

Inflammatory Bowel Disease

Ghobad Abangah

Associate Professor of Gastroenterology and Hepatology

School of Medicine

Shahid Mostafa Khomeini Hospital

Ilam University of Medical sciences

Liver cirrhosis

Inflammatory bowel disease



Cecum
portion
of large
intestine



Inflammatory
bowel
disease (IBD)

Ileum
portion
of small
intestine

	Ulcerative colitis	Crohn's disease (regional ileitis)
Site	Almost always involves Rectum (95%) & Descending colon / Sigmoid	Any where in GIT, Commonest in ILEUM <u>Rectum often spared</u>
A/-	Unknown	Unknown, ? vasculitis
		Smoking 3 X ▲
	1^o Siblings= 15 X	1^o Siblings= 15 X
	Mucosal immunological	Auto-immune
	Weakened mucosal barrier	TH receptor
	Defective mucosal metabolism of butyrates	? Variant of TB

	Ulcerative colitis	Crohn's disease (regional ileitis)
	pANCA	ASCA
		<u>CARD15</u> gene (also known as the NOD2 <u>gene</u>)
	<u>T_h2</u> <u>cytokine</u> response	<u>T_h17</u> <u>cytokine</u> response
		opiate receptor antagonist <u>Naltrexone</u> (also <u>Low-dose naltrexone</u>)
		TH receptor
		activation of the <u>CB1</u> and CB2 <u>cannabinoid receptors</u>
	Defective mucosal metabolism of butyrates	? Variant of TB

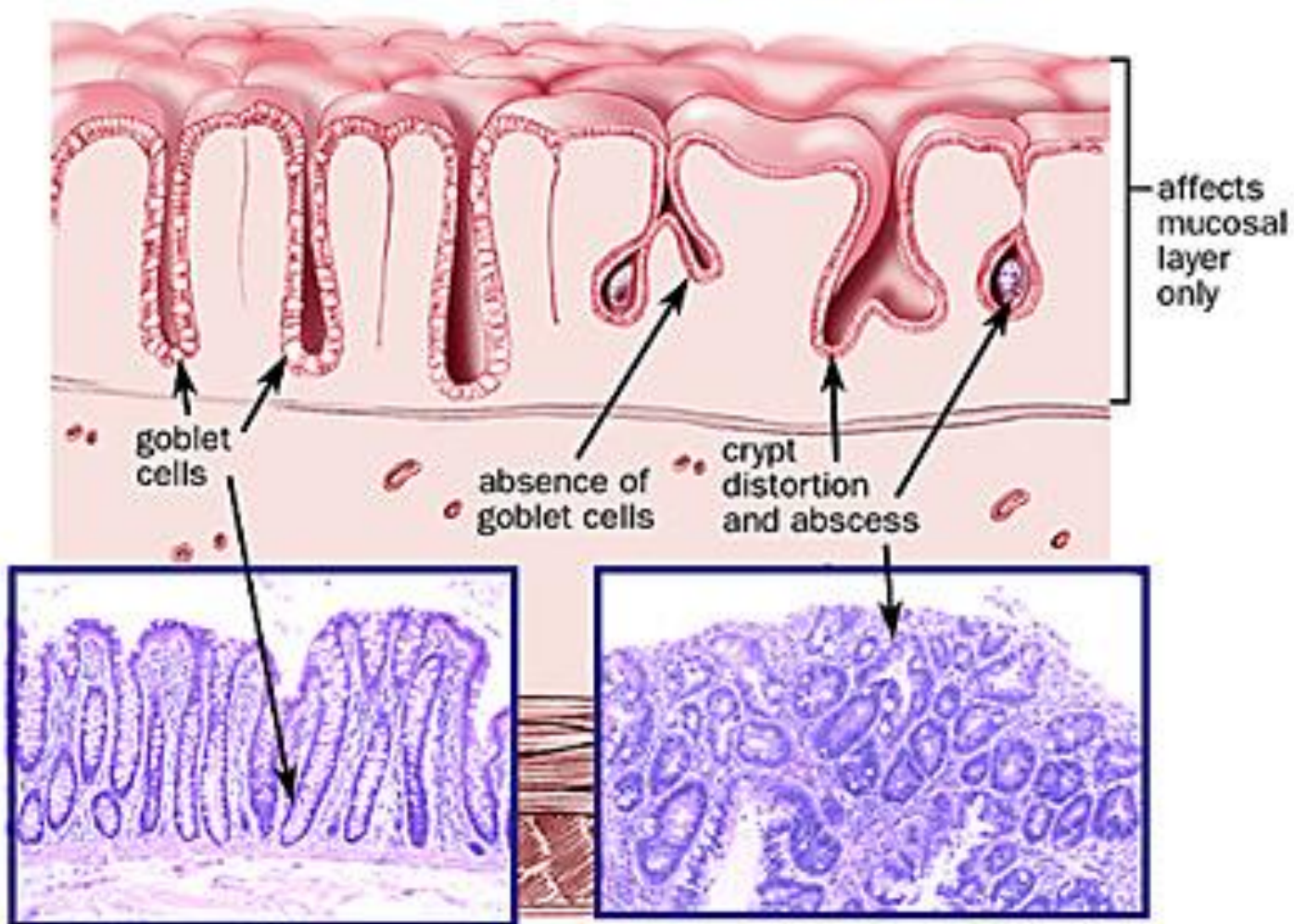
	Ulcerative colitis	Crohn's disease (regional ileitis)
Etiology		Ankylosing spondylitis
		Chromosome 16 IBD 1 locus= NOD2 gene
		40X incidence when allele variants of NOD 2 gene on both chromosomes

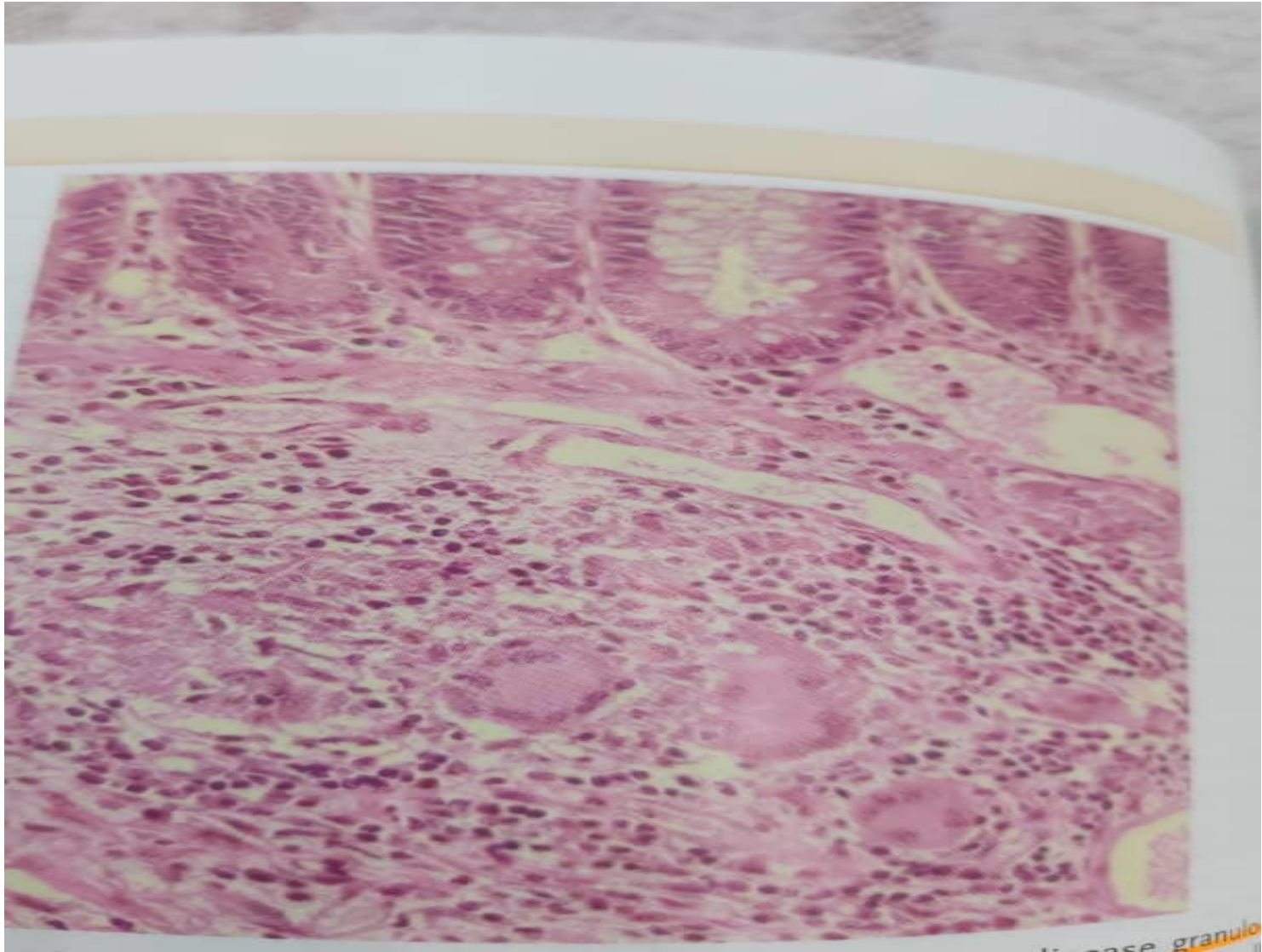
	Ulcerative colitis	Crohn's disease (regional ileitis)
Site	Almost always involves rectum & Descending colon / Sigmoid	Commonest in Ileum 60% <u>Rectum often spared</u> Anal lesions are common

Patho	Ulcerative colitis	Crohn's disease
Gross	<ul style="list-style-type: none"> - only the mucosa involved - superficial ulceration - Exudation - pseudopolyposis 	<ul style="list-style-type: none"> - Inflammation involve full thickness of bowel wall involving the serosa - Cobble stone - deep fissured ulcer - LN enlarged - Fistula - Skip areas
Micro	<ul style="list-style-type: none"> - Crypt abscess common - Inflammatory polyps - Highly vascular granulation tissue Crypts are reduced in # Crypts appear atrophic= pipe stem colon 	<ul style="list-style-type: none"> Crypt abscess rare Non caseating giant cell granuloma present in 60%

Normal colon

Ulcerative colitis





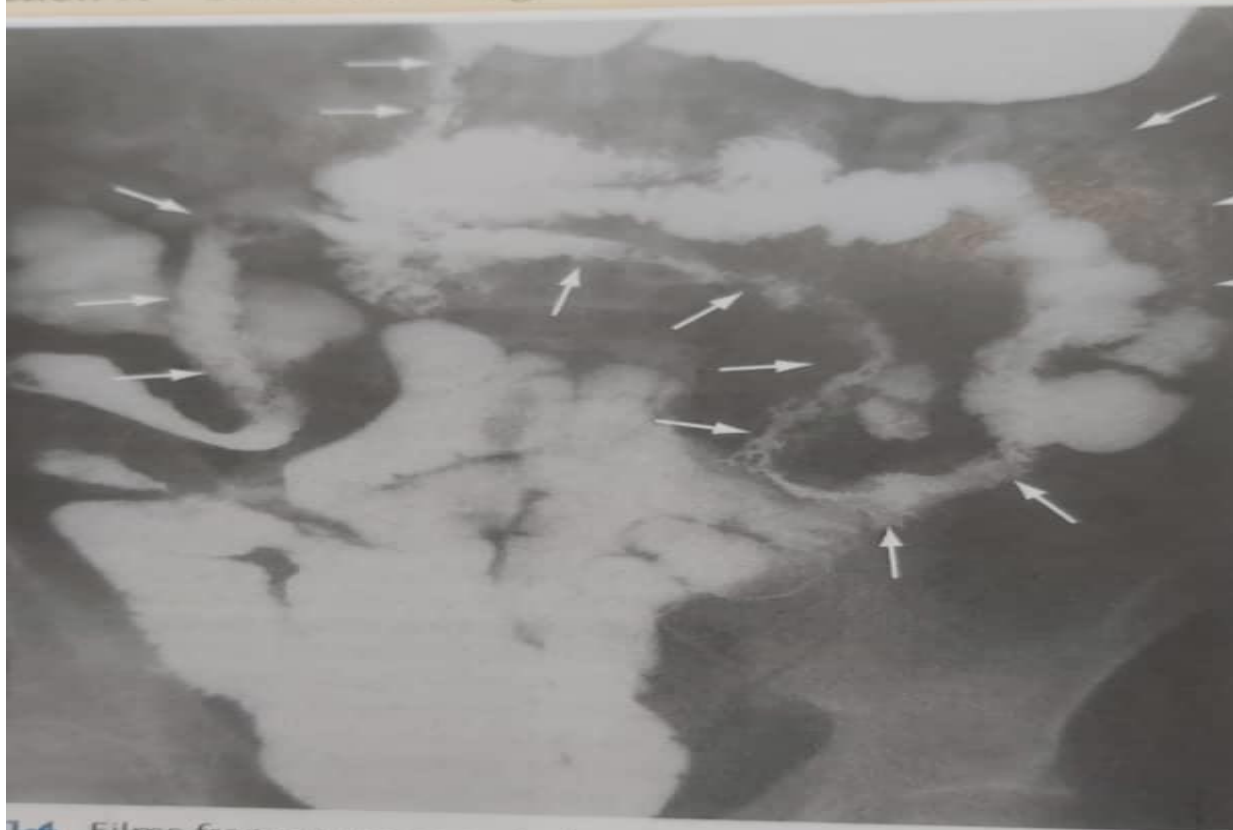
...ase granulo

... but its major value is still to help evaluate and guide therapy of perianal disease.^{178,177} Doppler vascular



Figure 111-6. Magnetic resonance enterography with gadolinium contrast in a patient with Crohn's disease. This coronal view shows mural hyperenhancement, mural thickening, and the comb sign (engorged perienteric vascature) involving the terminal ileum. The vessels are seen to the left of the inflamed loop and resemble the teeth of a comb. (Courtesy of Dr. David Loftus and Dr. Jeffrey Fidler, Rochester, Minn.)

Section X Small and Large Intestine



1-4. Films from an upper gastrointestinal series and small bowel follow-through are noted (arrows), with a classic cobblestoned appearance of the mucosa that demonstrates a string sign in the right lower quadrant. The classic string sign is a result of spasm and edema associated with Crohn's disease. It resolves with administration of glucagon, which relieves smooth muscle spasm.

... 89/8, BMU document... 110 Safety of radiation

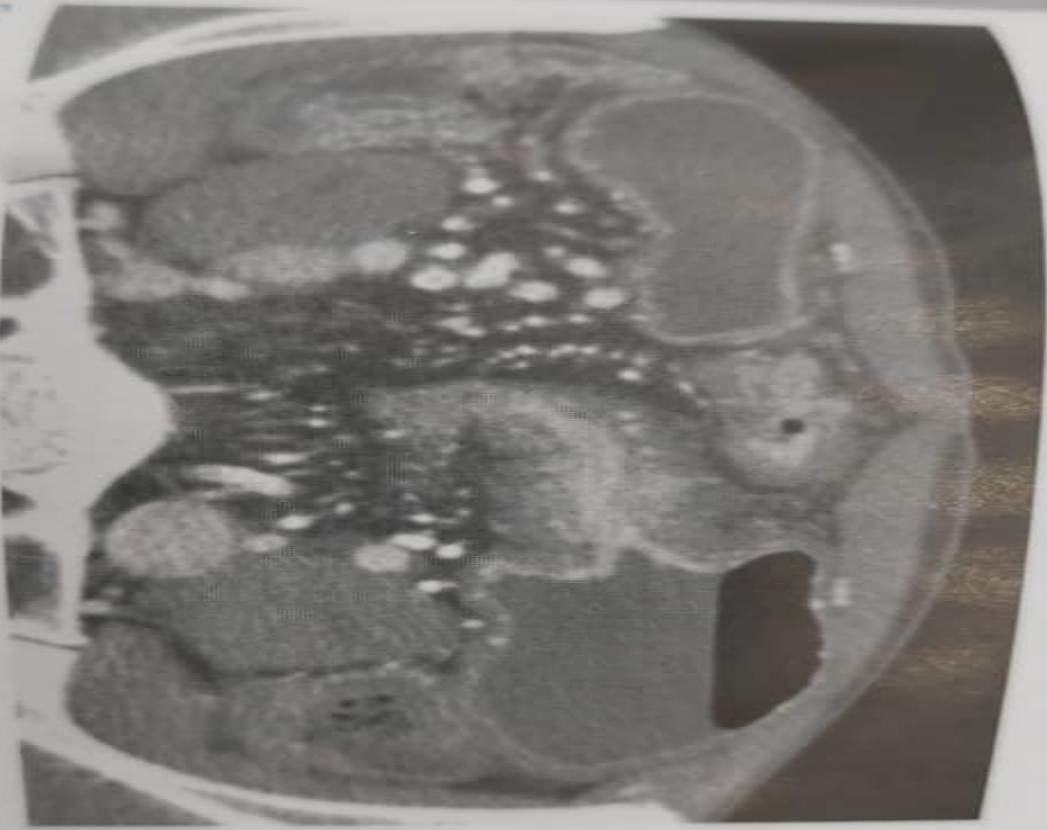


Figure 111-5. Computed tomography enterography in a patient with Crohn's disease. ... aneurysmal dilatation.



Figure 111-6. Magnetic resonance enterography in a patient with Crohn's disease. ... mural thickening.



	Ulcerative colitis	Crohn's disease
Clinical feature	<ul style="list-style-type: none">-Watery or bloody diarrhea-Rectal discharge of mucus-Proctitis-Lt sided & total colitis	<ul style="list-style-type: none">-Chronic diarrhea-Abdominal pain-Food fearwt loss-pyrexia-RIF pain (?? Appendicitis)-as abdominal mass-acute intestinal obstruction-multiple perianal fissures, fistula & abscess

	Ulcerative colitis	Crohn's disease
Clinical feature	<p>Toxic megacolon</p> <p>Fulminating colitis</p> <p>Perforation</p> <p>Severe hemorrhage</p>	<p>Intra-abdominal fistula</p> <ul style="list-style-type: none"> •Entero-enteric •Entero-cutaneous
Severity	<p>Mild</p> <p>Moderate</p> <p>Severe</p>	<p>Complex anal fistula</p> <p>DD TB</p>

	Ulcerative colitis	Crohn's disease
Clinical feature		Fat wrappings
	TH 2	TH1 TH 17

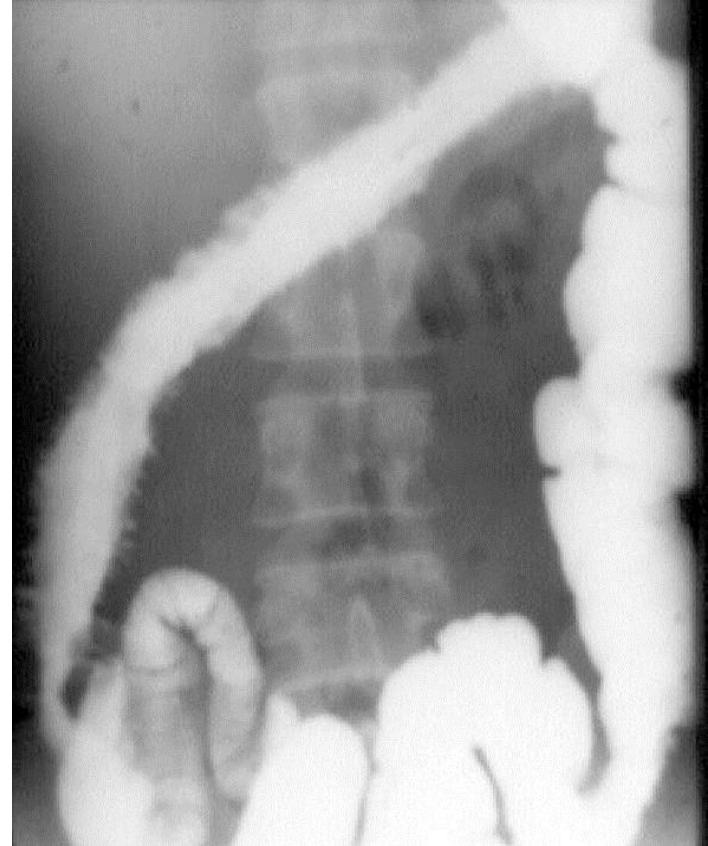
	Ulcerative colitis	Crohn's disease (regional ileitis)
Extra-colonic manifestation	1-Arthritis. 2-skin disorder- erythema nodosum, pyoderma - gangrenosum.	1-Peripheral Arthritis, Ankylosing spondylitis, Sacro-ilitis 2-skin condition- erythemanodosum, pyoderma gangrenosum.

	Ulcerative colitis	Crohn's disease
Extra-colonic manifestation	3- Eye disease- Iritis 4-Bile duct cancer 5-Sclerosing cholangitis 6-Hepatic disease 7-Urology- Nephrolithiasis	3- Eye disease- Iritis 4-Bile duct cancer 5-Sclerosing cholangitis 6-Hepatic disease

	Ulcerative colitis	Crohn's disease (regional ileitis)
Investigation	<ul style="list-style-type: none">-CBC-stool culture-plain film of abdomen-Barium enema-sigmoidoscopy-colonoscopy-biopsy	<ul style="list-style-type: none">-small bowel enema- Ba Enema-sigmoidoscopy-colonoscopy-biopsy



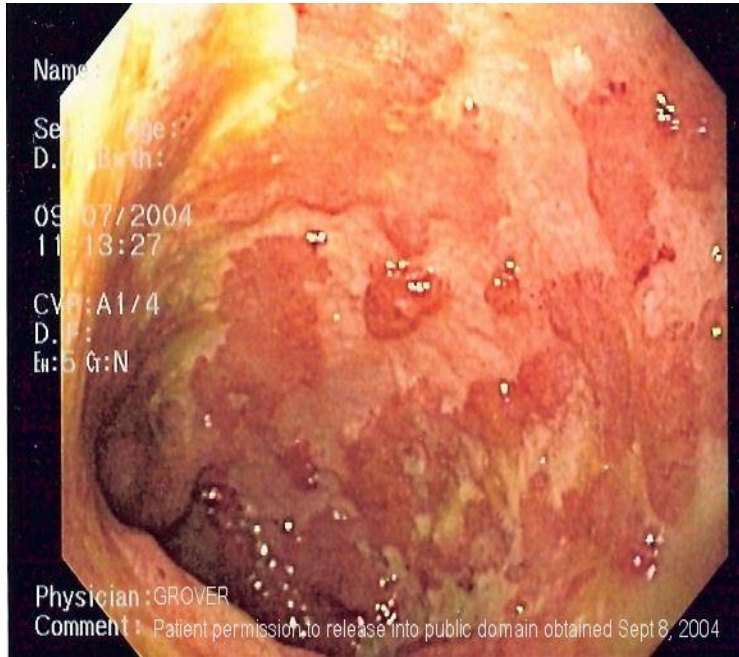
Ulcerative colitis. Double-contrast barium enema study shows pseudopolyposis of the descending colon



Crohn's disease (regional ileitis)

Contrast

- String sign of Kantor
- Sterlien's sign
- Fleischner's sign



- Endoscopic image of **ulcerative colitis** affecting the left side of the colon. The image shows confluent superficial ulceration and loss of mucosal architecture

Crohn's disease
(regional ileitis)

Rx	Ulcerative colitis	Crohn's disease (regional ileitis)
	<p>1-sulfasalazine.</p> <p>2-azithioprine in resistance cases.</p> <p>3-steroids: Topical (Predsol enemas) Oral(30 – 40mg prednisolone)</p> <p>4-high-fiber diet & bulk forming agents as methylcellulose.</p>	<p>1-Sulfasalazine.</p> <p>2-Azithioprine in resistance cases.</p> <p>3-Steroids</p> <p>1-supplementary diet.</p> <p>2-elemental diets</p> <p>3-supplement of oral iron.</p> <p>4- TPN</p> <p>6- Metronidazole/ Antibiotics</p>

Rx	Ulcerative colitis	Crohn's disease
	Sulfasalazine	INFLIXIMAB=MAB against TNF-α for Internal Fistula
	Azathioprim	Elemental diet, TPN
	Steroids-Topical	Sulfasalazine
	Steroids-Oral	Steroids
	high-fiber diet & bulk forming agents as methylcellulose	Metronidazole.

Rx	Ulcerative colitis	Crohn's disease (regional ileitis)
	<p><u>Surgical:</u></p> <p>-indication</p> <p>Panproctocolectomy + permanent ileostomy</p>	

	Ulcerative colitis	Crohn's disease (regional ileitis)
Complication	<ul style="list-style-type: none">-Fulminating colitis & toxic dilatation (mega colon)-perforation-sever hemorrhage	<ul style="list-style-type: none">-stricture Rx-adhesion Rx

Vienna Classification of Crohn's

- ***Age at diagnosis***¹
A1, <40 years
A2, > or = 40 years
- ***Location***²
L1, terminal ileum³
L2, colon⁴
L3, ileocolon⁵
L4, upper GI⁶
- ***Behaviour***
B1, non-constricting nonpenetrating⁷
B2, stricturing⁸
B3, penetrating⁹

Cancer risk in UC

- 3.5%
- 20y=12%

Thank you