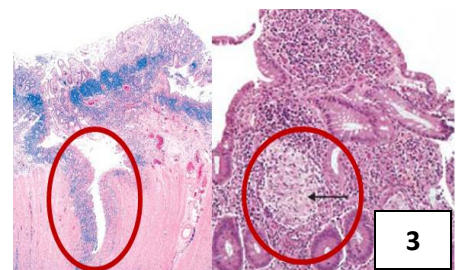
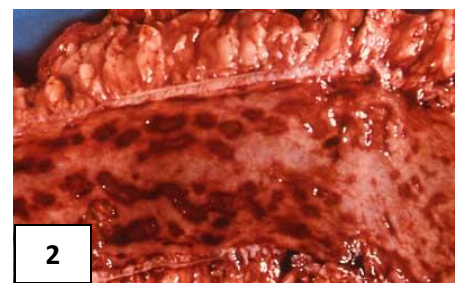
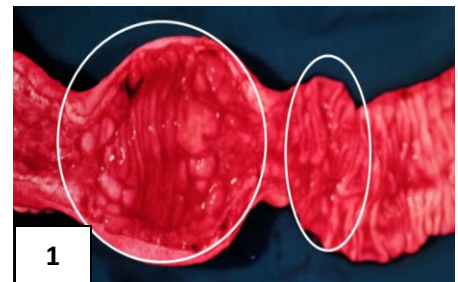




- **Inflammatory Bowel Disease (IBD) = Crohn's disease + ulcerative colitis.** Notice that they are diagnosed through colonoscopic biopsies.
- **Crohn's disease:**
 - **Definition:** it is a chronic inflammatory bowel disease with unknown etiology!
 - **Mostly affecting terminal ileum (although it might affect any region of the GI system from mouth to anus).**
 - **Typical morphological features:**
 - ✓ **Transmural inflammation:** which means that there is inflammation involving the whole thickness of the GI wall. This can result in obstruction of fistula formation (a fistula is a connection from bowel to: bowel, urinary bladder or skin).
 - ✓ **Granulomas.**
 - **Clinical features:**
 - ✓ Abdominal pain (which might be similar to appendicitis “inflammation of the appendix”).
 - ✓ Obstruction of the bowel.
 - **Morphological features:**
 - ✓ Crohn's disease is a segmental disease which means that there will be a formation of skip lesions (image-1).
 - ✓ Grossly, there is a lot of fat around the area of the disease known as periserosal fat or cobble-stone appearance (image-2).
 - ✓ When you view the mucosa you will notice linear snake-like ulcerations (image -2).
 - ✓ At a later stage, there will narrowing of the ileum lumen.
 - ✓ **Histological features:**
 - ❖ Deep fissure ulcers and granulomas (which consist of epithelial cells and non-caseating necrosis)- image (3).
 - **Complications:**
 - ✓ When Crohn's disease undergoes surgery, patients develop malabsorption syndrome due to short bowel syndrome.
 - ✓ Fistula formation.
 - ✓ Anal lesions.
 - ✓ Acute complications (such as perforation).
 - ✓ Malignancy: there is increased risk of adenocarcinoma.
- **Ulcerative colitis:**
 - **Definition:** it is a chronic inflammatory disease associated with recurrent phases of relapses and remissions.
 - **Affecting only the colon (notice that it first starts in the rectum and sigmoid colon).**
 - **Inflammation is only confined to the mucosa.**
 - **Complications:**
 - ✓ **Acute:** toxic megacolon, perforation, hemorrhage and loss of fluids.
 - ✓ **Chronic:** anemia, affection of liver and malignancy.
 - **Clinical features:**
 - ✓ Bloody diarrhea.

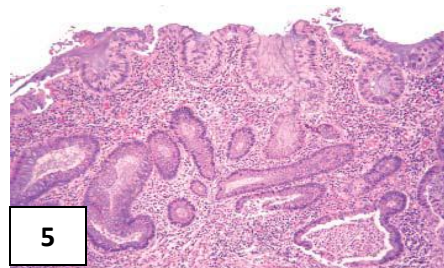
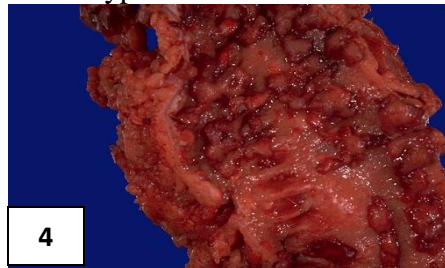




✓ Notice that the risk of malignancy is higher in ulcerative colitis than in Crohn's disease.

• **Morphological features:**

- ✓ Inflammatory polypi (image-4).
- ✓ Histological features (image-5):
 - ❖ Inflammation is limited to the mucus membrane.
 - ❖ Crypt abscesses.



- **Comparison between Crohn's disease and ulcerative colitis (VERY IMPORTANT):**

	Crohn's disease	Ulcerative colitis
Possible etiology	Intestinal bacteria	Autoimmune
Location	Any portion of GI tract; mostly in terminal ileum; skip lesion with sparing of the rectum	Contineous colonic lesions with involvement of the rectum
Gross morphology	Transmural inflammation → fistula; cobble-stone mucosa; creeping fat; string sign on barium swallow x-ray; linear ulcers; fissures	Mucosal and submucosal inflammation only; mucosal pseudopolyps; lead pipe appearance on imaging
Microscopic morphology	Noncaseating granulomas; lymphoid aggregates (Th ₁ -mediated)	Crypt abscesses and ulcers; bleeding; no granulomas (Th ₂ -mediated)
Complications	Strictures (leading to obstruction); fistulas	Toxic megacolon; colorectal carcinoma
Intestinal manifestation	Diarrhea that may or may not be bloody	Bloody diarrhea
Treatment	Corticosteroids; azathioprine, methotrexate, infliximab and adalimumab	ASA preparations (sulfasalazine); infliximab; colectomy