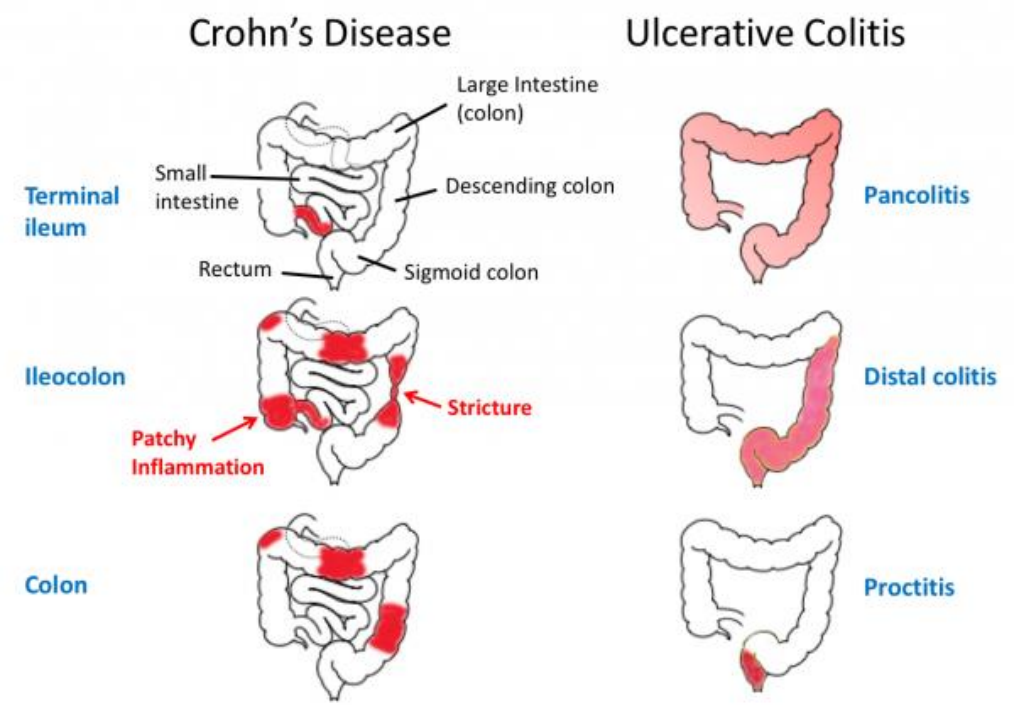


IBD Unspecified

5% to 20% of cases

1. Silverberg MS, et al. *Can J Gastroenterol*. 2005;19(suppl A):5A-36A.

Classifying Inflammatory Bowel Disease: Montreal Classification



Montreal Classification: Ulcerative Colitis

Distribution of UC	According to Disease Activity
• E1 (proctitis): involvement limited to the rectum • E2 (left-sided UC, also called distal UC): involvement limited to a portion of the colorectum distal to the splenic flexure • E3 (extensive UC, also called pancolitis): involvement extends proximal to the splenic flexure[1]	• S0 (remission): Asymptomatic • S1 (mild UC): passage of ≤4 stools per day (with or without blood), absence of any systemic illness, and normal levels of inflammatory markers • S2 (moderate UC): passage of >4 stools per day, minimal signs of systemic toxicity • S3 (severe UC): passage of ≥6 bloody stools daily, pulse rate of at least 90 per minute, temperature of at least 37.5˚ C (99.5˚ F), hemoglobin level of <10.5 g/dL and ESR ≤30 mm/h[1]

ESR, erythrocyte sedimentation rate; UC, ulcerative colitis

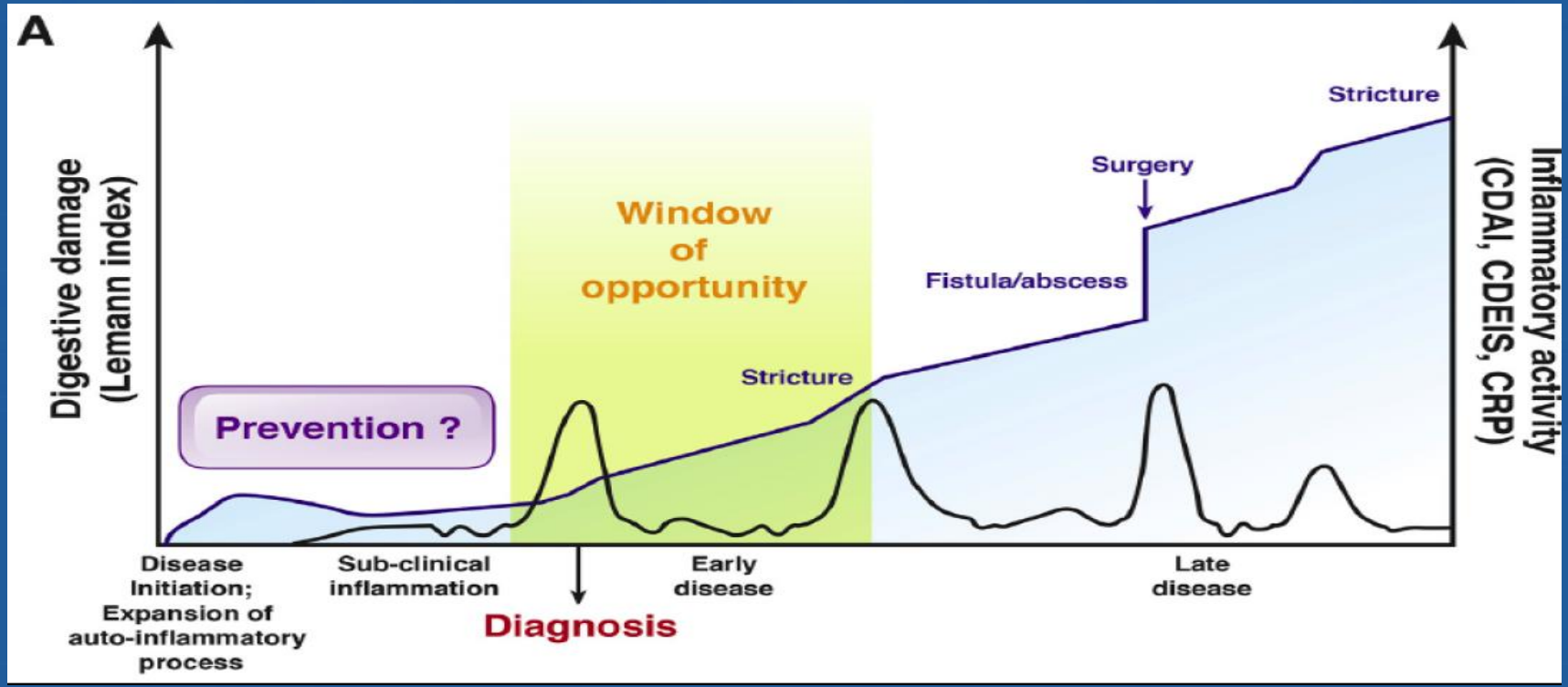
1.Silverberg MS, et al. *Can J Gastroenterol*. 2005;19(suppl A):5A-36A.

Montreal Classification: Crohn's

Age at diagnosis	Location	Behavior
• A1 (<16 years) • A2 (17 to 40 years) • A3 (>40 years)	• L1 – Terminal ileum • L2 – Colon • L3 – Ileocolonic • L4 – Upper GI	• B1 – non-stricturing, non-penetrating • B2 – stricturing • B3 – penetrating

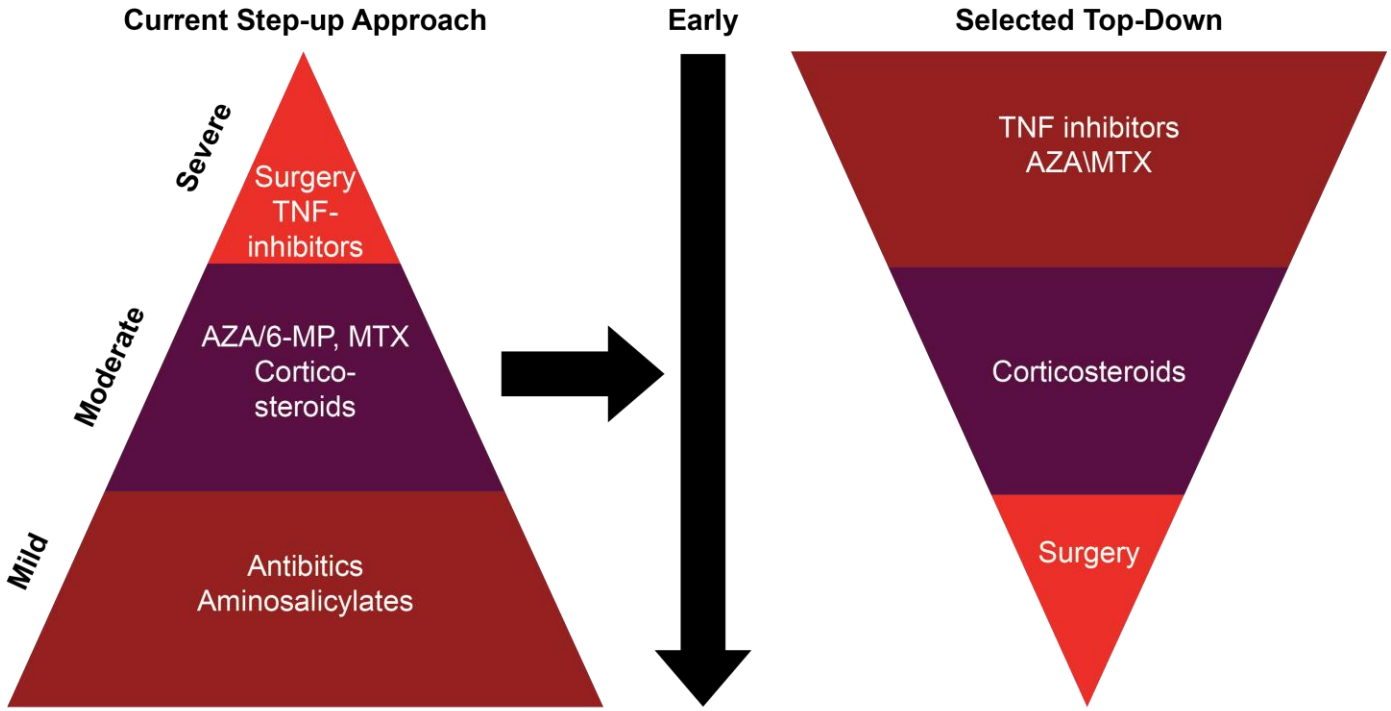
1.Silverberg MS, et al. *Can J Gastroenterol*. 2005;19(suppl A):5A-36A.

Crohn's Disease



Colombel JF et al. Gastroenterology 2017; 351-361

Positioning of biologics in CD



Current Biologics used in IBD in the USA

Drug class		Ulcerative Colitis	Crohn's disease
Anti-tumor necrosis factor			
	Infliximab : Remicade infliximab-dyyb: Inflectra infliximab-abda: Renflexis infliximab-qbtx: Ixifi	X	X
	Adalimumab: Humira adalimumab-atto: Amjevita adalimumab-adbm: Cyltezo	X	X
	Golimumab	X	
	Certolizumab Pegol		X
Anti-Integrin inhibitors			
	Natalizumab		X
	Vedolizumab	X	X
Interleukin antagonists (IL-12/23 inhibitors)			
	Ustekinumab		X

Health Maintenance Checklist for Adult IBD Patients

CROHN'S & COLITIS FOUNDATION

Vaccine-Preventable Illnesses	Which Patients	How Often
Influenza (inactive)	All	Annually
Pneumococcal PCV13	If on/planning immunosuppression	Once[1]
Pneumococcal PPSV23	If on/planning immunosuppression	At baseline, repeat in 5 years and again after age 65
Tdap	All	Every 10 years
HPV	All aged 11–26 years	Once[1]
Meningococcal meningitis	All adult patients at risk of meningitis	Once[1]
Hepatitis A	If non-immune	Once[1]
Hepatitis B	If non-immune	Once[1]
MMR (live vaccine)	If non-immune[2]	Once[1]
Varicella (live vaccine)	If non-immune[2]	Once[1]
Herpes Zoster	All aged > 50 years[3]	Once[1]

Cancer Prevention	Which Patients	How Often
Cervical PAP smear	All on systemic immunosuppression[4]	Annual
Skin screen	All on systemic immunosuppression[4]	Annual
Colonoscopy	All with colonic disease for > 8 years	Every 1-3 years

Other Screenings	Which Patients	How Often
DEXA Scan	High risk; women with low BMI, post-menopausal, chronic steroid exposure	At least 2 years apart
PPD or IGRA	Prior to anti-TNF or anti-IL-12/23	Once (repeat if TB exposure)
Smoking status	All	Annual
Depression check	All	Annual

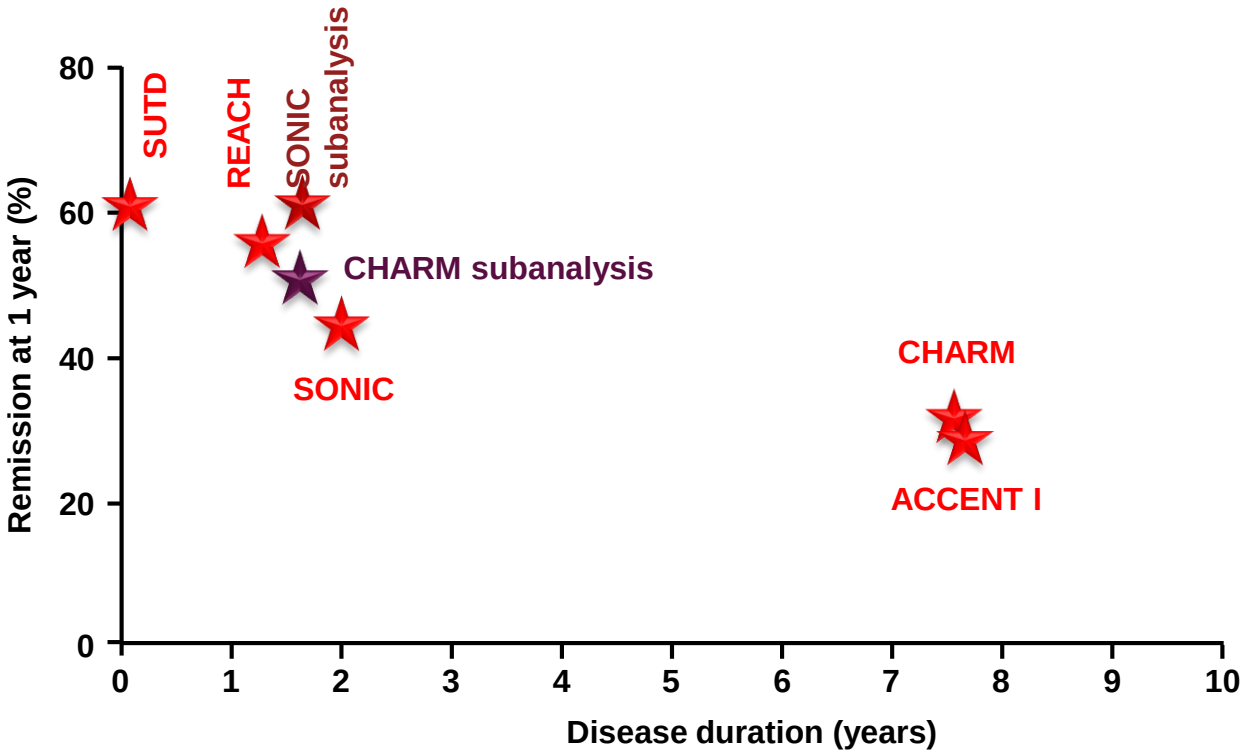
The evidence base for this checklist varies from "insufficient to assess benefits" to "moderate net benefits." Developed by the Crohn's & Colitis Foundation's Professional Education Committee Sub-Group: Alan Moss MD, Francis Farraye MD, MSc, Glenn Gordon MD, Raluca Vrabie MD • Approved by Committee Chairs: Millie Long MD, Samir Shah MD • V3_January_2018

1. Recommended timing and spacing of vaccines available in ACIP recommendation
2. Patients treated with systemic immunosuppressive therapy (steroids, thiopurines, anti-TNFs) should not receive live (attenuated) vaccines e.g. measles, mumps, rubella, nasal influenza, varicella, and yellow fever
3. The CDC's ACIP recommends the subunit vaccine (Shingrix) over the live vaccine (Zostavax), and that Shingrix can be administered to patients who have already received Zostavax. Patients receiving anti-TNFs, anti IL-12/23 or >20 mg prednisone should NOT be given the live zoster vaccine.
4. "Systemic immunopsuppression" currently includes azathioprine, mercaptopurine, methotrexate, anti-TNFs, anti-IL-12/23

ADDITIONAL INFORMATION

- ACG
- ACIP
- ACOG
- AGA
- NCI Skin Screen
- National Osteoporosis Foundation
- PHQ-9 Depression Survey
- US Preventive Services Task Force (USPSTF)

Anti-TNF therapy is most effective in early disease



Hyams J et al. Gastroenterology 2007; Colombel JF et al. N Engl Med J. 2010; Hanauer SB et al. Lancet. 2002; Colombel JF et al. Gastroenterology. 2007; Colombel JF et al. Aliment Pharmacol Ther. 2015

ACCENT, **A Crohn's Disease Clinical Trial Evaluating Infliximab;** SUTD, Step-Up Top-Down; Study of Biologic and Immunomodulator Naive Patients in Crohn Disease; TNF, tumor necrosis factor

AGA Clinical Pathway for Ulcerative Colitis
Stratifying Patients by Colectomy Risk

Low colectomy risk

Limited anatomic extent
Mild endoscopic disease

High colectomy risk

Extensive colitis
Deep ulcers
Age < 40 years
High CRP and ESR
Steroid-requiring disease
History of hospitalization
C. difficile infection
CMV infection

For High Risk: Options for induction:
or
Steroids + Immunomodulator
or
Anti-TNF +-Immunomodulator
or
Vedolizumab +-Immunomodulator

Dassopoulos, et al. httsp://dx.doi.org/10.1053/j.gastro.2015.05.036

AGA Clinical Pathway for Crohn's Disease: Initial Treatment

Low-risk patient

Ileum and/or proximal colon, none to minimal symptoms

Options

- Budesonide 9 mg/day with or without AZA
- Tapering course of prednisone with or without AZA

Diffuse or left colon, none to minimal symptoms

Options

- Tapering course of prednisone with or without AZA

Moderate/high-risk patient

Options

- Anti-TNF or biologic monotherapy over no therapy or thiopurine monotherapy
- Anti-TNF + thiopurine over thiopurine monotherapy or anti-TNF monotherapy
- Methotrexate for patients who do not tolerate purine analog in combination with anti-TNF

Since this came out: Vedolizumab and Ustekinumab
Also options for this group of patient (biologic naïve or Anti-TNF failure or loss of response)

Sandborn WJ. *Gastroenterology*. 2014;147:702-705.

Risk Stratification

- Ulcerative Colitis
  - Endoscopic extent
  - Endoscopic severity
    - Fissuring ulcers
  - Histology
  - Need for steroids
  - PSC
  - Hospitalization/ IFX
  - C diff

- Crohn's Disease
  - Age at diagnosis
  - Extent of disease
  - Fistulizing/penetrating
  - Severe rectal/perianal dz
  - Deep ulcers
  - Previous surgery
  - EIM
  - Need for steroids
  - Smoking
  - C diff

***the initial rx will often determine maintenance rx**

How to decide who gets monotherapy or combination therapy?

One Size Does Not Fit All

- RAND panel to address when it is “appropriate” or “inappropriate” to use combination anti-TNF therapy
- 134 different patient scenarios
  - Combination therapy generally appropriate or uncertain
  - More extensive disease, prior surgery → Combo therapy
  - Inappropriate for young men with limited disease extent
  - Most disagreement about young patients
- Level III evidence

BRIDGe
Building Research in IBD Globally

http://www.BRIDGeIBD.com

Melmed et al. CGH 2010.

Mono versus Combo: One Size Does Not Fit All

Patient type

Patients were categorized into five different scenarios. Please choose the scenario that best fits the patient in question:

Patient type:

- (•) No previous exposure to steroids, immunomodulators, or biologic therapy
- ( ) Induction therapy with steroids alone; no concurrent or previous exposure to immunomodulator or biologic
- ( ) Currently on an immunomodulator at treatment doses for at least 2 months, but still with active disease
- ( ) Clinical attenuation or intolerance to monotherapy with 1 anti-TNF
- ( ) Patients on concomitant immunomodulator (at any dose) and biologic for at least 6 months

RECOMMENDATIONS

APPROPRIATE

The RAND panel felt that for this patient scenario, the use of immunomodulators was appropriate (expected health benefits exceeded negative health consequences by a sufficiently wide margin to justify prescribing the immunomodulator). Therefore, the recommendation is for combination therapy.

Disease variables

Now, please select the disease variables that best describes the patient in question:

Disease extent:

- (•) Limited to ileum and right colon, no more than 15 cm ileal involvement
- ( ) More than 15 cm ileal involvement and/or upper tract/mid-small bowel involvement and/or more than right-sided colonic involvement

Perianal involvement:

- ( ) No fissure, fistula, or anal stricture (ever)
- (•) Active or previous fissure, fistula, or anal stricture

Age:

- ( ) Age 25 years or younger
- (•) Age 26 or older

Gender:

- (•) Female
- ( ) Male

Disease duration:

- (•) Disease duration of 2 years or less (since diagnosis)
- ( ) Disease duration of greater than 2 years (since diagnosis)

Surgery history:

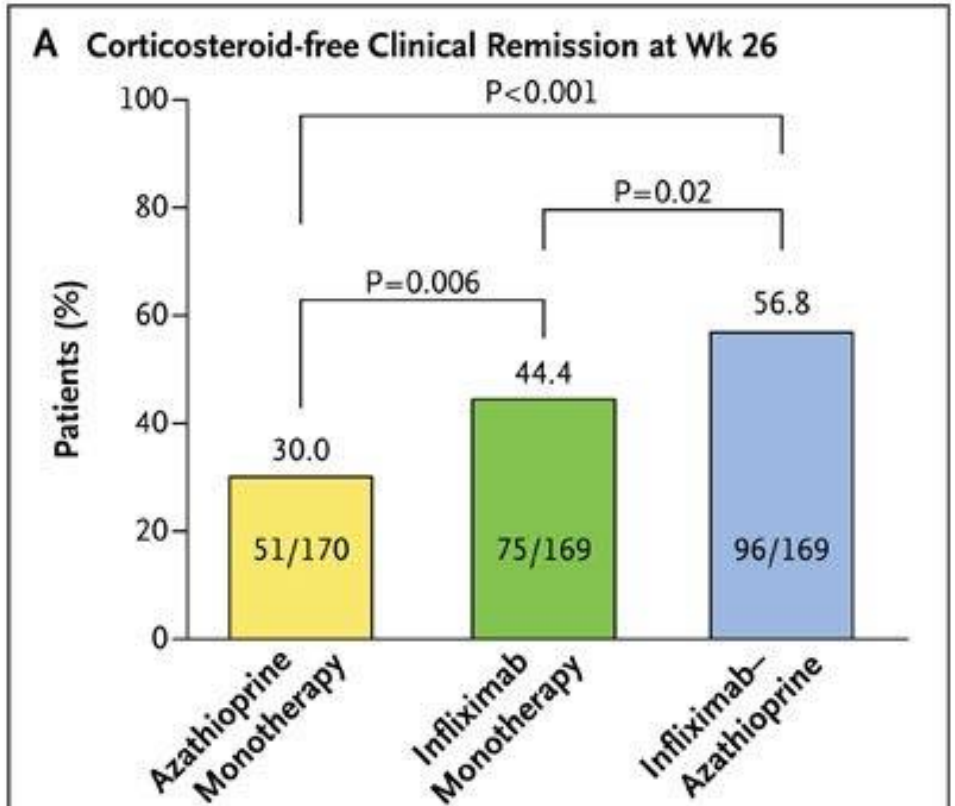
- (•) No previous intestinal resection
- ( ) 1 limited (<15 cm ileal or ileo-cecal) resection
- ( ) 1 extensive (>15 cm ileal) resection, or more than 1 resection

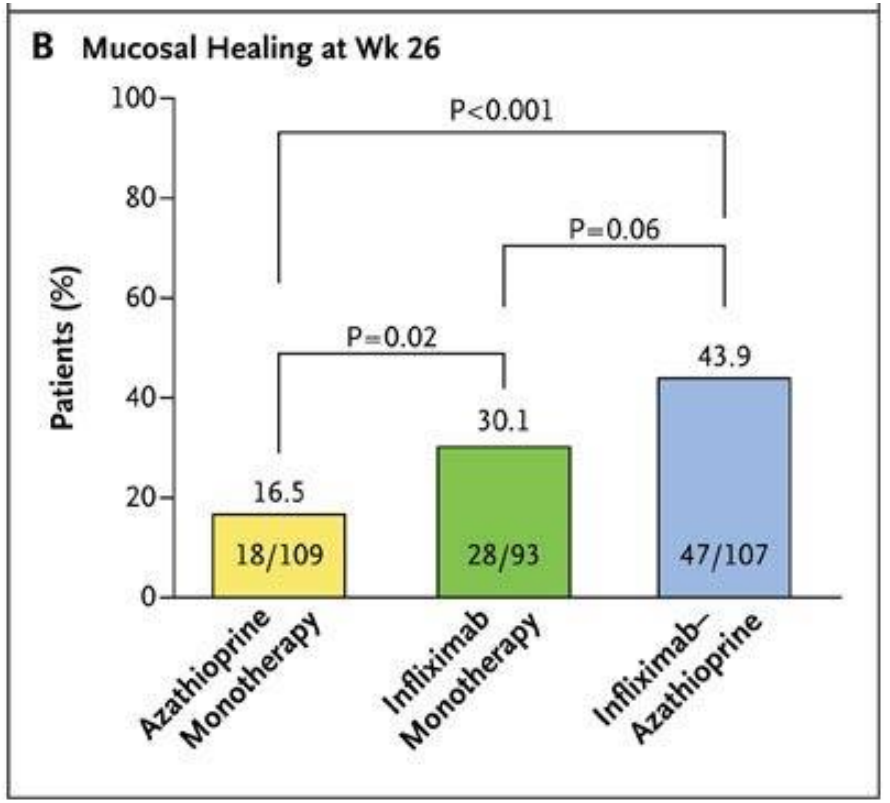
SUBMIT

BRIDGe
Building Research in IBD Globally

www.BRIDGeIBD.com

Sonic Study





N Engl J Med 2010; 362:1383-1395

BRIDGe (Rand panel): When should drug concentration and antibody testing be performed?

Appropriate to perform testing

- At the end of induction, primary non-response
- Secondary non-response
- During maintenance, responding
- Restarting after drug holiday (before 2nd infusion)

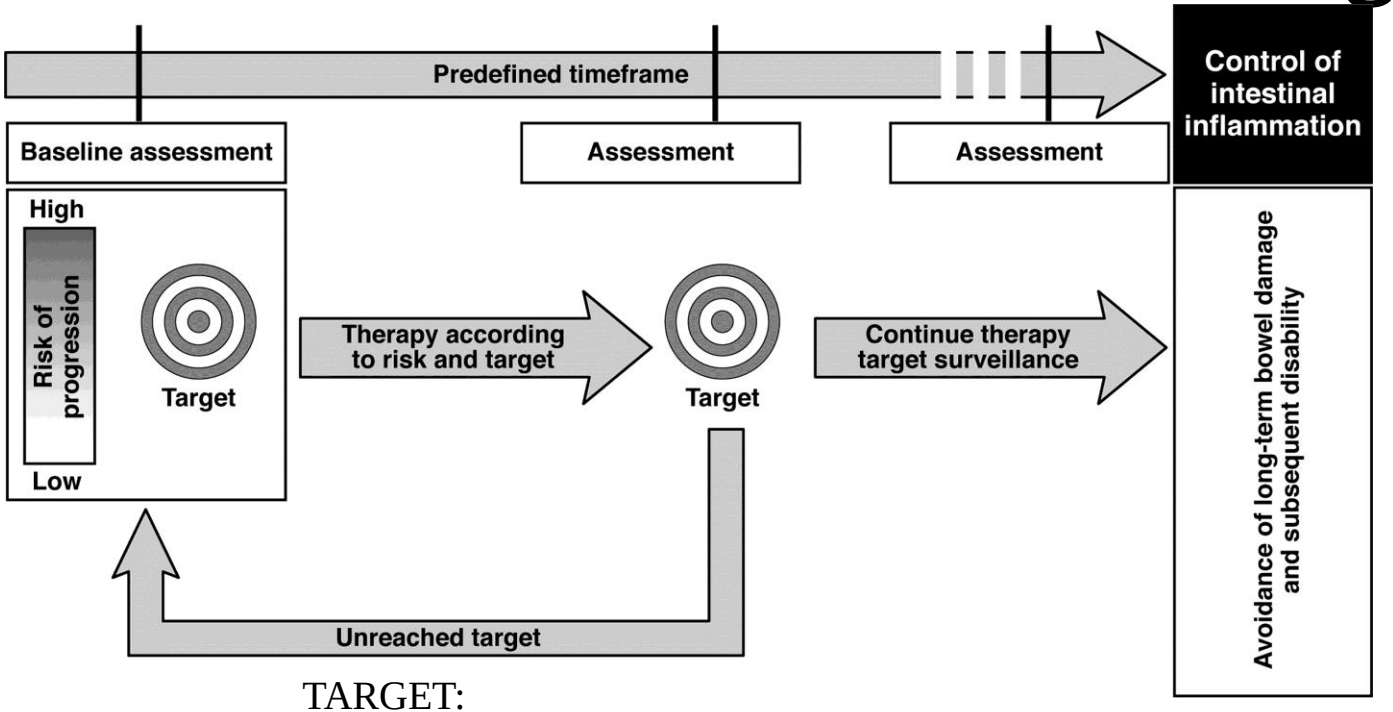
Uncertain to perform testing

- At the end of induction, in responders

Melmed et al, CGH 2016

www.BRIDGeIBD.com

Treat to Target



TARGET:

- No symptoms (feels well, good QOL)
- Markers: CRP, fecal calprotectin, trough drug levels (TDM)
- Mucosal healing (endoscopic, histologic)

Clinical Gastroenterology and Hepatology 2015 13, 1042-1050.e2DOI: (10.1016/j.cgh.2013.09.006)

Calprotectin: High Sensitivity and Specificity

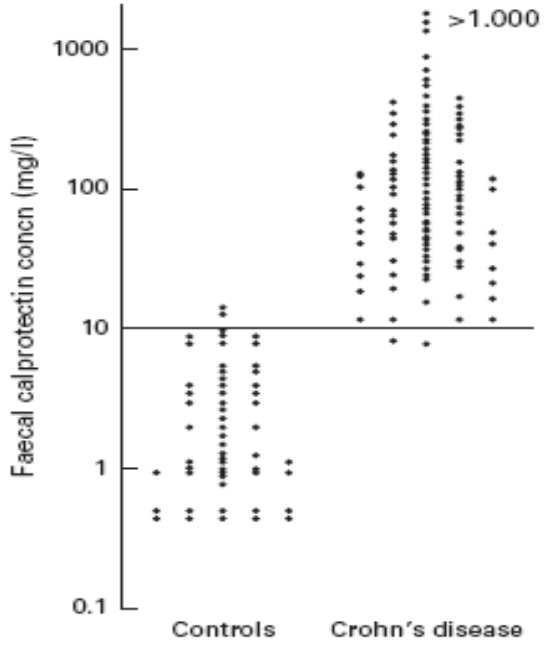


Figure 2 Concentrations of calprotectin (on a logarithmic scale) in faeces in 116 patients with Crohn's disease compared with controls. The horizontal line indicates the upper normal limit (+2SD) for calprotectin concentrations.

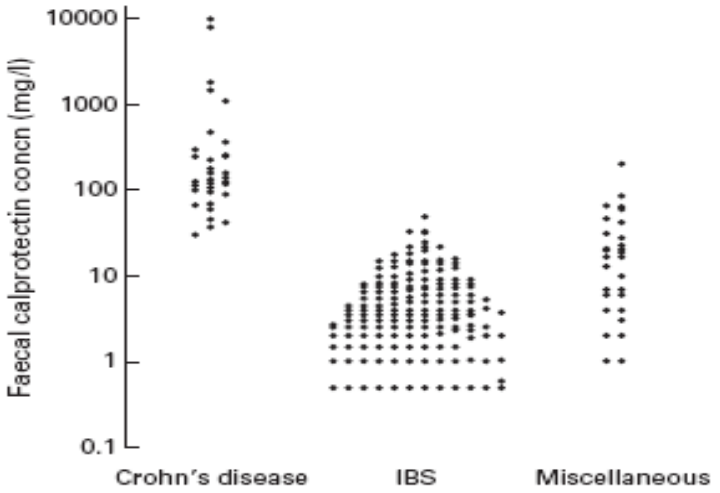


Figure 3 Concentrations of calprotectin (on a logarithmic scale) in faeces in patients subsequently diagnosed as having Crohn's disease, irritable bowel syndrome (IBS), and miscellaneous diseases. The upper normal limit (+2SD) for calprotectin concentrations is 10 mg/l.

Tibble et al. GUT 2000;47:506-513.

Fecal Calprotectin: 19 studies

Table 2. Diagnostic accuracy of fecal calprotectin, stool lactoferrin, and C-reactive protein for endoscopically active disease

Marker	Sensitivity	Specificity	Positive LR	Negative LR	AUC	Diagnostic OR
C-reactive protein						
IBD	0.49 (0.34, 0.64)	0.92 (0.72, 0.98)	6.3 (1.9, 21.3)	0.56 (0.44, 0.71)	0.72 (0.68, 0.76)	11 (3, 38)
Fecal calprotectin						
IBD	0.88 (0.84, 0.90)	0.73 (0.66, 0.79)	3.2 (2.6, 4.1)	0.17 (0.14, 0.21)	0.89 (0.86, 0.91)	19 (13, 27)
CD	0.87 (0.82, 0.91)	0.67 (0.58, 0.75)	2.7 (2.1, 3.4)	0.19 (0.14, 0.27)	0.85 (0.82, 0.88)	14 (9,22)
UC	0.88 (0.84, 0.92)	0.79 (0.68, 0.87)	4.2 (2.8, 6.4)	0.15 (0.11, 0.20)	0.91(0.89, 0.94)	28 (18, 46)
Sensitivity analysis 1[a]	0.87 (0.82, 0.90)	0.71 (0.62, 0.78)	3 (2.3, 3.8)	0.19 (0.14, 0.24)	0.87 (0.84, 0.90)	16 (11, 23)
Sensitivity analysis 2[a]	0.87 (0.83, 0.91)	0.71 (0.63, 0.78)	3 (2.3, 3.9)	0.18 (0.13, 0.24)	0.88 (0.85, 0.91)	19 (14, 28)
Sensitivity analysis 3[a]	0.88 (0.84, 0.91)	0.73 (0.66, 0.79)	3.2 (2.5, 4.1)	0.17 (0.13, 0.21)	0.89 (0.86, 0.92)	19 (14, 28)
Sensitivity analysis 4[a]	0.87 (0.83, 0.90)	0.72 (0.65, 0.78)	3.1 (2.5, 3.9)	0.18 (0.14, 0.23)	0.88 (0.85, 0.91)	17 (12, 24)
Stool lactoferrin						
IBD	0.82 (0.73, 0.88)	0.79 (0.62, 0.89)	3.8 (2.0, 7.5)	0.23 (0.14, 0.38)	0.87 (0.84, 0.90)	16 (6, 48)

Mosli et al. Am J Gastro 2015: 110:802-819. doi:10:1038/ajg.2015.120

When to consider scope

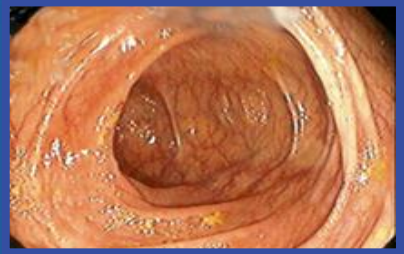
- If you need to restage disease (extent, severity)
  - Consider fecal calprotectin
- Hospitalization with colitis flare
  - Severity /extent
  - Exclude c diff (aspirate stool), CMV
- Monitor therapeutic response
- Therapeutic (anastomotic stricture)
- Post operative assessment: Rutgeert's Score
- Surveillance for colon cancer
  - Individualize based on risk factors
  - Chromoendoscopy data compelling

Endoscopy

- Complete colonoscopy with ileal intubation
  - Pediatric colonoscope preferred in CD; EGD if appropriate
  - Detailed report, extent and severity of disease, photodocumentation
- Endoscopic extent of disease
  - Future CRC risk
  - Therapy (oral / topical /both)
- Histology
  - Appropriate number and location of biopsies
  - GI expert pathologist
  - Bx for CMV, assess C diff→ severe disease
- Capsule endoscopy: useful in excluding SB Crohn's

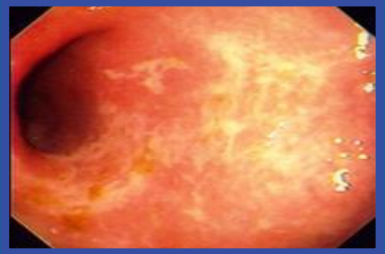
- Extent of disease, complication: CTe, MRe, SBFT

Endoscopic Severity of UC



NORMAL

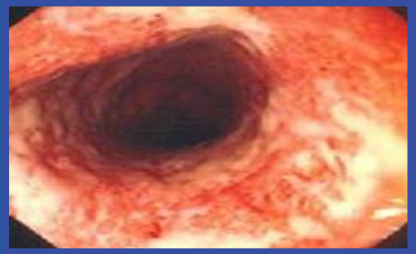
MAYO: 0



MILD

Diminished vascular markings, mild erythema, granularity, and friability

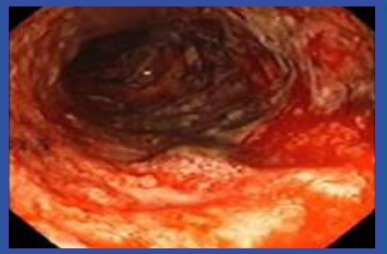
MAYO: 1



MODERATE

Marked erythema, absent vascular markings, contact friability, no ulcers

MAYO: 2



SEVERE

Spontaneous bleeding, ulcers

MAYO: 3

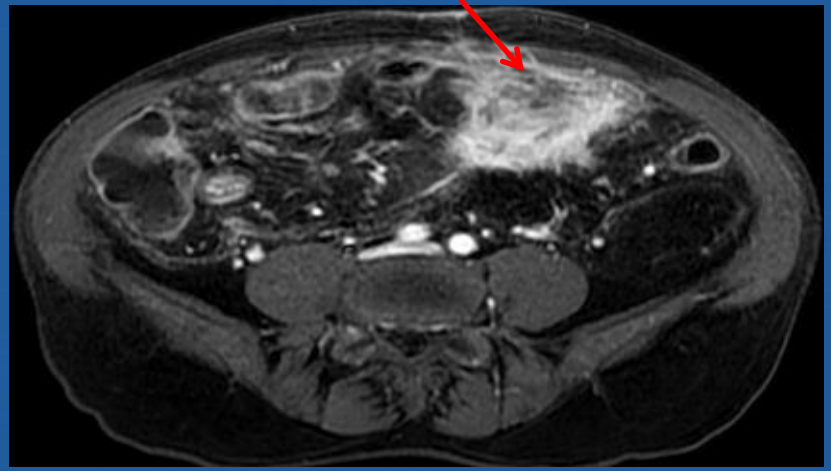
Rutgeert's Score

Rutgeerts' score	Endoscopic description of findings
i0	no lesions
i1	≤5 aphthous ulcers
i2	>5 aphthous ulcers with normal intervening mucosa, skip areas of larger lesions, or lesions confined to ileocolonic anastomosis
i3	diffuse aphthous ileitis with diffusely inflamed mucosa
i4	diffuse inflammation with larger ulcers, nodules and/or narrowing

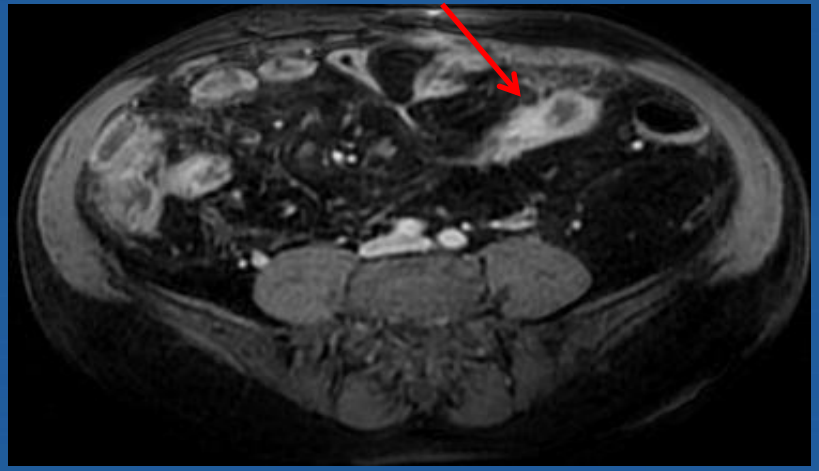
Adapted From Rutgeerts et al.[7]

6-12 months post surgery: assess for recurrence
Ulcers at the anastomosis do not count

MRE: Treatment Monitoring



4/2/07

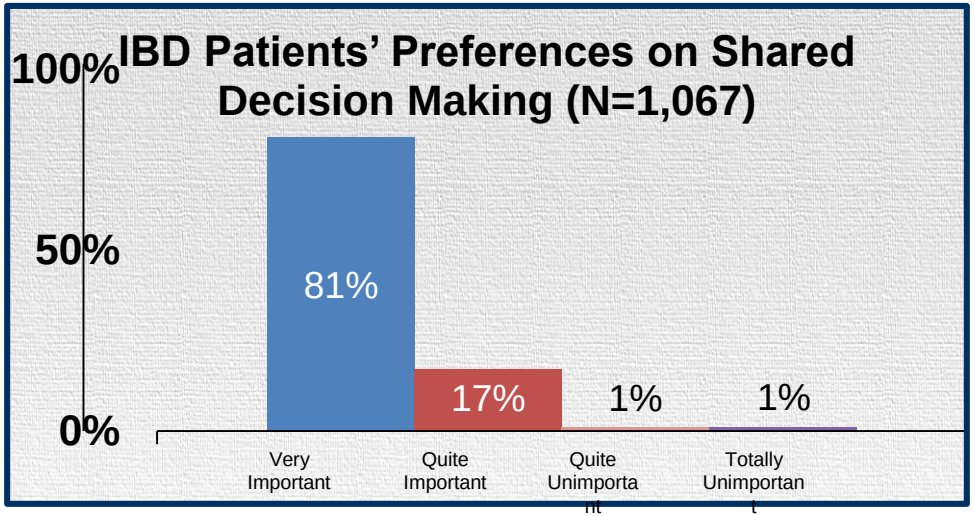


8/6/07

Patient with Crohn's Disease undergoing Anti-TNF therapy: MRE shows decreased inflammation compatible with excellent response to therapy

Shared Decision Making: Focus on the Patient

Shared decision making is especially important for patients making long-term decisions or who have chronic disease management, such as IBD



Study Design: Adult IBD patients (N=1,067; 617 CD and 450 UC) were asked to anonymously complete an online survey to assess IBD patients' preferences about being involved in such decisions. The questionnaire was placed on the website of the Dutch Patients' Association of Crohn's Disease and Ulcerative Colitis (CCUVN) from December 2006 to January 2007. Non-parametric tests were used to determine the relationship between responses and respondents.

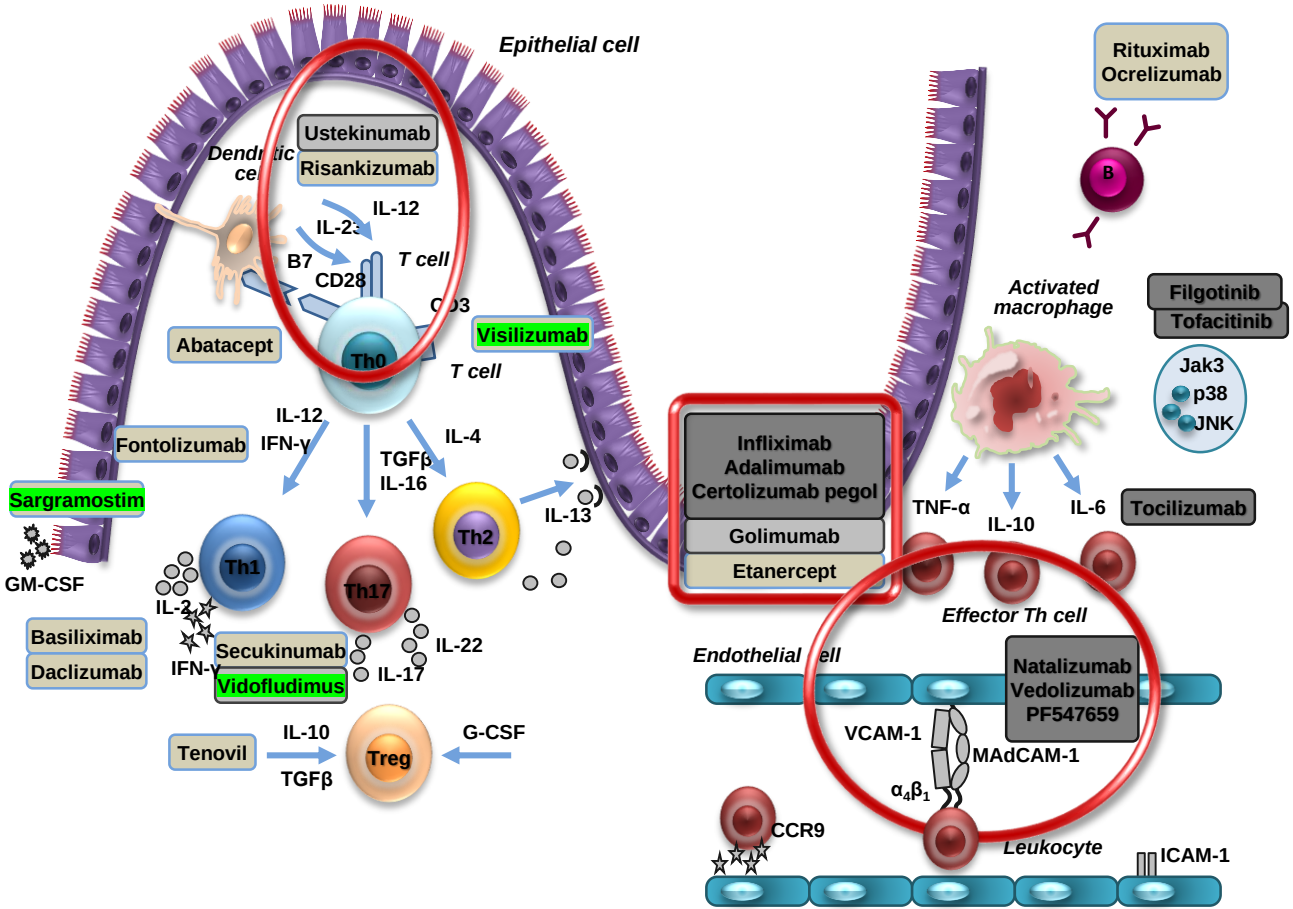
1. Baars JE, et al. *Digestion*. 2010;81(2):113-119. 2. Coulter A, et al. *BMJ*. 1999;318(7179):318-322.

Serious Infections
Logistic Regression Data (Multivariate)

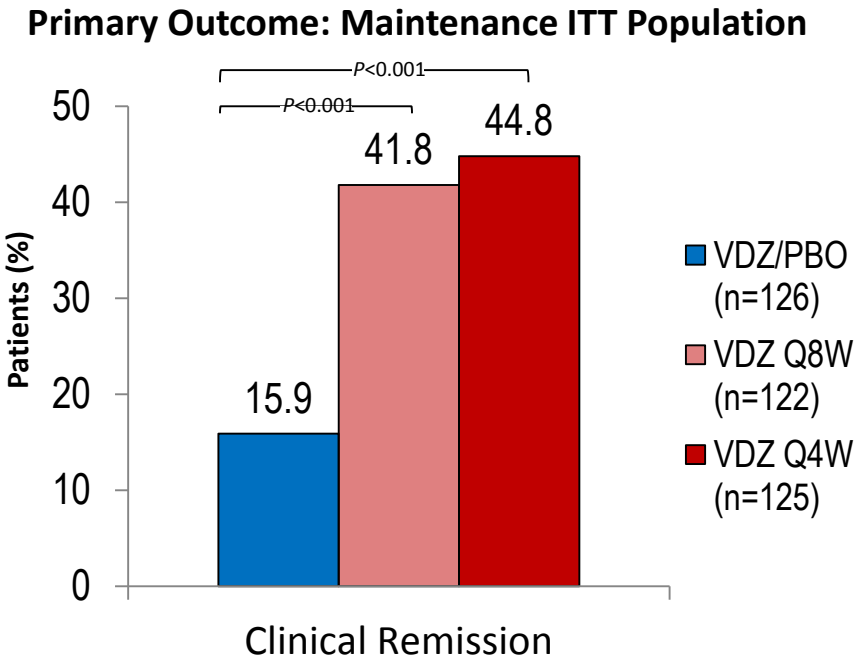
	Odds Ratio	95% CI	*P*-Value
Current use of infliximab	0.991	0.641- 1.535	*P*=0.97
Current use of 6MP/AZA/MTX	0.782	0.519- 1.179	*P*=0.24
Current use of corticosteroids	2.212	1.464-3.342	*P*<0.001
Current use of narcotic analgesics	2.380	1.560-3.631	*P*<0.001

Lichtenstein G et al. *Clin Gastroenterol Hepatol.* 2006;4:621-630.

Biologics for IBD



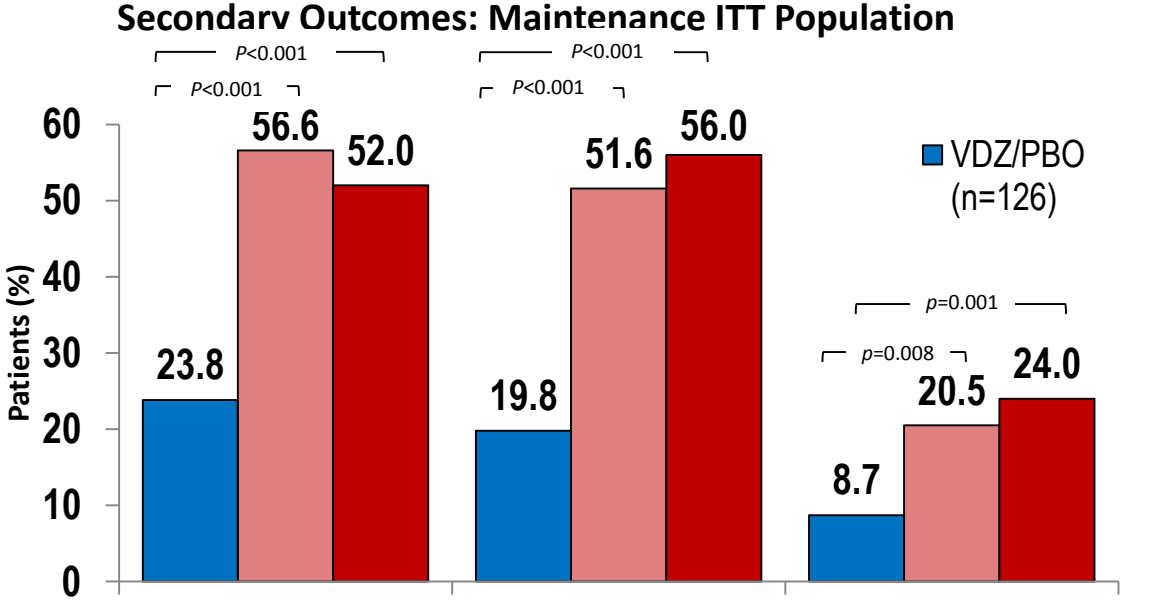
GEMINI I: Vedolizumab in Ulcerative Colitis Maintenance Phase – Outcomes at Week 52



CS=corticosteroid; PBO=placebo; VDZ=vedolizumab; ITT=intent to treat

Feagan BG et al. *N Engl J Med* 2013

GEMINI I: Vedolizumab in Ulcerative Colitis Maintenance Phase – Outcomes at Week 52

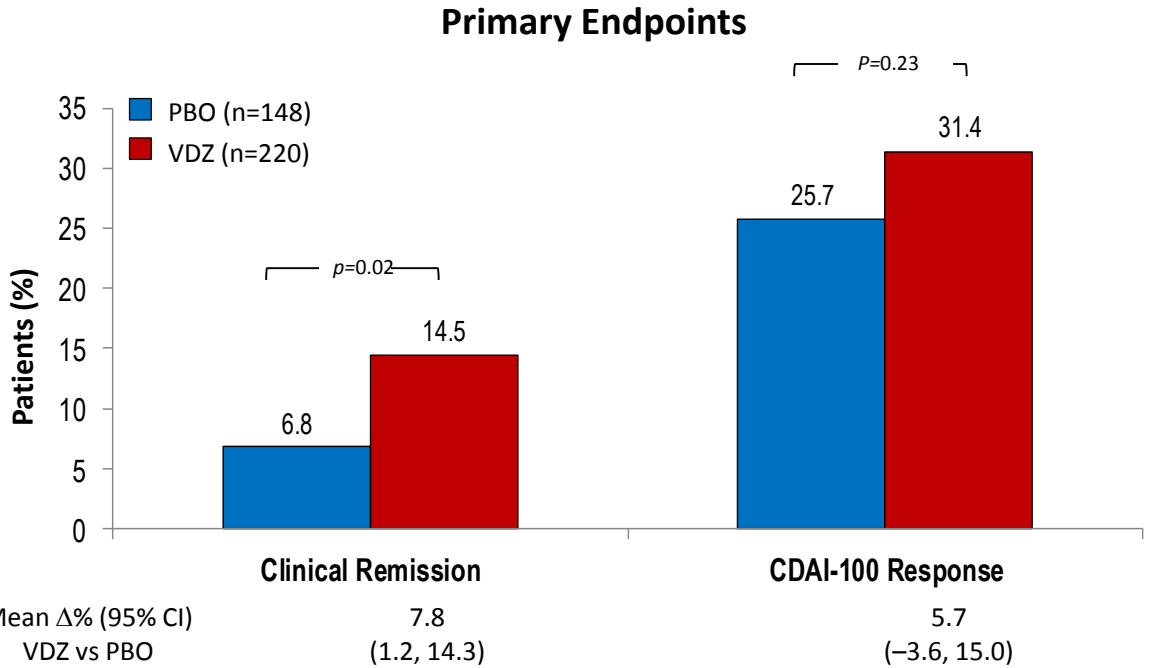


Mean Δ% (95% CI)			
VDZ Q8W vs PBO	32.8 (20.8, 44.7)	32.0 (20.3, 43.8)	11.8 (3.1, 20.5)
VDZ Q4W vs PBO	28.5 (16.7, 40.3)	36.3 (24.4, 48.3)	15.3 (6.2, 24.4)

GC=glucocorticoid; PBO=placebo; VDZ=vedolizumab; ITT=intent to treat

Feagan BG et al. *N Engl J Med* 2013

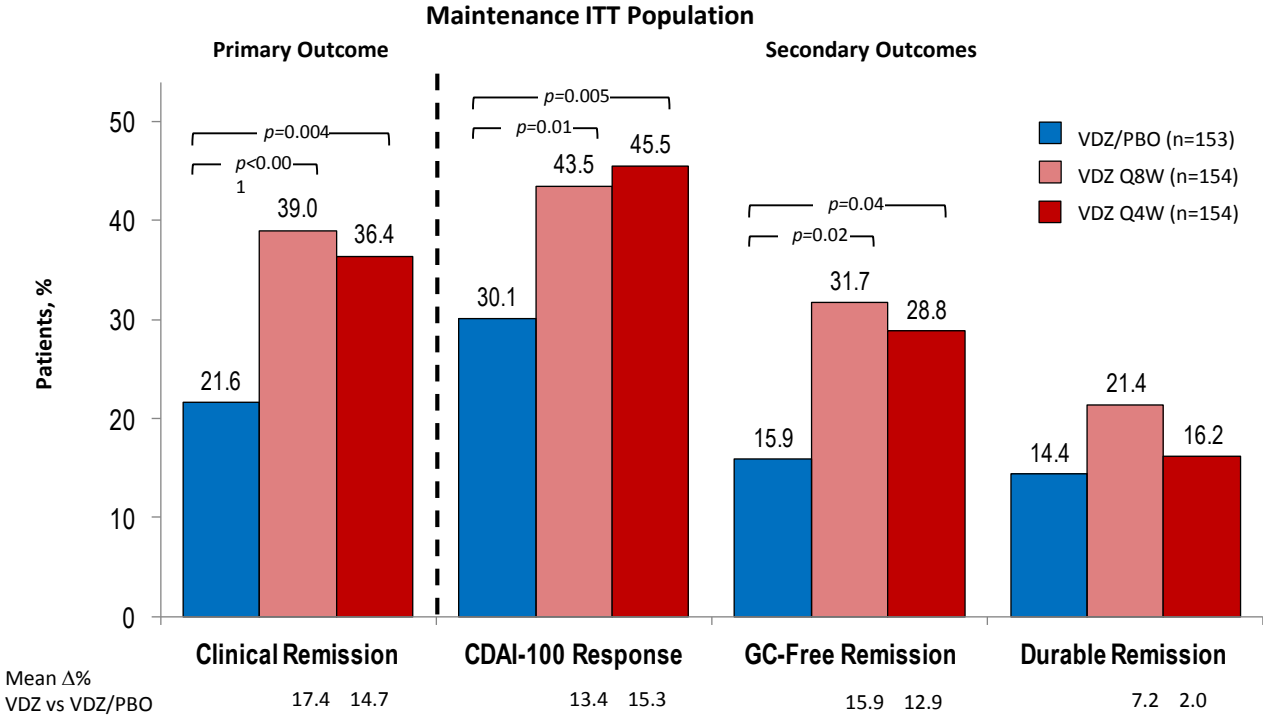
GEMINI II: Vedolizumab in Crohn's Disease Induction Phase – Outcomes at Week 6



CDAI=Crohn's Disease Activity Index; PBO=placebo; VDZ=vedolizumab

Adapted from: Sandborn WJ et al. *New Engl J Med* 2013;369:711-721.

GEMINI II: Vedolizumab in Crohn's Disease Maintenance Phase – Outcomes at Week 52



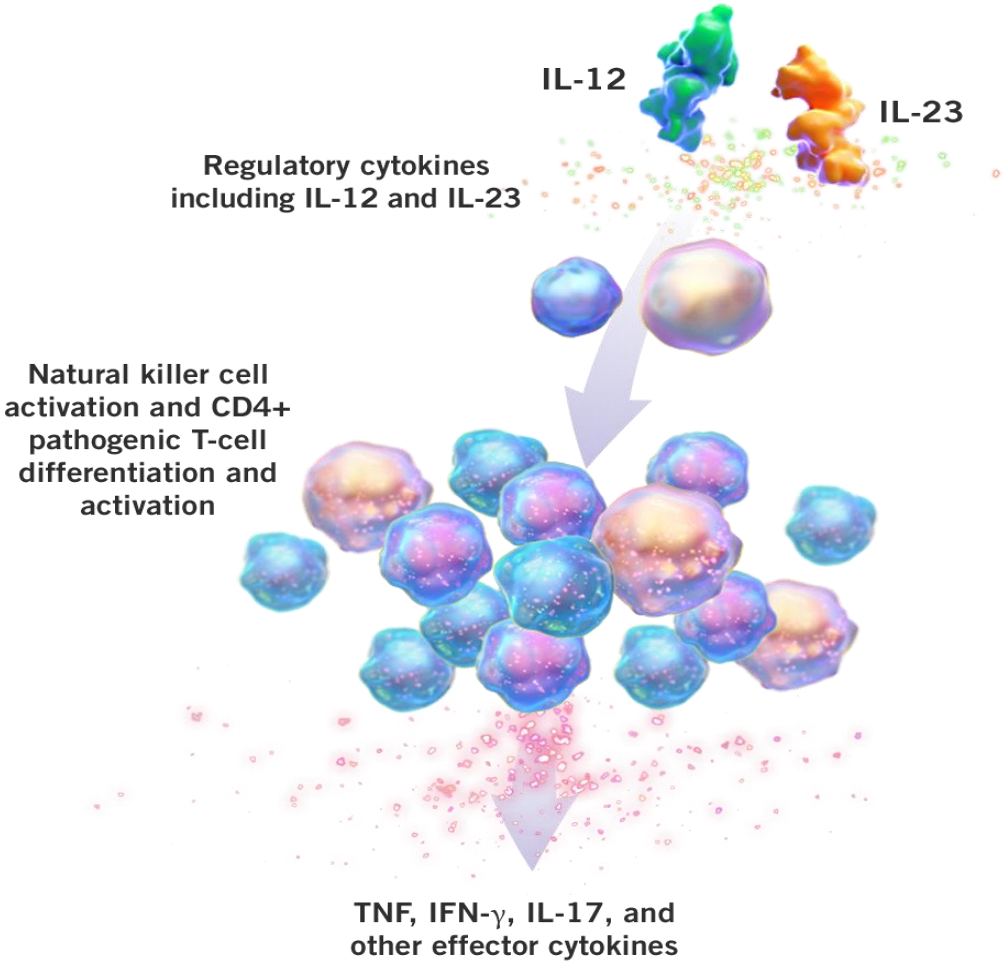
CDAI=Crohn's Disease Activity Index; CS=corticosteroid; PBO=placebo; VDZ=vedolizumab

Adapted from: Sandborn WJ et al. *New Engl J Med* 2013;369:711-721

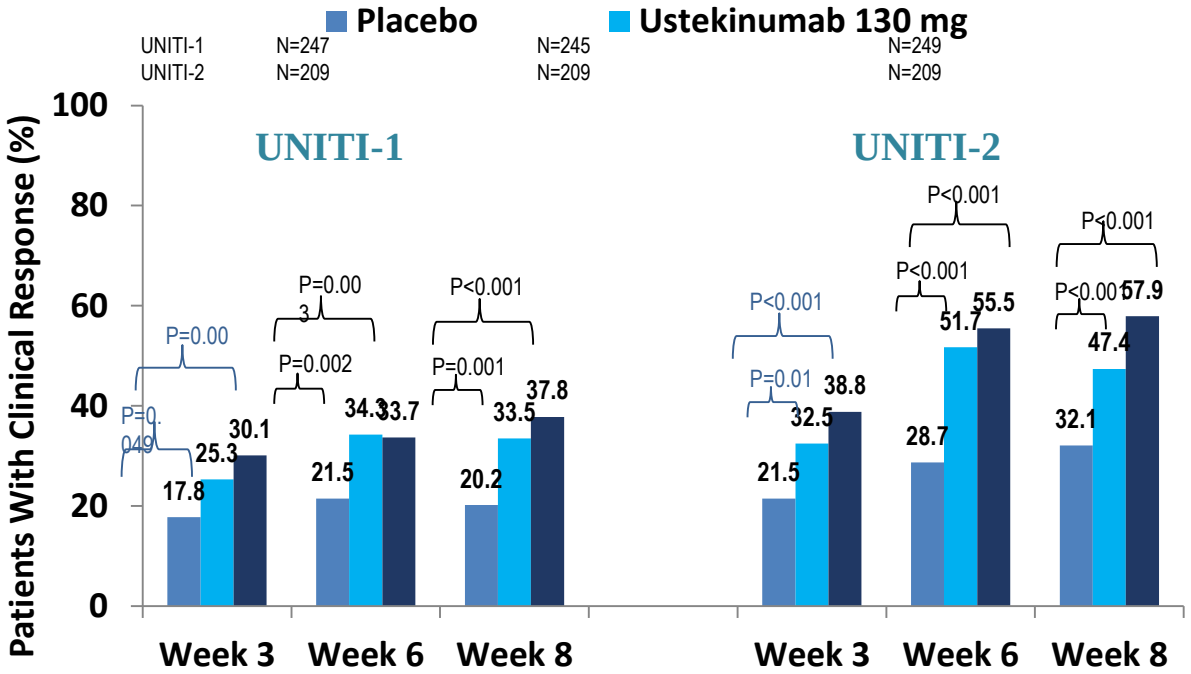
The safety of vedolizumab for ulcerative colitis and Crohn's disease

- Treatment with vedolizumab for up to 5 years in a population of over 2800 patients demonstrated a favorable safety profile.
- No cases of progressive multifocal leukoencephalopathy (PML)
- Vedolizumab is not associated with an increased risk of serious or opportunistic infections, and the rate of malignancy (0.1/100 person-years) is consistent with that observed in patients with IBD normally.
- Infusion-related reactions, enteric infections and autoimmune events occur

Colombel J-F, et al. Gut 2016;0:1–13.
doi:10.1136/gutjnl-2015-311079


IL-12
IL-23
Regulatory cytokines including IL-12 and IL-23
Natural killer cell activation and CD4+ pathogenic T-cell differentiation and activation
TNF, IFN-γ, IL-17, and other effector cytokines

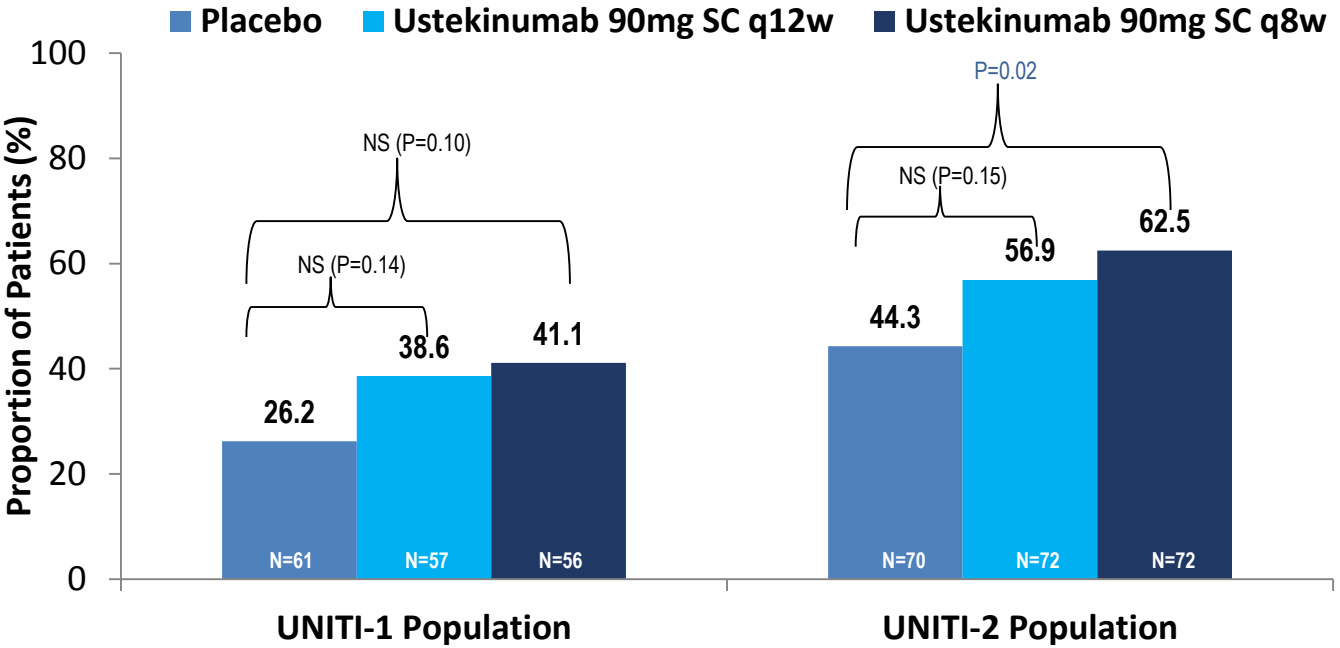
UNITI-1 and UNITI-2: Rates of Clinical Response During Induction Through Week 8



Note: Clinical response defined as a decrease from baseline in Crohn's Disease Activity Index [CDAI] score of ≥100 points or a CDAI score <150. For all the P values in gray, P<0.05 is only nominally significant, since the end point is not among the type I error–controlled end points and should be interpreted with caution. Weight-range–based doses of ustekinumab approximating 6 mg/kg of body weight are as follows: 260 mg (weight, ≤55 kg), 390 mg (weight, >55 kg and ≤85 kg), and 520 mg (weight, >85 kg). Patients who had a surgery related to Crohn's disease, had prohibited changes in concomitant medications for Crohn's disease, or had begun receiving a prohibited concomitant medication were considered to have treatment failure (treated as if they did not have a clinical response or clinical remission) from that time point onward, regardless of their CDAI score. Patients for whom there were insufficient data to calculate the CDAI score at a given time point were treated as if they did not have a clinical response or clinical remission at that time point.

Feagan BG, et al. *N Engl J Med*. 2016;375:1946-1960.

IM-UNITI: Patient Remission in UNITI-1 and UNITI-2 Subgroups During Maintenance Therapy (Week 44)



Notes: Rates of remission and response are after a total of 52 weeks of treatment. P values in gray, P<0.05 is only nominally significant according to the hierarchical testing procedure and should be interpreted with caution.
Abbreviations: NS = not statistically significant; q8w = every 8 weeks, q12w = every 12 weeks, SC = subcutaneous

Feagan BG, et al. *N Engl J Med*. 2016;375:1946-1960.

Tobacco Cessation

- Cardiac, pulmonary, and oncologic risk
- Active smoking a risk factor for CD
  - Reduced response to medications
  - Increased rate of post-operative recurrence
  - Shortened duration of remission
- Medical therapy for smoking cessation

1. Moscandrew M, et al. *Inflamm Bowel Dis*. 2009;15:1399-1409. 2. Johnson GJ, et al. *Aliment Pharmacol Ther*. 2005;21:921-931.

Don’t Ignore Anemia or Nutrition

- Anemia
  - If anemic, or bleeding, check iron stores
  - Many don’t respond or tolerate oral iron
  - IV iron very effective and underutilized
- Nutrition
  - Underemphasized/utilized in practice
  - Common concern for patients
  - Utilize Nutritionist. BMI, muscle wasting, restrictive diets
  - DINE STUDY (Mediterranean vs. SCD)

The Effect of IBD on Nutrition

IBD patients are at an increased risk for:

- Nutritional deficiencies
- Weight loss
- Iron deficiency
- Folic acid deficiency
- Vitamin B12 deficiency
- Mineral/electrolyte deficiencies
- Dehydration
- Osteoporosis
- Growth retardation in children

Heller A. *Eating Right with IBD*. 2004.

Nutrition Screening and IBD

Nutritional evaluation may include:

- Patient history
- Physical exam and laboratory studies:
  - Height and weight
  - Blood count (CBC)
  - Biochemical profile, magnesium
  - Inflammatory markers (CRP, ESR)
  - Serum iron studies, including ferritin
  - Albumin and pre-albumin
  - Folic acid/Vitamin B12
  - 25 OH vitamin D
  - Bone density testing (DEXA) – if concerned about low bone density

Heller A. *Eating Right with IBD*. 2004.

Adult IBD Nutritional Goals

- Maintaining an adequate intake of protein, carbohydrates, and fat, as well as vitamins and minerals, is necessary for good health
- Communicating regularly with your healthcare team is important!
  - Identify deficiencies or problems in advance
  - After surgery, there may be different needs
  - People with j-pouches and ostomies may have different needs

Ophthalmologic Issues

- Extraintestinal manifestations develop in ¼ to ⅓ of IBD patients
- Ocular manifestations develop in <10% of IBD patients but may be associated with significant morbidity, including blindness
  - Scleritis, episcleritis, uveitis, conjunctivitis
- Evaluation of the eye should be routine in patients with IBD
- Patients on chronic corticosteroids should be evaluated by an ophthalmologist for glaucoma and cataracts

Mintz R, et al. *Inflamm Bowel Dis*. 2004;10:135-139.
Fine S et al. Digestive Diseases and Sciences [24 Oct 2017, 62(12):3269-3279]

Psychosocial Issues

- Depression and anxiety more common in patients with IBD, more severe during periods of active disease[1-4]
- Predisposing factors include chronic relapsing nature of IBD and some medications (e.g., corticosteroids)[1]
- Depression reduces health-related quality of life and increases self-perceived functional disability irrespective of symptom severity[2,4]
  - Depression in particular can have a detrimental impact on disease course[1]
- Weight of evidence calls for more routine screening of patients, as anxiety and depression often go unrecognized in IBD[1]
- Recent Study: 25.% Depression and 21.2% Anxiety[5]

1. Graff LA, et al. *Inflamm Bowel Dis.* 2009;15:1105-1118. 2. Walker JR, et al. *Am J Gastroenterol.* 2008;103:1989-1997.
3. Kurina LM, et al. *J Epidemiol Community Health*. 2001;55:716-720. 4. Moscandrew M, et al. *Inflamm Bowel Dis*. 2009;15:1399-1409.
5. Byrne G, Can J Gastroenterol Hepatolo 2017

Depression

Screening adults for depression: position statement of the American College of Preventive Medicine, 2009

- Ask these 2 questions:
  - Over the past month, have you felt down, depressed, or hopeless?
  - Over the past month, have you felt little interest or pleasure in doing things?
- Appropriate medical treatments are available and well tolerated

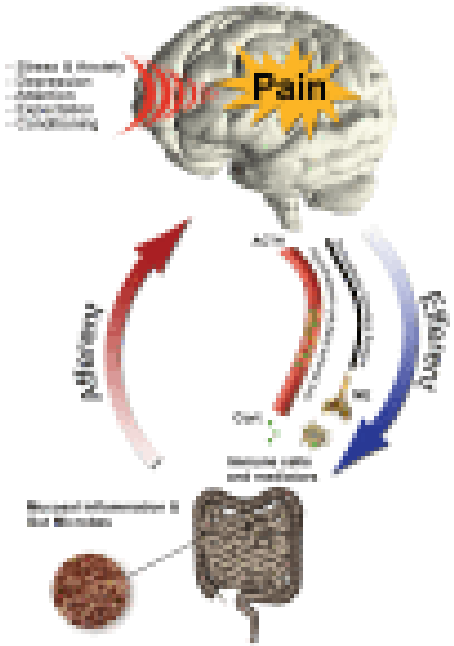
Nimalasuriya K, et al. *J Fam Pract.* 2009;58:535-538.

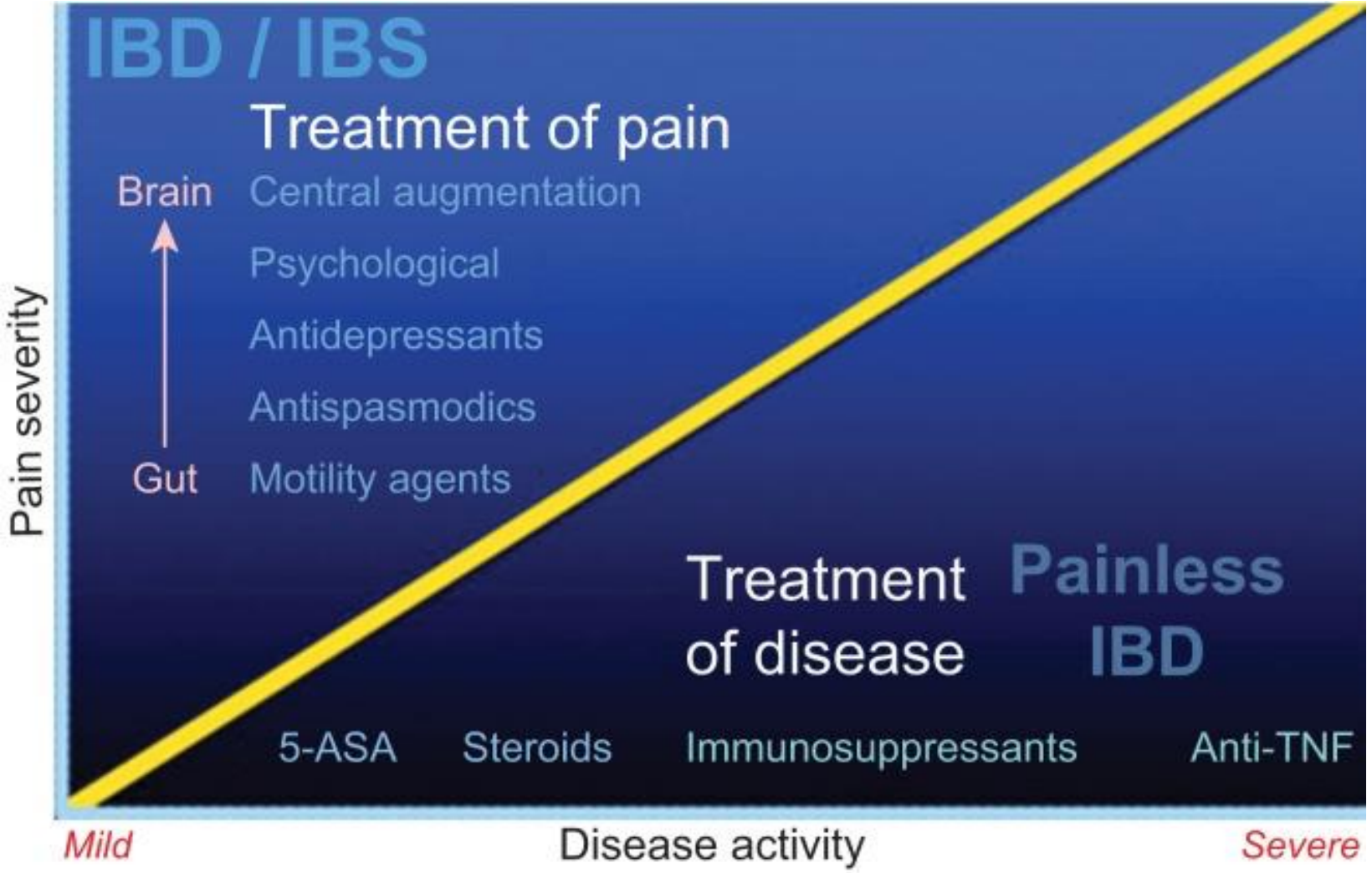
Sexuality

- Affects Men and Women
- OSCCAR Study:
  - 97% of women reported sexual dysfunction
  - 94% men reported ED, and 39% global sexual dysfunction
- CD more than UC
- Often ignored
- Important to ask and refer appropriately

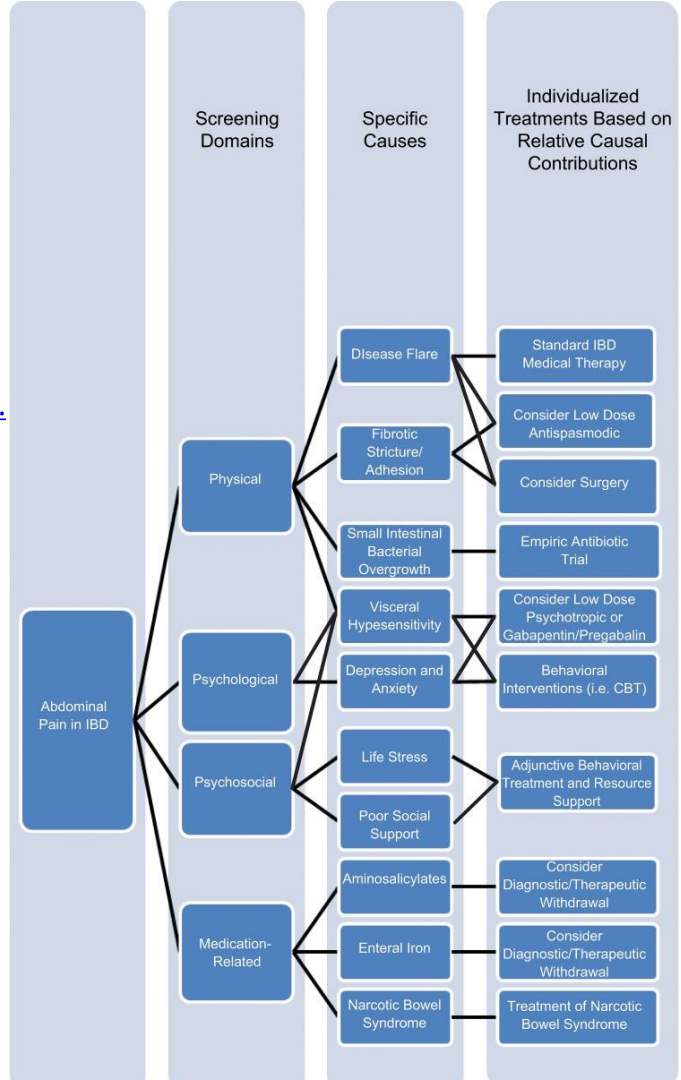
Pain Control

- Avoid Narcotics
- SSRIs, SNRIs, TCA, gabapentin, etc.
- CBT
- Acupuncture
- Pain specialist

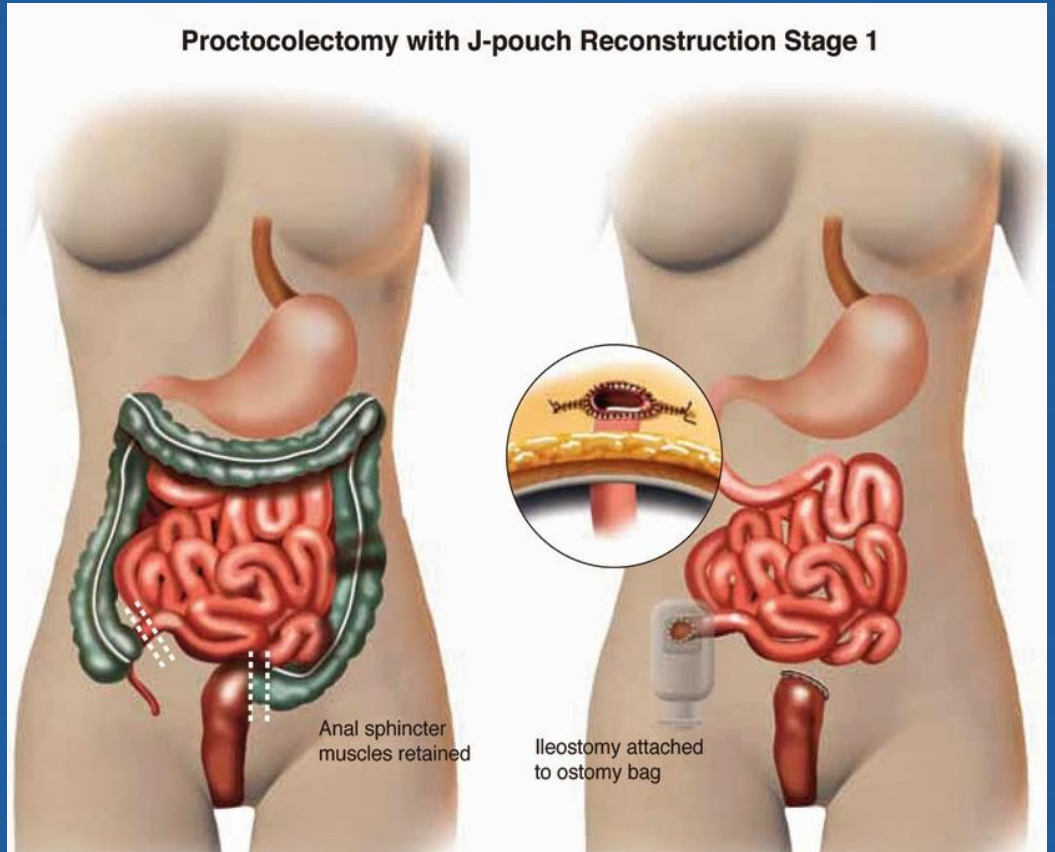


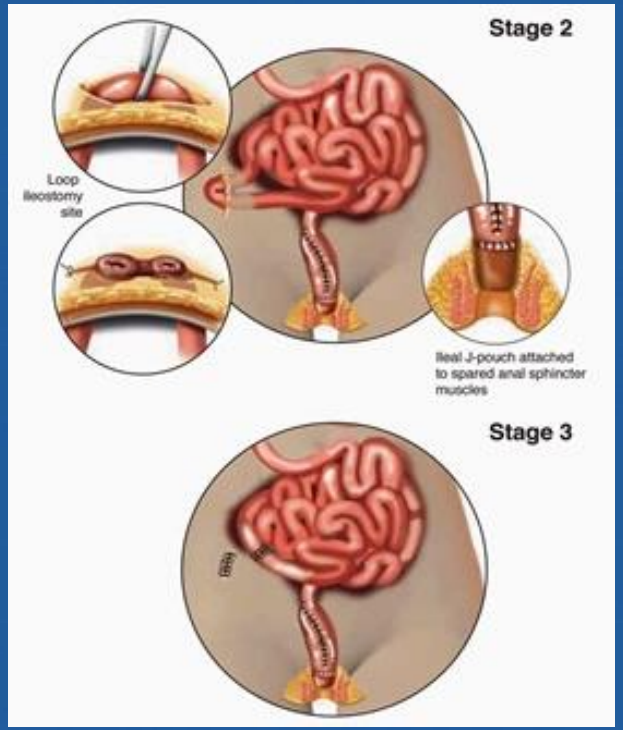

IBD / IBS
Treatment of pain
Brain
Central augmentation
Psychological
Antidepressants
Antispasmodics
Gut
Motility agents
Pain severity
Treatment of disease
Painless IBD
5-ASA
Steroids
Immunosuppressants
Anti-TNF
Mild
Disease activity
Severe

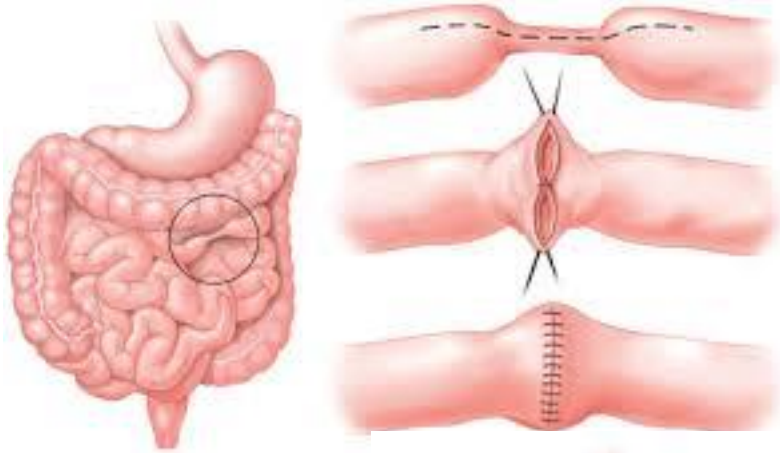
Therap Adv Gastroenterol. 2012 Sep; 5(5): 339–357.
doi: 10.1177/1756283X12446158



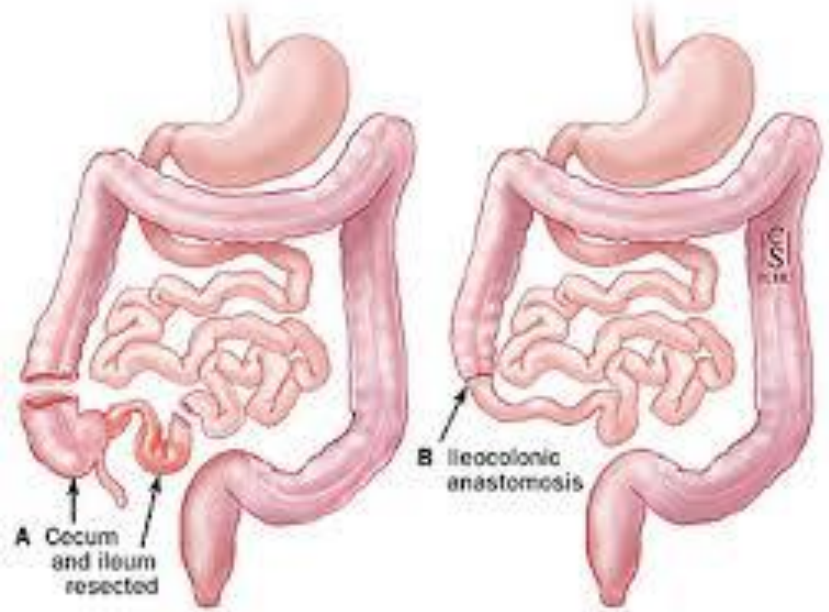
Surgery


Proctocolectomy with J-pouch Reconstruction Stage 1
Anal sphincter muscles retained
Ileostomy attached to ostomy bag


Stage 2
Loop ileostomy site
Ileal J-pouch attached to spared anal sphincter muscles
Stage 3



GI Tract Affected by Crohn's Disease



Philosophy Important

- We're here to save lives not save colons!
- Surgery is sometimes the best short and long-term option
- Waiting for surgical emergency (perforation) is associated with worse outcome
- Drugs are expensive and have side effects!
- Surgery =/= Medical failure.

Learning objectives:

- Understand the importance of accurate diagnosis, staging
  - Montreal Classification
  - Risk stratification: Mild vs. Moderate/Severe
- Current Treatment options and approach
  - Matching treatment to disease severity
  - Avoiding steroids and narcotics
  - Therapeutic Drug Monitoring/ Treat to Target
  - Surgery is not failure
- Treating the whole patient
  - Anemia, Nutrition, Bone disease, Sexual function
  - Pain control, Depression