

What is Inflammatory Bowel Disease?

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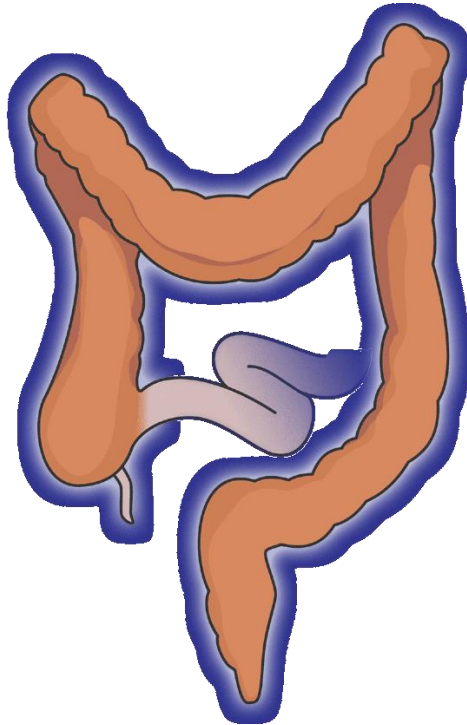
What Inflammatory Bowel Disease IS:

- IBD is characterized by:
 - Chronic inflammation of the GI tract
 - Most often has a progressive or remitting and relapsing course
- The 2 major forms of IBD are ulcerative colitis and Crohn's disease
- IBD affects an estimated 1.4 million persons in the United States
- IBD is NOT *irritable bowel syndrome*

Inflammatory Bowel Diseases

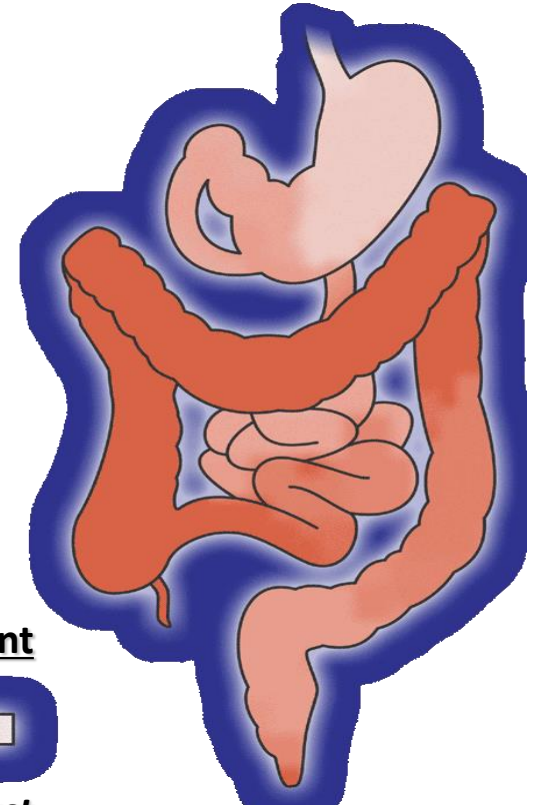
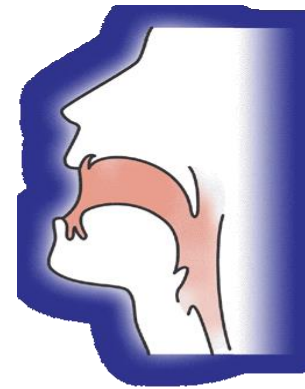
Ulcerative Colitis

*Confined to the large intestine,
continuous, superficial*

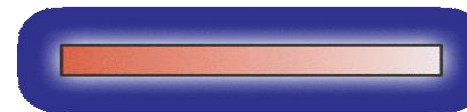


Crohn's Disease

*Any portion of the GI tract,
patchy, deeper ulcers*



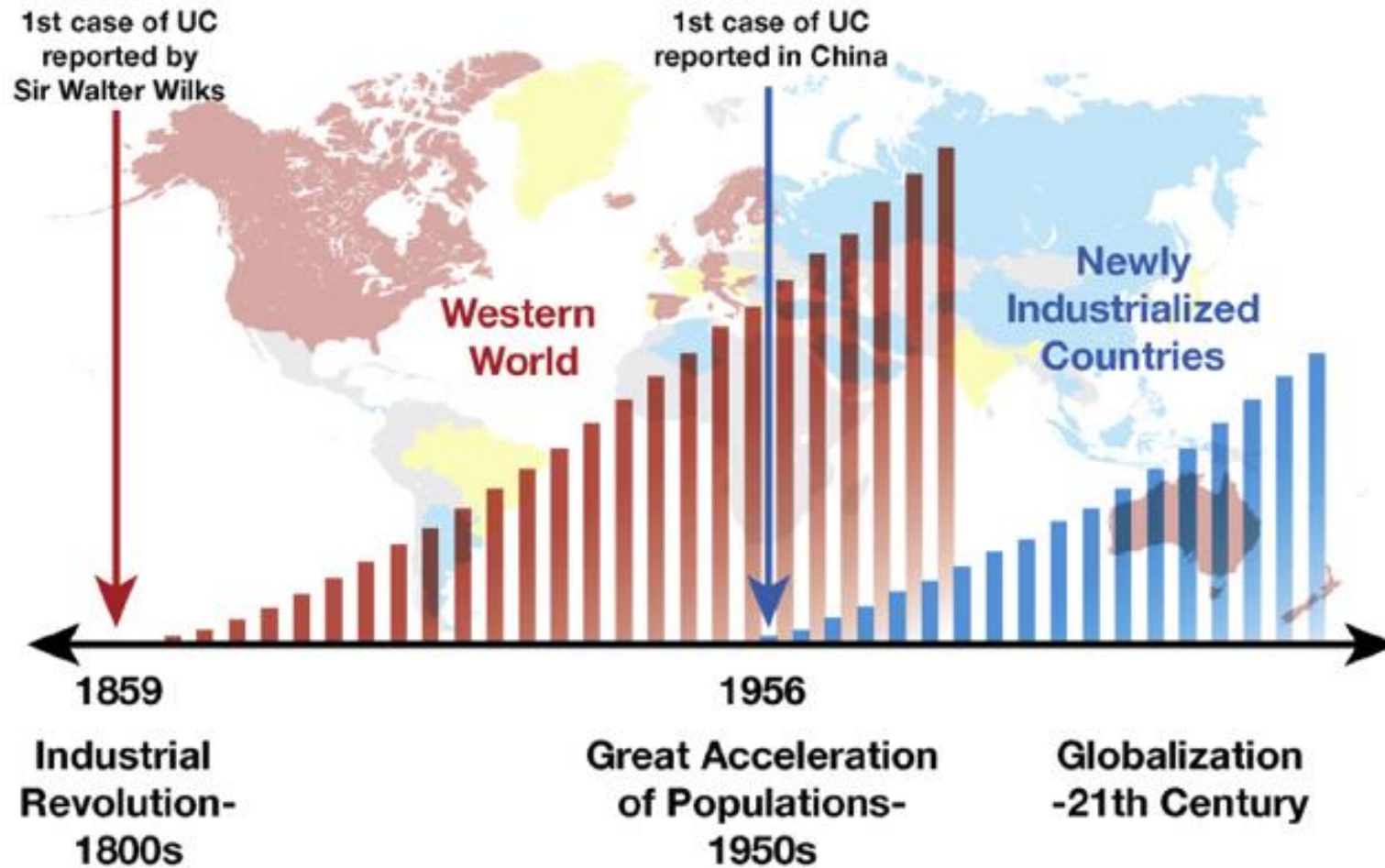
Frequency of Involvement



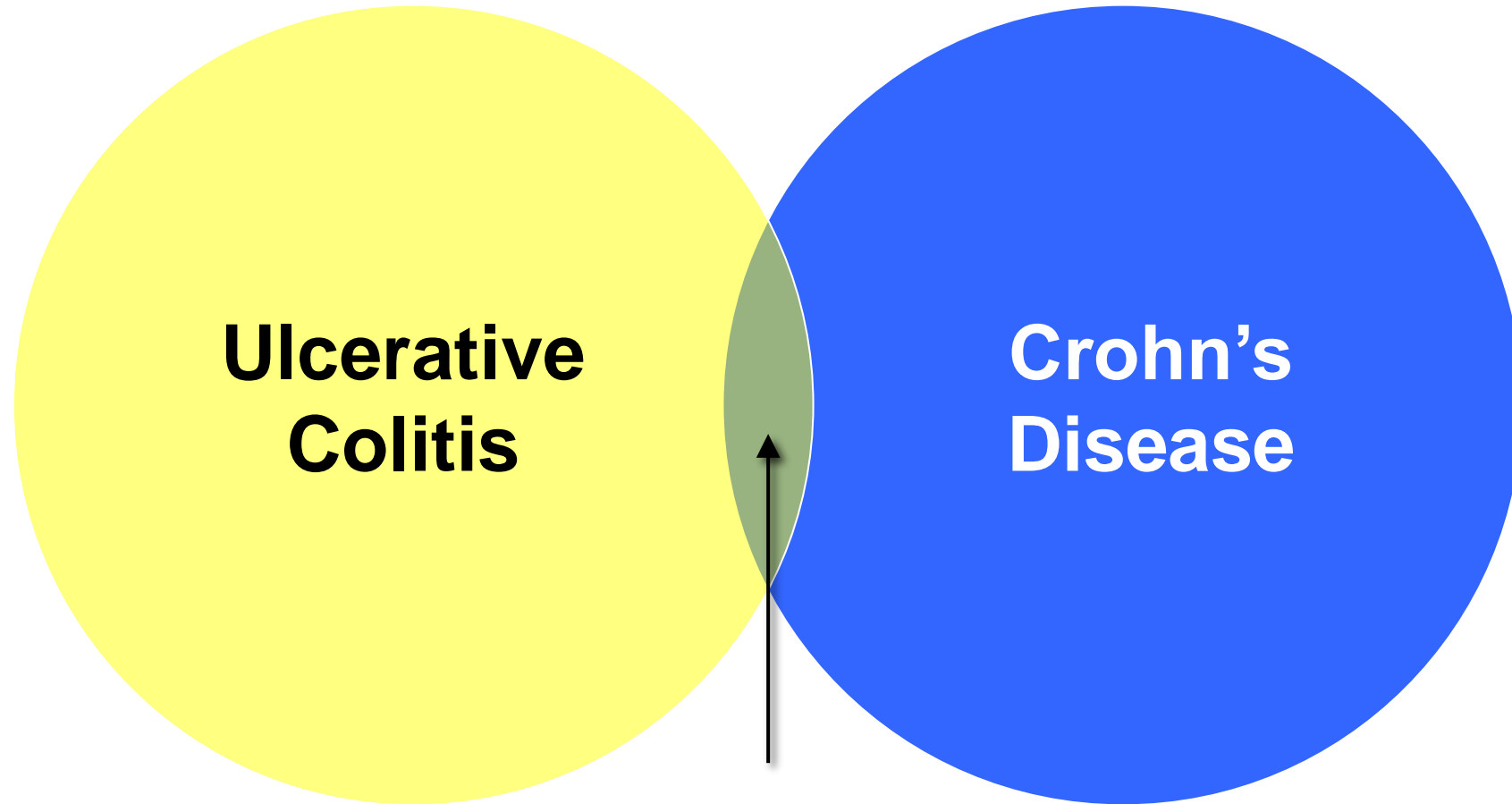
Most

Least

Increasing Prevalence of IBD



The Spectrum of IBD



**Ulcerative
Colitis**

**Crohn's
Disease**

Indeterminate colitis

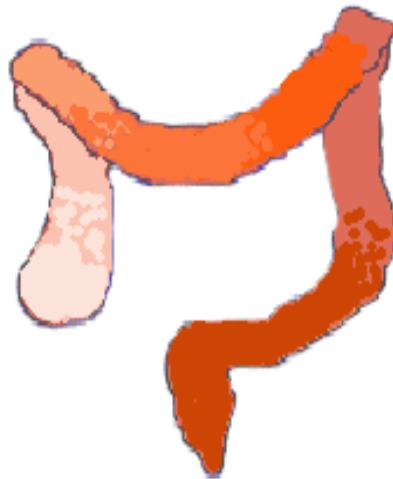
Clinical Features of UC and CD

Ulcerative Colitis

- Continuous inflammation
- Colon only
- Superficial inflammation
- Variable extent
- Risk of cancer
- Extraintestinal manifestations

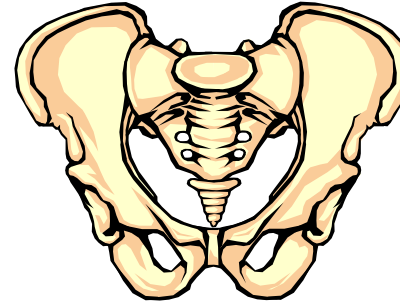
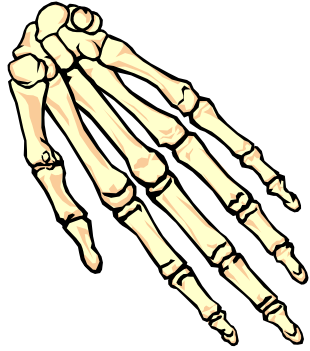
Crohn's Disease

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



When to Suspect the Diagnosis of IBD

- Change in bowel habits that persists longer than 1-3 months
- Blood per rectum (any)
- Rectal urgency
- Nocturnal symptoms
- Iron deficiency anemia
- Child or adolescent with failure to grow/develop (even with NO GI symptoms!)

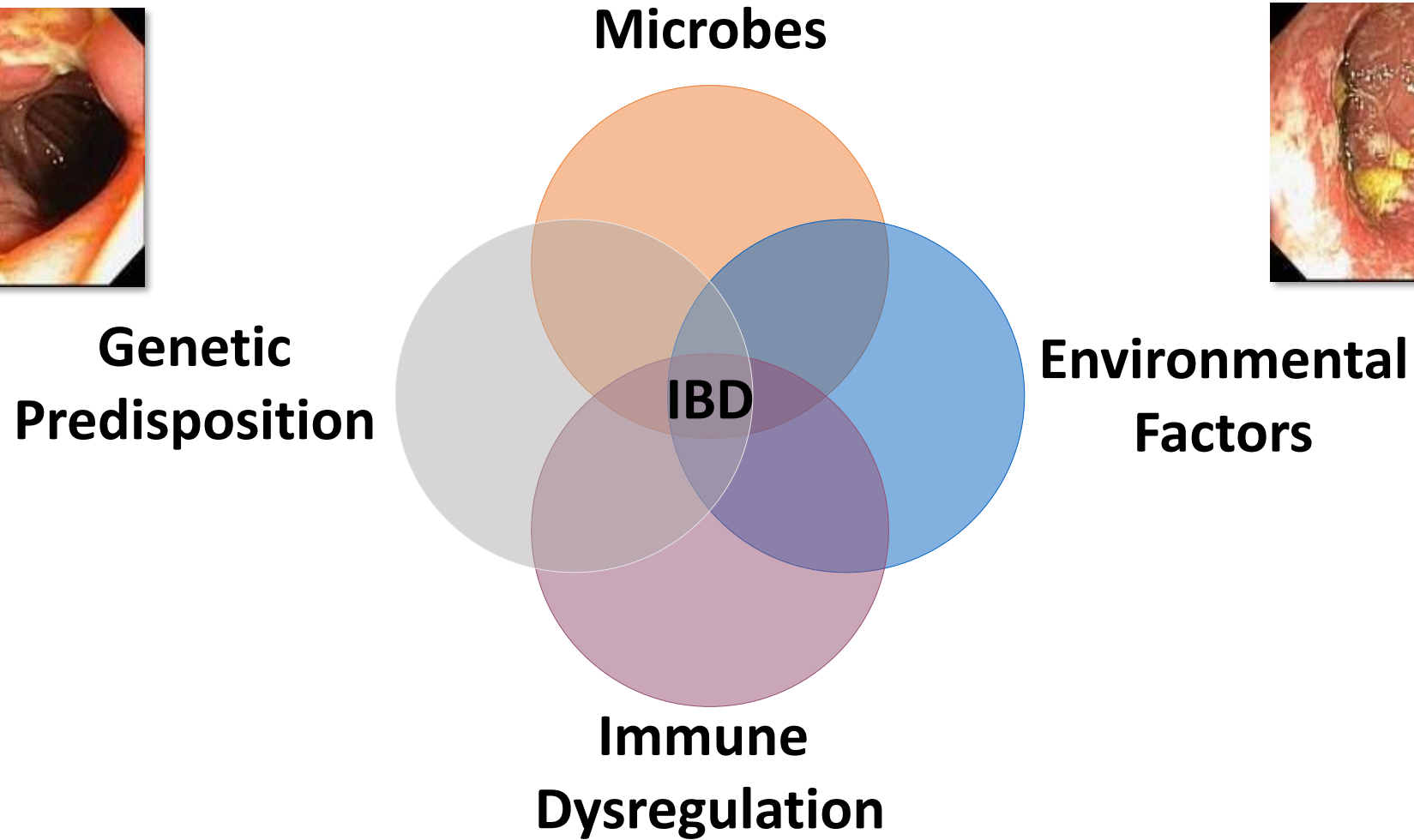


Extraintestinal Manifestations in IBD

Extraintestinal Manifestations of IBD

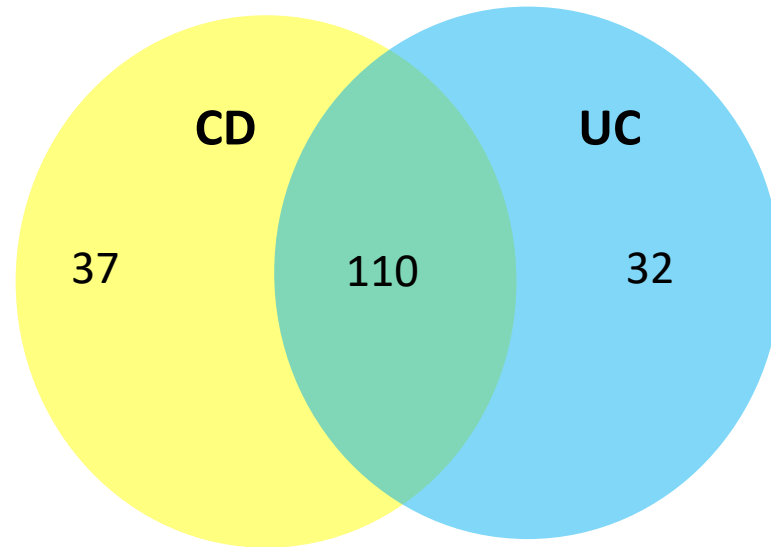
- Hematologic
 - Anemia
 - Pulmonary embolism
 - Venous thromboembolism
- Hepatobiliary
 - Cholelithiasis
 - PSC
- Mucocutaneous
 - Erythema nodosum
 - Pyoderma gangrenosum
- Musculoskeletal
 - Osteoporosis
 - Peripheral arthralgias and arthritis
 - Spondyloarthritis (ankylosing spondylitis, sacroiliitis)
- Ocular
 - Episcleritis
 - Scleroconjunctivitis
 - Uveitis
- Renal
 - Nephrolithiasis

Pathogenesis of IBD

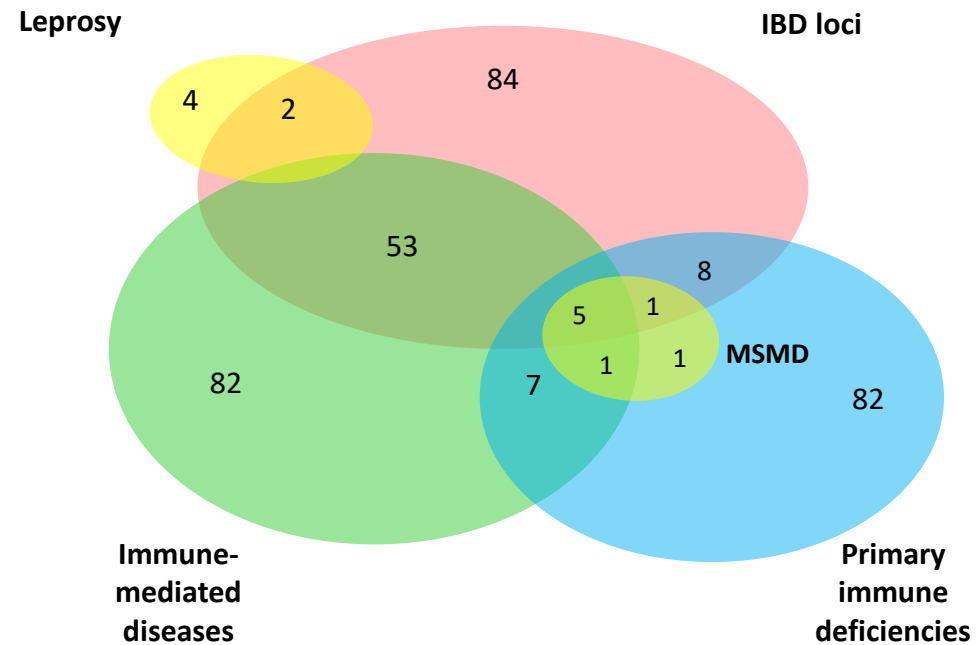


IBD is a Complex Genetic Condition

>242 susceptibility loci identified



Meta-analysis of many published studies
Total > 75,000 cases/controls

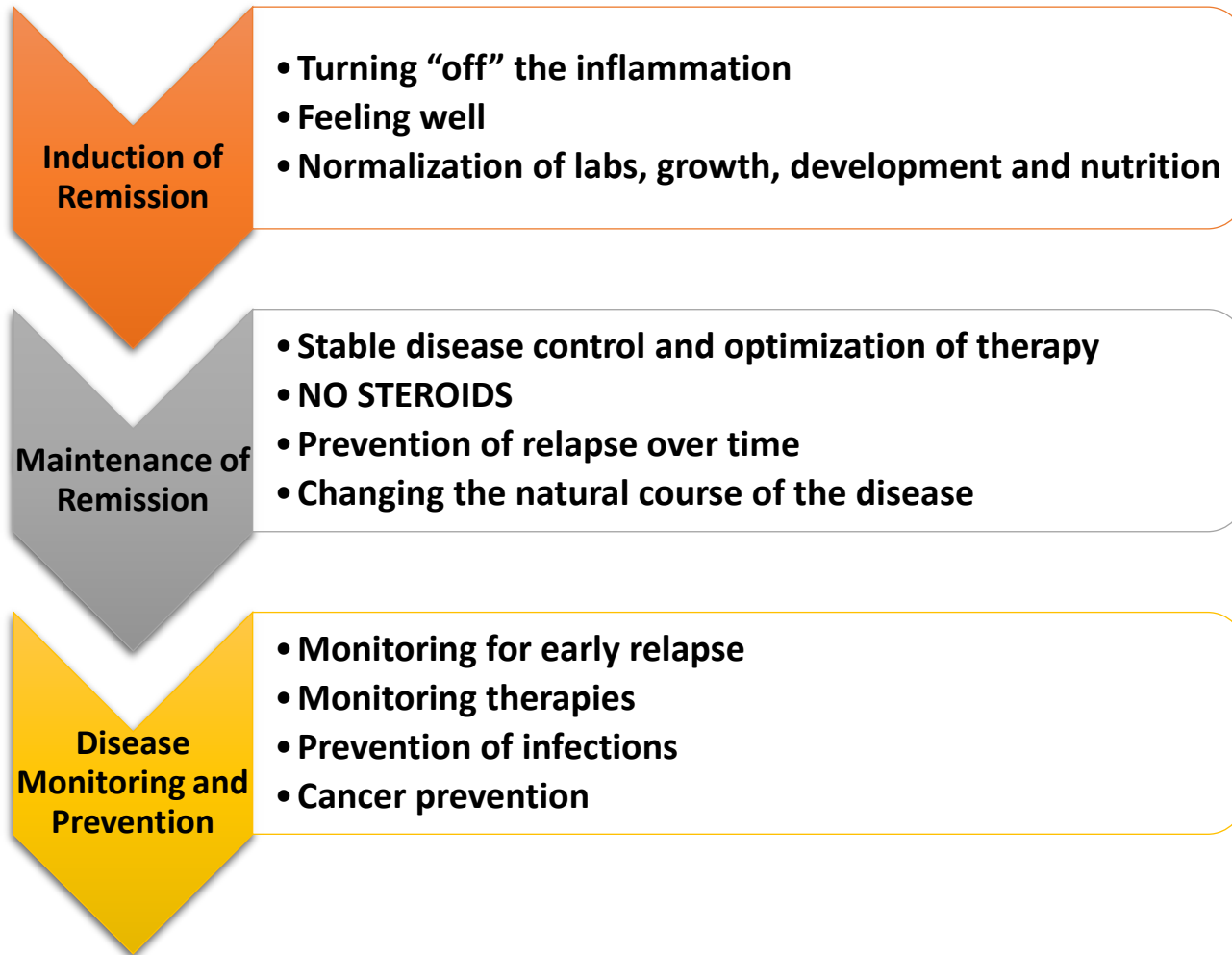


GWAS, Genome-Wide Association Study
MSMD, Mendelian susceptibility to mycobacterial disease

Jostins L, et al. *Nature*. 2012;491(7422):119-24.
Mirkov MU, et al. *Lancet Gastroenterol Hepatol*. 2017;2(3):224-234.

How is IBD Treated?

REMISSION, REMISSION, REMISSION



Selected Recent Breakthroughs in IBD

1. New therapies
2. Prevention of recurrence after surgery
3. New treatment strategies for severe colitis (invented here)
4. Choices of therapies based on immune pathways
5. Predication of relapse with disease monitoring strategies (biosensor studies here)
6. Bowel normalization with deep remission, bowel remodeling
7. Use of point of care intestinal ultrasound (UChicago one of two centers in the U.S.)

Medical Treatment Options for IBD

Treatment	Induction	Maintenance	
Dietary treatment (PEN/EEN)	CD	CD	Conventional Therapies (traditional)
5-ASA	UC	UC	
Steroids (budesonide and prednisone equivalents)	✓	✗	
Antibiotics	?	?	
Thiopurines	✗	✓	Conventional Therapies (Immunomodulators)
Methotrexate	CD	CD	
Anti-integrin (natalizumab, vedolizumab)	✓	✓	Biological Therapies
Anti-p40 (ustekinumab) Anti-p19 (risankizumab)	✓	✓	
Anti-TNF (adalimumab, certolizumab pegol, golimumab, infliximab)	✓	✓	
JAKinibs (tofacitinib, upadacitinib)	UC	UC	Targeted synthetic Small molecules
S1P receptor mod (ozanimod)	UC	UC	

Modern Management of IBD 2020

1. Symptom control is not sufficient

2. Emphasis on sustained functional remission

- Objective evidence of disease control
- Goal can be mucosal healing- leads to stable remission
- “Trust but verify”
- Addressing the “other” manifestations of IBD:
 - Sleep, fatigue, pain, mental health

3. Treating earlier changes outcomes

- The era of disease modification has arrived

4. Prevention is key to good health!

- Vaccination for preventable illnesses
- Cancer prevention
 - Colon cancer prevention with scheduled colonoscopies
 - Skin cancer monitoring with annual dermatology visits
 - Pap smears
- Regular visits to your IBD doctor, and communicate with the rest of the medical team

5. Developing customized treatment plans

- Do you know where your disease is located?
- What is your individual prognosis?
- Does your IBD flare seasonally?
- What is your plan at the earliest sign of relapse?

6. Monitoring and pre-emptively adjusting therapy

- What is your monitoring strategy