



at a glance  
Ulcerative colitis  
and Crohn's disease

# Inflammatory Bowel Disease (IBD)

## Management & Treatment

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## Outline

Case: 23yo male with 4-year history of pan-ulcerative colitis presents with 1 week of increasing diarrhea, hematochezia, and 10 pound weight loss. He has had multiple flares and has been on 40 mg of prednisone QD and mesalamine 1600mg TID since his last flare started 6 weeks ago. Symptoms improved for the first 5 weeks, but suddenly worsened over the past week.

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## Outline

- IBD
  - Making a Diagnosis
  - How to differentiate Crohn's & UC
  - Treatment
- Primary Care Issues in IBD
- Inpatient Management in IBD

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## Diagnosis of IBD

- When
  - Symptoms lasting > 2 weeks and negative evaluation for acute causes such as infection, ischemia, medications and chronic diseases (hyperthyroid, celiac)
  - Alarm Symptoms: Bleeding, Weight Loss, Fevers.
- How
  - Direct visualization and biopsy are the gold standard
  - Imaging is suggestive
  - Serology?

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## IBD Serology

- PROMETHEUS® IBD Serology 7
  - ASCA IgA ELISA: <20.0 EU/mL
  - ASCA IgG ELISA: <40.0 EU/mL
  - Anti-OmpC IgA ELISA: <16.5 EU/mL
  - Anti-CBir1 ELISA: <21.0 EU/mL
  - AutoAntibody ELISA: <12.1 EU/mL
  - IFA Perinuclear Pattern: Not Detected
  - DNase Sensitivity: Not Detected
- Sensitivity: 71% for CD and 51% for UC

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## IBD Serology

- Pattern-recognition algorithm to predict IBD (Yes or NO).
- Algorithm can predict IBD even if 7 parameters are normal.
- If suspicion for IBD is:
  - **LOW**, positive test likely a false positive
  - **MODERATE**, neither a positive nor a negative test is helpful
  - **HIGH**, negative test likely a false negative
- If test positive still need endoscopic/radiographic evaluation to define disease extent to guide treatment.
- Guidelines recommend against use of IBD serologic testing.

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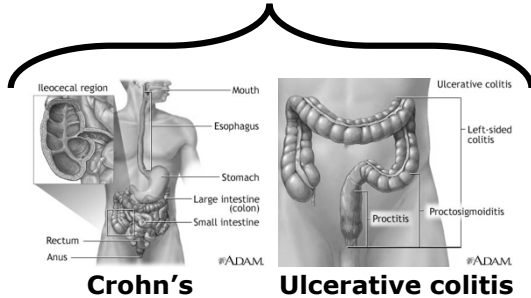
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## Inflammatory Bowel Disease




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## Crohn's vs. Ulcerative Colitis- Microscopic Features

	<b>Crohn's</b>	<b>Ulcerative Colitis</b>
Inflammation	Transmural	Limited to mucosa
Pseudopolyps	Moderate	Marked
Ulcers	Deep	Superficial
Lymphoid reaction	Marked	Moderate
Fibrosis	Marked	Mild to none
Serositis	Marked	Mild to none
Granulomas	Yes (~20%)	No
Fistulae/sinuses	Yes	No

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## Crohn's Disease vs. UC-Endoscopic and Radiographic Features

	<b>Crohn's</b>	<b>Ulcerative Colitis</b>
Bowel region	Ileum+Colon	Colon only
Distribution	Skip lesions	Diffuse
Stricture	Yes	Rare
Wall appearance	Thick	Thick or Thin

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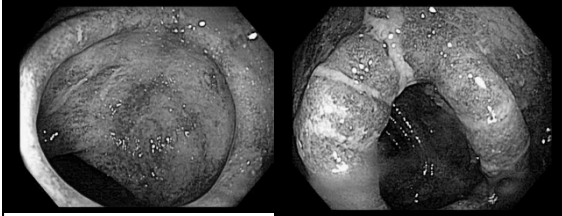
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### Ulcerative Colitis




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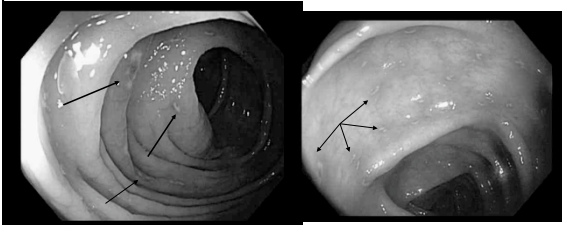
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### Crohn's Disease




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### Crohn's vs. UC-Clinical Features

	Crohn's	Ulcerative Colitis
Perianal fistula	Yes (in colonic disease)	No
Fat/vitamin malabsorption	Yes	No
Malignant potential	With colonic involvement	Yes
Recurrence after surgery	Common	No
Toxic megacolon	No	Yes

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## Signs and Symptoms

### ULCERATIVE COLITIS

- Rectal bleeding
- Diarrhea
- Tenesmus
- Anemia
- Weight loss
- Fevers
- Mucus
- Pain
- Urgency

### CROHN'S

- Fatigue
- Diarrhea
- Pain
- Weight loss
- Fever
- ± Gross bleeding
- Fistula
- Abscess

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## Indeterminate Colitis

- Criteria for Crohn's colitis or ulcerative colitis cannot be established
- Up to 10-15% with IBD will be diagnosed with indeterminate colitis
- Over time > 50% will be given a diagnosis, with most being UC
- Seem to have more severe course

-Burakoff. J Clin Gastroenterol 2004

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## Overview of IBD Treatment



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## Classes of IBD Drugs

- 5- Aminosalicylates (5-ASA)
- Steroids
- Local therapies for proctitis
- Antibiotics
- Non-steroid Immunomodulation
- Biologics

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## Treatment Distinctions

### INDUCTION OF REMISSION

- 5-ASA
- Steroids
- Local therapies
- Biologics

### MAINTENANCE OF REMISSION

- 5-ASA
- Local therapies
- Immunomodulators
- Biologics

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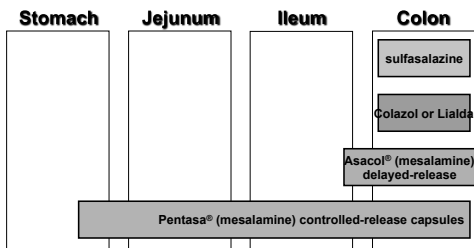
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## Oral 5-ASA Formulations



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## Dosing of 5-ASA's

- Use high dose to start therapy
- Takes 6-12 weeks for maximal effect
- Enables steroid discontinuation, remission maintenance, and reduces risk of CRC
- Reduce dose if in complete remission for 6-12 months
- Potential Side Effect – Severe watery diarrhea (<5%)!!

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## Steroids in IBD

- Better for UC than Crohn's
- Start at 40-60 mg/day of prednisone for severe acute disease. Define biologic response.
- Keep on high dose for 4-6 weeks.
- Taper when in clinical remission and on an adequate dose of 5-ASA or azathioprine.
- Taper steroids very slowly (over 2-3 months)
- Budesonide (9mg QD) an option for small bowel Crohn's.

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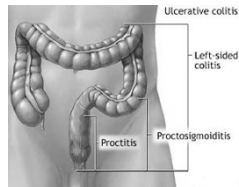
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## Local Therapies for Proctitis

- 0-10 cm = suppository/foam, 0-30 cm = enema
- Steroid suppositories, enemas, and foam
- 5-ASA suppositories and enemas
- Use BID initially, taper very slowly, but only after in complete remission for weeks
- If severe and cannot retain local therapies, oral steroids or 5-ASA will be needed



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## Antibiotics in IBD

- Antibiotics only effective as second line treatment for Crohn's not CUC
  - Crohn's with fistulas or perianal disease
- Metronidazole, ciprofloxacin, tetracycline, Bactrim, rifaxamin, and clarithromycin have been used.
- Evidence largely anecdotal but consistent

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## Non-Steroid Immunomodulators

- Azathioprine, 6-mercaptopurine
  - Mainstays for Crohn's – less effective for CUC
  - Useful in getting off steroids
  - Recommended to check TPMT level prior
  - Weight based dosing or to WBC count
  - Take 2-3 months to work
- Methotrexate (sc 25mg/week) if above fails
  - In Crohn's (may work in UC)

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## Biologics

- Anti-TNF's: Infliximab (Remicade), adalimumab (Humira), certolizumab (Cimzia)
- Anti-Integrins: Natalizumab (Tysabri)
- IV infusion or sc injections
  - Total cost will be less with sc
- Induce total remission in 40% of Crohn's patients, less than 30% CUC
- Work quickly if they are going to work
- If they don't work stop them.

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## Biologics

- Remicade – Additional benefit if also on immunomodulator (e.g. azathioprine)
  - + ANA, serum sickness, anaphylaxis
- All increase risk of infection, lymphoma, neurological disease (MS)
- Anti-integrin – PML

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## Primary Care Issues in IBD

- Osteoporosis
  - Secondary to Steroids or Ca/Vit D. Deficiency
  - Increased bone turnover secondary to IBD
  - DEXA if: history of previous fragility fracture, postmenopausal, male >50 years, corticosteroid therapy [>3 months in lifetime, or hypogonadism)

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## Primary Care Issues in IBD

- CRC Surveillance
  - Ulcerative Colitis
    - Pancolitis: Start 8-10 Years after Diagnosis. Every 1-2 Years.
    - Left-sided colitis: Start 15 years after diagnosis. Every 1-2 Years.
    - Proctitis: ?
  - Crohn's Colitis
    - Follow Guidelines for UC

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## Primary Care Issues in IBD

- Diet/Nutritional Considerations
  - ? Change Diet: May alter Antigen Load, Gut Microflora, and Mucosal Barrier Integrity
  - Potential for Vitamin and Mineral Deficiency, primarily in patients with small bowel Crohn's disease
- Smoking
  - Critically important for Crohn's disease patients to quit smoking

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## Primary Care Issues in IBD

### Extraintestinal manifestations

- Eye: Uveitis, Scleritis
- Skin: Pyoderma Gangrenosum, Erythema Nodosum
- Liver: Primary Sclerosing Cholangitis



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## Primary Care Issues in IBD

- Vaccinations
  - Should get Seasonal Flu
  - Should get Pneumovax
  - Avoid Live Vaccines if on Immunosuppression (Steroids, Biologics, or Immunomodulators)
- Mood Disorders
  - Depression
  - Anxiety

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## Primary Care Issues in IBD

- Sexual and Reproductive Issues
  - Men: Risk of oligospermia, particularly if on sulfasalazine
  - Women post-resection have decreased fertility
  - Increased complications during pregnancy related to disease activity
  - Increased risk of preterm birth and low-birth weight
  - OK to continue 5-ASA's, steroids, immunodulators (except Methotrexate), and Infliximab if necessary.

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## Inpatient Management

- Reasons to Admit:
  - Unable to tolerate po
  - Evidence of obstruction, abscess, perforation, or toxic megacolon on imaging
  - Severe symptoms or toxic appearance: Profuse diarrhea, bleeding, abdominal/perianal pain

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## Inpatient Management

- Management
  - Exclude C. Diff, CMV (up to 10% of IBD flares)
  - Imaging
    - Acute abdominal series
    - Judicious use of CT (cumulative radiation exposure)
    - Consider SBFT in Crohn's (<50% radiation of CT) or MR enterography (if available)
  - Consider early flex sig or colonoscopy to stage disease activity and exclude other infectious causes

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## Inpatient Management

- Medical treatment of Severe Flares
  - If on little or no steroids, IV solu-medrol 40-60mg QD.
    - CD: Antibiotics may be useful
    - UC: Maximize 5-ASA
  - If already on high-dose steroids:
    - CD: Consider Infliximab
    - UC: Consider Infliximab (Cyclosporine also an option)
- No benefit for 2 months with immunomodulators
- Minimize Narcotics

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## Inpatient Management

- Surgery Consultation
  - If evidence of obstruction, high-grade stricture, abscess, perforation, or toxic megacolon on imaging
  - Refractory to medical management
  - More conservative with surgical resections in CD because of high rate of recurrence (60-70%).

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## Summary

- High suspicion for IBD if alarm symptoms > 2 weeks
- Ensure bone density, vaccinations, and CRC surveillance are up to date
- Medical management
  - Induce remission: 5-ASA's, Steroids, Biologics
  - Maintain remission: 5-ASA's, Immunomodulators, and Biologics
- Management of flares
  - Exclude infection (esp. C. Diff and CMV)
  - Early imaging and endoscopy to guide management

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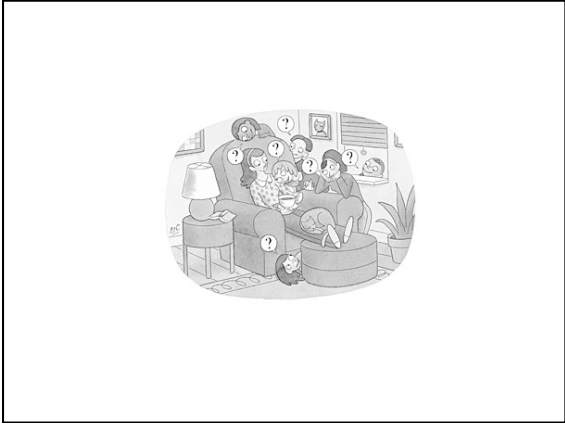
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