Inflammatory Bowel Disease
Prepared by Kurt Schaberg

**Activity = PMNs**

- Cryptitis
- Crypt Abscesses

**Chronicity**

- Crypt architectural distortion
  - Crypt foreshortening
  - Crypt branching
  - Crypt dropout
  - Loss of crypt parallelism
  - Villiform surface

- Basal lymphoplasmacytosis
  - Paneth cell metaplasia and hyperplasia

- Lamina propria and submucosal fibrosis

**Ulcerative Colitis**

Chronic active inflammation in the **rectum** proceeding proximally in **continuous, diffuse** pattern

Typical findings:
- **Chronic Active Colitis** limited to mucosa and superficial submucosa with ulceration

Can see deeper inflammation with severe “fulminant” colitis

Quiescent Colitis = Chronic inactive colitis

**Crohn’s Disease**

Patchy **Transmural** chronic active inflammation in any part of the GI tract

Typical findings:
- **Transmural** inflammation
- **Skip** areas and **patchy** inflammation
- **Granulomas**
- **Ulcers**: superficial apthous to fissuring
- Muscle and nerve hypertrophy
- **Pyloric gland metaplasia** (esp. in TI)
- Fibrosis and strictures
- Fistulas
### Acute Infectious Colitis
(aka Acute Self-limited Colitis)

**Causes:** E. Coli, Salmonella, Shigella, Campylobacter, Viruses

E. coli O157:H7 → ischemic changes

### Microscopic Colitis

**Causes:**
- Neutrophilic Cryptitis
- Chronicity ABSENT
  - Neutrophils in superficial lamina propria
  - Crypt abscesses
  - Hemorrhage, edema
  - Possible erosions

### Focal Active Colitis

**Causes:**
- Neutrophilic Cryptitis
- Chronicity ABSENT
- NSAIDS → + Increased apoptoses, ischemic-like changes
- Bowel preparation artifact → + Increased apoptoses, edema, mucin depletion
- Early infection → Days 0-4 after onset

### Additional DDX:

- Ischemic colitis → Hyalinized lamina propria, withered crypts, minimal inflammation
- Radiation colitis → Ischemic changes, Atypical stromal cells, Telangiectatic blood vessels
- Diverticular disease–associated colitis → In colonic segment with diverticulosis
- Diversion colitis → Colon isolated from fecal stream, Follicular lymphoid hyperplasia
- Prolapse → Fibromuscular hyperplasia, Angulated diamond-shaped crypts
- Vasculitis → Inflammatory destruction of vessels, Fibrinoid necrosis
- Eosinophilic/Allergic Colitis → >60 Eos/10 HPF, Few PMNs, Absent chronicity
- Graft versus Host Disease → Increased crypt apoptoses