Purpose & Intended Audience

This deck was created to provide a succinct overview of IBD for an audience of healthcare professionals working with adult IBD patients and is estimated to be a one-hour presentation. Suggested speaker notes are included. You may pick and choose the slides that are most useful for your presentation.

Suggested Objectives

1. Recognize the impact of IBD
2. Recognize the causes of IBD
3. Describe the clinical features and symptoms of IBD
4. Identify the techniques used to diagnose IBD
5. Develop a treatment plan based on disease activity and severity
6. List treatment options for mild, moderate, and severe IBD
7. Discuss the importance of a coordinated care team in the care of an IBD patient
8. Discuss additional considerations in the care of IBD patients including shared decision-making, special populations, and insurance

Disclaimer

This deck was created with the intent of providing the most up-to-date information as of May 2020. However, it is the responsibility of the presenter to review and update the information as needed to ensure accuracy. The Foundation shall not be liable for any added/modified language utilized by presenter. Any added or modified content will be clearly labeled as such and presenter will own the copyright solely to the added content.

Last modified May 2020
Overview of IBD

- Definition
- Incidence
- Pathogenesis
- Cost
What Is Inflammatory Bowel Diseases?

• IBD is characterized by:
  – Chronic, immune-mediated inflammation in the gastrointestinal (GI) tract
  – Often has a progressive, destructive course
• The two major forms of IBD are Crohn’s disease (CD) and ulcerative colitis (UC)
• IBD is not IBS (irritable bowel syndrome)
• Incidence of IBD has significantly increased over time in the U.S.
• An estimated 1.6-3.1 million are living with Crohn’s or ulcerative colitis in the U.S.

Pathogenesis of IBD

- Immune response
- Genetic susceptibility
- Environmental triggers

IBD
Economic Impact of IBD in the United States

Trends in all-cause costs in IBD

Cost ratios of IBD pharmacotherapy

Adapted from: Park KT et al. Inflamm Bowel Dis 2019; 26(1): 1-10

Last modified May 2020
Diagnosis of IBD

- Goals
- Differential Diagnosis
- Algorithm
- Clinical Features
- Symptoms
- Colonoscopy & Endoscopy
- Pathology
- Extraintestinal Manifestations
Diagnosis of IBD

- Diagnostic goals should include:
  - Determining if CD vs. UC
    - Up to 10% are diagnosed as indeterminate colitis
  - Mapping the extent of disease burden
  - Identifying disease behavior (specifically for CD)
  - Recognizing severity

- There is no “gold standard” test for diagnosing IBD

- Must utilize history, exam findings, family history and diagnostic testing
Differential Diagnosis When Considering IBD

- Infectious colitis (including *Clostridioides difficile*)
- Ischemic colitis
- Drug-induced (NSAID) enterocolitis
- Solitary rectal ulcer syndrome
- Radiation enterocolitis
- Sexually transmitted infections

- Diversion colitis
- Endometriosis
- Malignancy
- Functional disorder (especially irritable bowel syndrome)
- Diverticular disease

Learn more about the most common conditions misdiagnosed as IBD at: www.crohnscolitisfoundation.org/clinical-pearls

Proposed IBD Diagnostic Algorithm for First Presentation

Labs (CBC, CRP, albumin)  
Stool studies (calprotectin)

Ileo-colonoscopy with biopsies +/-  
Upper endoscopy with biopsies

Crohn’s disease  
Evaluate extent of disease with CT or MR enterography

Normal  
Small-bowel imaging CT or MR enterography  
Normal  
Capsule endoscopy*

Ulcerative colitis

*Consider if inflammatory markers are elevated, if iron deficiency is present or if there is elevated fecal calprotectin with negative prior diagnostic workup. Use with caution in patients with potential strictures.

Last modified May 2020
# Clinical Features of UC and CD

<table>
<thead>
<tr>
<th>Ulcerative Colitis</th>
<th>Crohn’s Disease</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colon and rectum</td>
<td>Any part of the GI tract</td>
</tr>
<tr>
<td>Rectum universally involved</td>
<td>Rectum involved in 10% of cases</td>
</tr>
<tr>
<td>Mucosal and submucosal injury</td>
<td>Transmural injury that may lead to strictures or fistulae including perianal involvement</td>
</tr>
<tr>
<td>Continuous pattern of inflammation</td>
<td>Skip lesions</td>
</tr>
<tr>
<td>Acute onset</td>
<td>Insidious onset</td>
</tr>
</tbody>
</table>

~10% do not fit into either group and are deemed indeterminate colitis
Predominant Symptoms of UC

- Rectal bleeding
- Frequent, small volume, loose stools
- Mucous discharge from the rectum
- Tenesmus, urgency, rectal pain
- Abdominal pain


Last modified May 2020
Ulcerative Colitis: Colonoscopy and Biopsy

Diffuse, prominent crypt architectural distortion and mucosal atrophy, with foci of crypt dropout. No granulomas.

Images courtesy of David T. Rubin, MD

Last modified May 2020
### Mayo Endoscopic Subscore

<table>
<thead>
<tr>
<th>Mucosal appearance at endoscopy</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal or inactive disease</td>
<td>0</td>
</tr>
<tr>
<td>Mild disease (erythema, decrease vascular pattern, mild friability)</td>
<td>1</td>
</tr>
<tr>
<td>Moderate disease (marked erythema, absent vascular pattern, friability, erosions)</td>
<td>2</td>
</tr>
<tr>
<td>Severe disease (spontaneous bleeding, ulceration)</td>
<td>3</td>
</tr>
</tbody>
</table>

Natural History of Crohn’s Disease


Last modified May 2020
Clinical Features of CD: Depend on Location & Phenotype

1. **Inflammatory**
   - **Small bowel**: abdominal pain, diarrhea, fever
   - **Colonic**: diarrhea +/- hematochezia, weight loss, fever

2. **Stricturing**
   - Bowel obstructions

3. **Penetrating**
   - Abscesses, fistulae

---


Last modified May 2020
Endoscopy in CD

Normal Colon

Deep Ulceration

Ulcerations in the Ileum
## Endoscopic Severity of CD: Simple Endoscopic Score (SES-CD)

<table>
<thead>
<tr>
<th>Variables</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size of ulcers, cm</td>
<td>None</td>
<td>0.1-0.5</td>
<td>0.5-2</td>
<td>&gt;2</td>
</tr>
<tr>
<td>Ulcerated surface, %</td>
<td>None</td>
<td>&lt;10</td>
<td>10-30</td>
<td>&gt;30</td>
</tr>
<tr>
<td>Affected surface, %</td>
<td>Unaffected segment</td>
<td>&lt;50</td>
<td>50-75</td>
<td>&gt;75</td>
</tr>
<tr>
<td>Presence of stenosis</td>
<td>None</td>
<td>Single, can be passed</td>
<td>Multiple, can be passed</td>
<td>Cannot be passed</td>
</tr>
</tbody>
</table>

Adapted from Takenaka et al. *Inflamm Bowel Dis.* 2015; 21(8): 1832–1838.

Last modified May 2020
Capsule Endoscopy in Crohn’s Disease

FIGURE 6. A,B, CE positive for SB mucosal disease. The arrow points to small bowel mucosal disease found on capsule endoscopy

Adapted from Hansel L et al. Inflamm Bowel Dis; 2018; 24(7): 1582-1588.
Pathology of CD: Transmural Inflammation & Granulomata

Images courtesy of Dr. Robert Lippman, McGuire VA Medical Center, Richmond, Virginia

Last modified May 2020
Extraintestinal Manifestations of IBD

Figure 1. A, Oral aphthous ulcers, (B) Sweet’s syndrome, (C) erythema nodosum, (D) pyoderma gangrenosum, (E) peristomal pyoderma gangrenosum, (F) episcleritis, (G) uveitis with hypopyon and dilated iris vessels, (H) conventional x-ray of the lateral spine demonstrating syndesmophytes (bamboo spine), (I) plane radiograph of the ileosacral joints with bilateral sacroiliitis, (J) plane radiography of the sacrum with bilateral ankylosis, (K) coronal magnetic resonance image of the sacroiliac joints with active inflammation mainly on the left side and chronic inflammatory changes on both sides.


Last modified May 2020
Treatment of IBD

- Approach & Goals
- Medication Options for Mild, Moderate, & Severe IBD
- Adverse Effects
- Loss of Response
Treatment of IBD

- Need to determine appropriate treatment based on:
  - IBD-related characteristics:
    - Disease activity
    - Disease severity
    - Complications of IBD
    - Response to prior IBD treatment(s)
  - Non-IBD characteristics:
    - Current infection
    - Comorbidities

Modified from AGA Institute Guidelines for the Identification, Assessment and Initial Medical Treatment in Crohn’s Disease Clinical Decision Support Tool available at: https://s3.amazonaws.com/agaassets/pdf/guidelines/IBDCarePathway.pdf
Determining Disease Activity and Severity

- **Disease activity** is based on:
  - Patient-reported outcomes (PROs)
    - Using disease activity scores, i.e. Harvey-Bradshaw Activity Index (CD), Modified Mayo Score or the Simple Clinical Colitis Activity Score for UC
  - Inflammatory burden
    - Based on extent of disease and severity of endoscopic findings and/or other non-invasive markers of inflammation, such as fecal calprotectin, ESR or CRP

- **Disease severity** is based on:
  - Risk factors for more severe disease prognosis

### Disease Activity for UC Using Simple Clinical Colitis Activity Index

<table>
<thead>
<tr>
<th>Condition</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCCAI Remission &lt; 2.5</td>
<td></td>
</tr>
<tr>
<td>Bowel frequency (day)</td>
<td></td>
</tr>
<tr>
<td>0 = 1–3</td>
<td></td>
</tr>
<tr>
<td>1 = 4–6</td>
<td></td>
</tr>
<tr>
<td>2 = 7–9</td>
<td></td>
</tr>
<tr>
<td>3 = &gt;9</td>
<td></td>
</tr>
<tr>
<td>Bowel frequency (night)</td>
<td></td>
</tr>
<tr>
<td>1 = 1–3</td>
<td></td>
</tr>
<tr>
<td>2 = 4–6</td>
<td></td>
</tr>
<tr>
<td>Urgency of defecation</td>
<td></td>
</tr>
<tr>
<td>1 = hurry</td>
<td></td>
</tr>
<tr>
<td>2 = immediately</td>
<td></td>
</tr>
<tr>
<td>3 = incontinence</td>
<td></td>
</tr>
<tr>
<td>Blood in stool</td>
<td></td>
</tr>
<tr>
<td>1 = trace</td>
<td></td>
</tr>
<tr>
<td>2 = occasionally frank</td>
<td></td>
</tr>
<tr>
<td>3 = usually frank</td>
<td></td>
</tr>
<tr>
<td>General well-being</td>
<td></td>
</tr>
<tr>
<td>0 = very well</td>
<td></td>
</tr>
<tr>
<td>1 = slightly below par</td>
<td></td>
</tr>
<tr>
<td>2 = poor</td>
<td></td>
</tr>
<tr>
<td>3 = very poor</td>
<td></td>
</tr>
<tr>
<td>4 = terrible</td>
<td></td>
</tr>
<tr>
<td>Arthritis, pyoderma gangrenosum,</td>
<td></td>
</tr>
<tr>
<td>erythema nodosum, uveitis</td>
<td></td>
</tr>
<tr>
<td>1 per manifestation</td>
<td></td>
</tr>
</tbody>
</table>

Extracolonic features include arthralgia, uveitis, rash, oral ulcers.

Score of < 4 is inactive disease.
Disease Activity for CD Using Harvey Bradshaw Activity Index

- Score* based on parameters of:
  1) Well-being of the patient (Score 0-4)
  2) Abdominal pain (Score 0-3)
  3) Number of liquid or soft stools (Score of 1 for each liquid bowel movement)
  4) Abdominal mass (Score 0-3)
  5) Complications (Score 1 per complication)

*Total score determines inactive disease (<5), mild disease (5-7), moderate disease (8-16), or severe disease (>16)

Can be found at: https://www.igibdscores.it/en/info-hbi.html


Last modified May 2020
## Risk Factors for Having Severe or Complicated IBD

<table>
<thead>
<tr>
<th>Ulcerative Colitis</th>
<th>Crohn’s Disease</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age &lt; 40 at diagnosis</td>
<td>Age &lt; 30 at diagnosis</td>
</tr>
<tr>
<td>Extensive colonic involvement</td>
<td>Extensive anatomic involvement</td>
</tr>
<tr>
<td>Severe endoscopic disease activity (i.e. Mayo score ≥3, UCEIS ≥7)</td>
<td>Perianal and/or severe rectal disease</td>
</tr>
<tr>
<td>Requiring hospitalization for colitis</td>
<td>Deep ulcers</td>
</tr>
<tr>
<td>Elevated C-reactive protein</td>
<td>Prior surgical resection</td>
</tr>
<tr>
<td>Low serum albumin</td>
<td>Stricturing and/or penetrating behavior</td>
</tr>
</tbody>
</table>

2. Modified from AGA Institute Guidelines for the Identification, Assessment and Initial Medical Treatment in Crohn’s Disease Clinical Decision Support Tool available at: [https://s3.amazonaws.com/agaassets/pdf/guidelines/IBDCarePathway.pdf](https://s3.amazonaws.com/agaassets/pdf/guidelines/IBDCarePathway.pdf);
   Gastroenterology 2014 147702-705DOI: (10.1053/j.gastro.2014.07.022) Copyright © 2014

Last modified May 2020
Goals of Treatment for IBD Patients

- Induction of Remission
  - Turning “off” the inflammation
  - Feeling well
  - Normalization of labs, growth, development and nutrition

- Maintenance of Remission
  - Stable disease control and optimization of therapy
  - NO STEROIDS
  - Prevention of relapse over time
  - Changing the natural course of the disease

- Disease Monitoring and Prevention
  - Monitoring for early relapse
  - Monitoring therapies
  - Prevention of infections
  - Cancer prevention

- Clinical remission (i.e. IBD symptoms have resolved)
- Mucosal improvement (i.e. overall decrease in mucosal inflammation)
- On a steroid-free treatment regimen

*The medication that works best is the one your patient will take consistently.*
Why Is Mucosal Healing Important?

• In clinical practice, mucosal healing should guide medical therapy
  – Symptoms do not always correlate with mucosal inflammation
  – Need to assess disease activity prior to making medication changes
  – Growing evidence that mucosal healing is an important goal because it appears to be associated with improved long-term outcomes including:
    • Decreased likelihood of a flare
    • Decreased progression to disease complications
    • Decreased need for surgery and hospitalization

### Treatment Options for Mild IBD

<table>
<thead>
<tr>
<th>Medication</th>
<th>CD/UC</th>
<th>Induction</th>
<th>Maintenance</th>
<th>Administration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corticosteroids</td>
<td>CD, UC</td>
<td>+</td>
<td>-</td>
<td>Oral, IV, Rectal</td>
</tr>
<tr>
<td>Budesonide</td>
<td>CD, UC</td>
<td>+</td>
<td>-</td>
<td>Oral</td>
</tr>
<tr>
<td>Aminosalicylates</td>
<td>UC</td>
<td>+</td>
<td>+</td>
<td>Oral, Rectal</td>
</tr>
</tbody>
</table>

### Potential Adverse Effects of Treatments for Mild IBD

<table>
<thead>
<tr>
<th>Medication</th>
<th>Possible Adverse Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corticosteroids</td>
<td>Sleep and mood disturbances, hypertension, glucose intolerance, cataracts, osteoporosis, myopathy, glaucoma, acne, edema, increased risk of infections</td>
</tr>
<tr>
<td>Budesonide</td>
<td>Headache, acne, nausea</td>
</tr>
<tr>
<td>Aminosalicylates</td>
<td>Nephrotoxicity, interstitial nephritis, nausea, GI disturbance, paradoxical diarrhea</td>
</tr>
</tbody>
</table>


Last modified May 2020
## Treatment Options for Moderate – Severe IBD

<table>
<thead>
<tr>
<th>Medication</th>
<th>CD/UC</th>
<th>Induction</th>
<th>Maintenance</th>
<th>Administration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thiopurines</td>
<td>CD, UC</td>
<td>-</td>
<td>+</td>
<td>Oral</td>
</tr>
<tr>
<td>Methotrexate</td>
<td>CD</td>
<td>-</td>
<td>+</td>
<td>Oral, IM</td>
</tr>
<tr>
<td>Anti-TNF Agents</td>
<td>CD, UC</td>
<td>+</td>
<td>+</td>
<td>IV, SC</td>
</tr>
<tr>
<td>Vedolizumab</td>
<td>CD, UC</td>
<td>+</td>
<td>+</td>
<td>IV, SC coming soon</td>
</tr>
<tr>
<td>Natalizumab</td>
<td>CD</td>
<td>+</td>
<td>+</td>
<td>IV</td>
</tr>
<tr>
<td>Ustekinumab</td>
<td>CD, UC</td>
<td>+</td>
<td>+</td>
<td>IV induction, SC maintenance</td>
</tr>
<tr>
<td>Tofacitinib</td>
<td>UC</td>
<td>+</td>
<td>+</td>
<td>Oral</td>
</tr>
<tr>
<td>Ozanimod</td>
<td>UC</td>
<td>+</td>
<td>+</td>
<td>Oral</td>
</tr>
</tbody>
</table>

Abbreviations: IM=intramuscular; anti-TNF= anti-tumor necrosis factor; IV=intravenous; SC=subcutaneous

# Adverse Effects: Treatments for Moderate-Severe IBD

<table>
<thead>
<tr>
<th>Medication</th>
<th>Possible Adverse Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thiopurines</td>
<td>Bone marrow suppression, hepatotoxicity, pancreatitis, pneumonitis, GI upset, rash, alopecia, fever, arthralgia, lymphoproliferative disorders, myeloid neoplasias, hepatosplenic T-cell lymphoma (young males), non-melanoma skin cancer, hemophagocytic lymphohistiocytosis (after EBV or CMV infection)</td>
</tr>
<tr>
<td>Methotrexate</td>
<td>Bone marrow suppression, alopecia, hepatic fibrosis, hypersensitivity pneumonitis, increased risk of infection</td>
</tr>
<tr>
<td>Anti-TNF Agents</td>
<td>Increased risk of infection, infusion or injection site reactions, dermatologic and neurologic manifestations, melanoma, lymphoma</td>
</tr>
<tr>
<td>Vedolizumab</td>
<td>Upper respiratory tract infections (URI), infusion related reaction</td>
</tr>
<tr>
<td>Natalizumab</td>
<td>Headache, rash, nausea, increased risk of infection, infusion related reaction, arthralgia, progressive multifocal leukoencephalopathy (in those with +JC virus antibody)</td>
</tr>
<tr>
<td>Ustekinumab</td>
<td>Injection site reaction, cold symptoms, headache, fatigue, increased risk of infection</td>
</tr>
<tr>
<td>Tofacitinib</td>
<td>Herpes Zoster, lipid abnormalities, venothromboembolism (specifically pulmonary embolism)</td>
</tr>
<tr>
<td>Ozanimod</td>
<td>Increased liver enzymes, bradycardia, hypertension, macular edema, URI, herpes zoster, decreased pulmonary function, headache, fetal risk, posterior reversible encephalopathy syndrome</td>
</tr>
</tbody>
</table>


Last modified August 2021
<table>
<thead>
<tr>
<th>Medication</th>
<th>Testing Prior to Starting</th>
<th>Recommended Monitoring</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mesalamines</td>
<td>Consider baseline renal function test</td>
<td>Annual renal function monitoring</td>
</tr>
<tr>
<td>Corticosteroids</td>
<td></td>
<td>Document plan for long-term therapy, consider ophthalmology exam, DEXA.</td>
</tr>
<tr>
<td>Thiopurines</td>
<td>TPMT enzyme activity, CBC and liver function</td>
<td>Routine CBC and liver function while on therapy</td>
</tr>
<tr>
<td>Methotrexate</td>
<td>CBC, liver and renal function</td>
<td>Routine CBC, liver and renal function monitoring while on therapy</td>
</tr>
<tr>
<td>Anti-TNF Agents</td>
<td>TB screening prior to start, check Hepatitis B panel, CBC and liver function</td>
<td>Assess for TB exposure annually while on therapy; CBC and liver function routinely while on therapy</td>
</tr>
<tr>
<td>Vedolizumab</td>
<td>CBC and liver function</td>
<td>CBC and liver function periodically while on therapy</td>
</tr>
<tr>
<td>Natalizumab</td>
<td>Enrollment in CD Touch® Prescribing Program</td>
<td>Assess for signs/symptoms suggestive of PML, routine CBC and liver function testing, JC virus antibody testing every 6 months, per CD Touch® Prescribing Program</td>
</tr>
<tr>
<td>Ustekinumab</td>
<td>TB screening prior to start, check Hepatitis B panel, CBC and liver function</td>
<td>Assess for TB exposure annually while on therapy; CBC and liver function routinely while on therapy</td>
</tr>
<tr>
<td>Tofacitinab</td>
<td>CBC, liver, fasting lipid panel and TB</td>
<td>Assess for TB exposure annually while on therapy, routine CBC and liver function monitoring while on therapy; repeat fasting lipid panel 4-8 weeks after start of therapy.</td>
</tr>
<tr>
<td>Ozanimod</td>
<td>CBC with lymphocyte count, liver function, antibodies to varicella, ECG, ophthalmic examination including macula if diabetes or history of uveitis</td>
<td>CBC and liver function periodically while on therapy, routine blood pressure checks; ophthalmic evaluation of the fundus is recommended if any change in vision; spirometric evaluation of respiratory function should be performed if new onset dyspnea.</td>
</tr>
</tbody>
</table>
Therapeutic Drug Monitoring for Loss of Response

- Therapeutic drug monitoring (TDM) involves checking serum trough drug and antibody levels of biologic medications to help guide changes in medical therapy.

- There are 2 types of TDM:
  - Reactive TDM
    - When symptoms worsen
    - Improves clinical care and helps to guide changes in management
    - Cost effective
  - Proactive TDM
    - During induction or maintenance, in the absence of clinical symptoms
    - Helpful when considering de-escalating therapy
    - Studies (mainly retrospective) show improved outcomes

Last modified May 2020
Surgery as Treatment in IBD

- When to Consider
- Common Procedures
- Postoperative Course
When to Consider Surgery in IBD

- Prevalence
  - 10%–20% of patients with UC have surgery
  - Approximately 2/3 of Crohn’s patients will need surgery
- Indications for surgery:
  - Dysplasia or cancer
  - Disease unresponsive to medications
    - Due to ongoing active symptoms, persistent fistulas or abscess
  - Intolerable medical side effects
  - Complication of disease
    - Stricture
    - Abscess
    - Fistulae
    - Toxic megacolon
    - Colonic perforation

The Natural Course of Postoperative CD

Recurrence is clinically silent initially

Histologic  Endoscopic  Radiologic  Clinical  Surgical

Within 1 wk  70%–90% by 1 y  Tissue damage  30% by 3 y  60% by 5 y  50% by 10 y

Postoperative endoscopic evaluation should take place 6-12 months after surgery to assess for recurrent Crohn’s disease with changes in treatment based on the findings.

1. Images courtesy of Miguel Regueiro, MD

Last modified May 2020
Weighing the Risks and Benefits of Treatment

**Benefits**
- Maintenance of remission
- Improved function and quality of life (QOL)
- Early promotion of mucosal healing to prevent complications and improve long-term outcomes

**Disadvantages**
- Side effects of medications
- Cost
- Majority of patients may not require more potent treatments initially

---


Last modified May 2020
Additional Considerations in IBD

- Shared Decision-Making
- Special Populations
Shared Decision-Making (SDM) in IBD

SDM: A process in which clinicians and patients work together to make decisions and select tests, treatments, and care plans based on clinical evidence that balances risks and expected outcomes with patient preferences and values.

See for further information and tools at:
https://www.crohnscolitisfoundation.org/shared-decisionmaking
Treating Special Populations with IBD

• During Pregnancy
  • Important for patients to be in remission prior to conception on a treatment regimen that can be safely continued throughout pregnancy
  • Ensure health maintenance is up-to-date prior to conception
  • Pregnancy educational video: https://www.crohnscolitisfoundation.org/science-and-professionals/education-resources/educational-videos-professionals

• Elderly Patients
  • Important to minimize polypharmacy
  • Long-term use of steroids is not appropriate maintenance treatment

• Patients with Prior Malignancy
  • No evidence that any IBD medications increases the risk for solid tumors
  • Discuss risks vs. benefits of treatment


Last modified May 2020
Comprehensive Care for IBD

- Health Maintenance
- Team Approach
- Insurance
Health Maintenance Checklist for Adults with IBD

Health Maintenance Summary

Vaccines and Infections

- **Influenza**: All patients >6 months of age should receive annual inactivated influenza vaccine, irrespective of immunosuppression status.
- **MMR**: IBD Patients not immune to MMR should receive a 2-dose series, at least 4 weeks apart. If immune status is uncertain, IgG antibody titer should be checked. MMR should not be given to patients currently on systemic immunosuppressive therapy.
- **Pneumococcus**: All patients >19 years age receiving systemic immunosuppression should receive PCV13, followed by PPSV23 at least 8 weeks later, and a booster of PPSV23 5 years later.
- **Varicella**: Seroprotection status should be checked with varicella zoster virus IgG antibodies in all patients without documented vaccination record or exposure. All patients who are not immune should receive a 2-dose series, 4–8 weeks apart, 24 weeks before immunosuppression, if therapy can be postponed.
- **Zoster**: All patients receiving JAK inhibitor therapy should receive the recombinant adjuvanted zoster vaccine. Risk of zoster should be considered with combinations of other immunosuppressive therapies.

Cancer Screening

- **Colorectal Cancer**: All IBD patients with extensive colitis (>1/3 of the colon) for >= 8 years should undergo surveillance colonoscopy every 1-3 years, depending on cancer risk:
  - IBD patients with a diagnosis of PSC should undergo colonoscopy, starting at the time of PSC diagnosis, and annually thereafter.
  - IBD patients with features that are high-risk for developing colon cancer (i.e. prior history of adenomatous polyps, dysplasia, family history of colon cancer and extensive colitis) should have colonoscopies more frequently than every 3 years.

- **Cervical Cancer**: All women with IBD who are being treated with systemic immunosuppression should undergo cervical cancer by cytology annually (if cytology alone) or every 2 years (if HPV negative).
- **Skin Cancer**: All IBD patients being treated with systemic immunosuppression should have annual total body skin exams to screen for skin cancer.

Other Protection

- **Osteoporosis**: Screen for osteoporosis by central (hip and spine) DXA scan in all patients with IBD if ANY risk factors for osteoporosis: low BMI, <3 months
- **Depression/Anxiety**: Screen all patients with IBD for depression (PHQ9) and anxiety (GAD7) at baseline, and annually. Refer for counseling/therapy when identified.

https://www.crohnscolitisfoundation.org/science-and-professionals/education-resources/health-maintenance-checklists

Last modified September 2021
### Healthcare team members involved in comprehensive IBD care

- **1️⃣ Care** → Health Maintenance
- **Pediatricians** → Transition of Care
- **Gastroenterology** → Coordination of Care
  - Dietician/Nutrition → Assessment/Management
  - Advanced Practitioners → F/U, Crisis Management
  - Nursing → Communications/Support
  - MAs/Liaisons → Scheduling/Authorizations
  - Pharmacy → Prescriptions/Infusions
  - Social Work → Resource utilization
  - Behavioral Therapy → Self Efficacy
  - Clinical Research → Clinical Trials

*Slide courtesy of Stephen B. Hanauer, MD*

*Last modified May 2020*
Providers Involved in the Care of IBD Patients

- Hospitalist → Inpatient coordination
- Surgeon → Complications
- Pathology → Diagnostics
- Radiology → Diagnostics/Intervention
- Specialists
  - Hepatology → Hepatitis's
  - Ob/Gyne → Contraception/Conception
  - Rheumatology → Joints
  - Endocrine → Bones
  - Ophthalmology → Ocular
  - Nephrology → Stones/Nephropathies
  - Neurology → Peripheral/Central nerves

Slide courtesy of Stephen B. Hanauer, MD

Last modified May 2020
Example Approach: IBD Medical Home

Total Care - IBD

- IBD schedulers
- Personal Nurse Coordinator assigned to each patient entering medical home. Coordination across entire health system to meet individual needs of the patient
- IBD surgeons
- Behavioral Health/Pain
- Physician Extenders
- Dietitian
- Rapid Access < 72 hour new and return visits
- Quality
- All patients entered in Patient Portal
- Inpatient Service 365 day inpatient IBD physician care
- Telemedicine Remote Monitoring IBD Connect- peer volunteers
- Prevention
- 24/7 IBD physician on call with access to EMR

Insurance for IBD

• Navigating the insurance process can be challenging:
  – Need prior authorization from companies before being able to switch therapies
  – Effective management may be affected by step therapy, where patients need to fail one class of agents before being able to try another
  – Takes time for approvals
  – Time consuming for both providers & patients

Managing cost of IBD Care webpage: www.crohnscolitisfoundation.org/managingcosts
• Understanding health insurance
• What to do if denied coverage
• Search for financial assistance programs
Summary
Key Points

- The incidence and prevalence of IBD in the U.S. are increasing.
- The diagnosis of IBD is based on suggestive clinical symptoms, radiographic and/or endoscopic + pathologic findings consistent with Crohn’s disease or ulcerative colitis.
- The choice of treatment should be based on the disease activity (i.e. patient reported symptoms) and disease severity (i.e. risk factors suggestive of more complicated IBD).
- The goals of treatment are clinical remission (i.e. absence of symptoms) and mucosal improvement (i.e. decreased intestinal inflammation) on a steroid-free treatment regimen.
- It is important to discuss the risks and benefits of treatment options with your patient prior to starting therapy to improve compliance.
- Lab monitoring prior to starting and throughout treatment as well as ensuring preventive health measures are up-to-date can lower the risk of adverse effects from medication use.
- Comprehensive IBD care involves many important healthcare team members.
Crohn’s & Colitis Foundation Resources

- For Healthcare Providers
- For Patients & Caregivers
Crohn’s & Colitis Foundation Resources

For Healthcare Providers:
• Online modules on diagnosis, treatment, and surgery
• Fact sheets on nutrition & anemia
• GI Tract Guide
• Educational videos on pregnancy, TDM, biosimilars
• Live training opportunities
• Clinical Pearls
• Online community
• Research Journals
• Dedicated webpage for PAs, NPs, RNs
  www.crohnscolitisfoundation.org/prescribereducation

To Share With Your Patients:
• Brochures and fact sheets
• IBD stories
• Treatment options in UC and Crohn’s disease
• Mental and emotional well-being
• Diet and nutrition
• Complementary medicine
• Youth and parent resources
• IBD help center
• Camp Oasis
• Financial and insurance information
  www.crohnscolitisfoundation.org/prescribereducation

Last modified May 2020
Thank You