

New entities in GIT pathology

Dr Ian Brown

Envoi Pathology

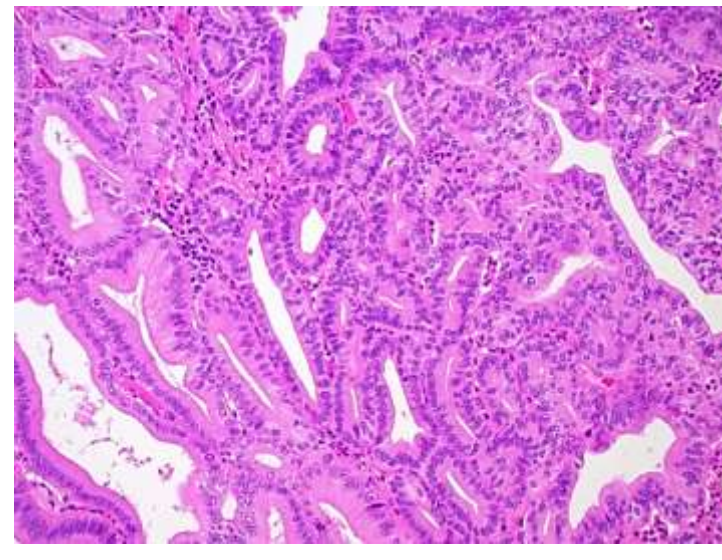
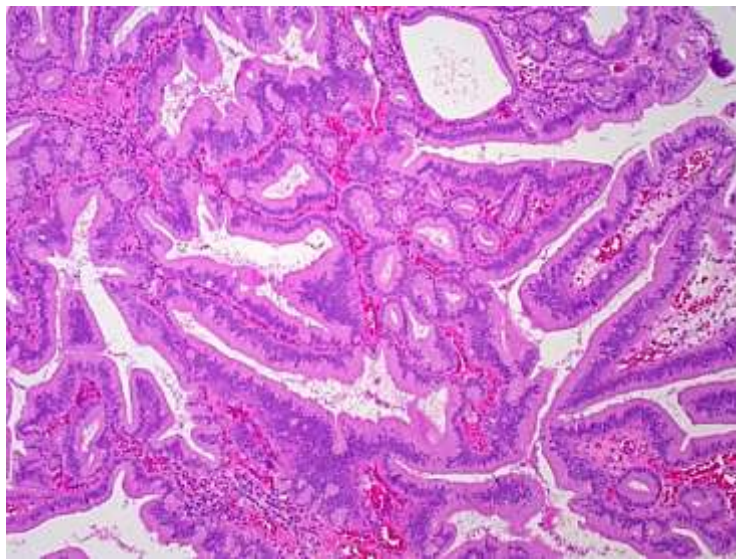
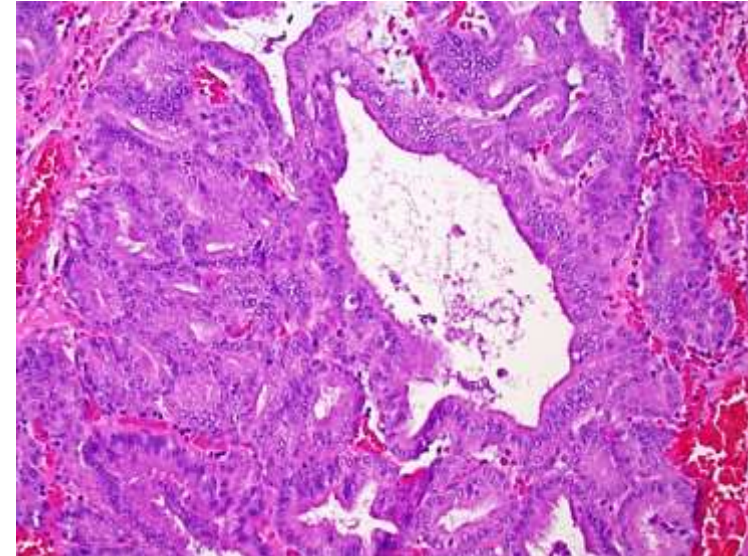
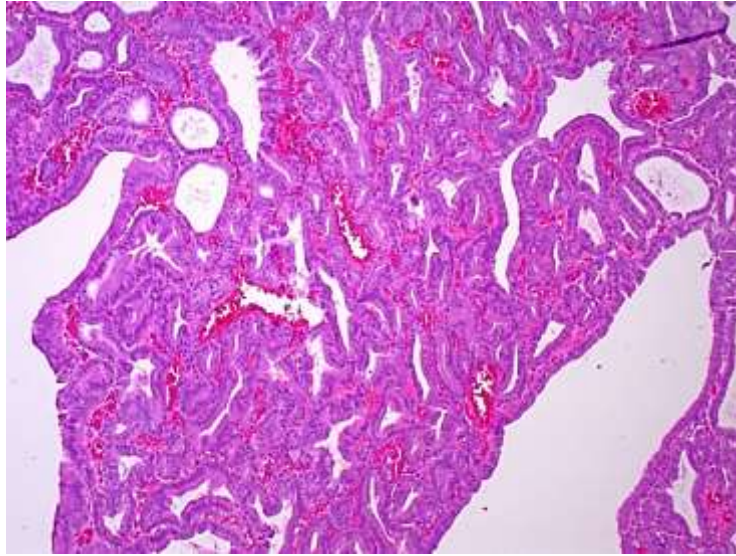
Differentiation in upper GIT neoplasms

- Gastric
 - Foveolar
 - Pyloric
 - Oxyntic/chief cell
- Intestinal
- (biliary)
- Pancreatic
- Hepatoid (embryonic)
- Neuroendocrine

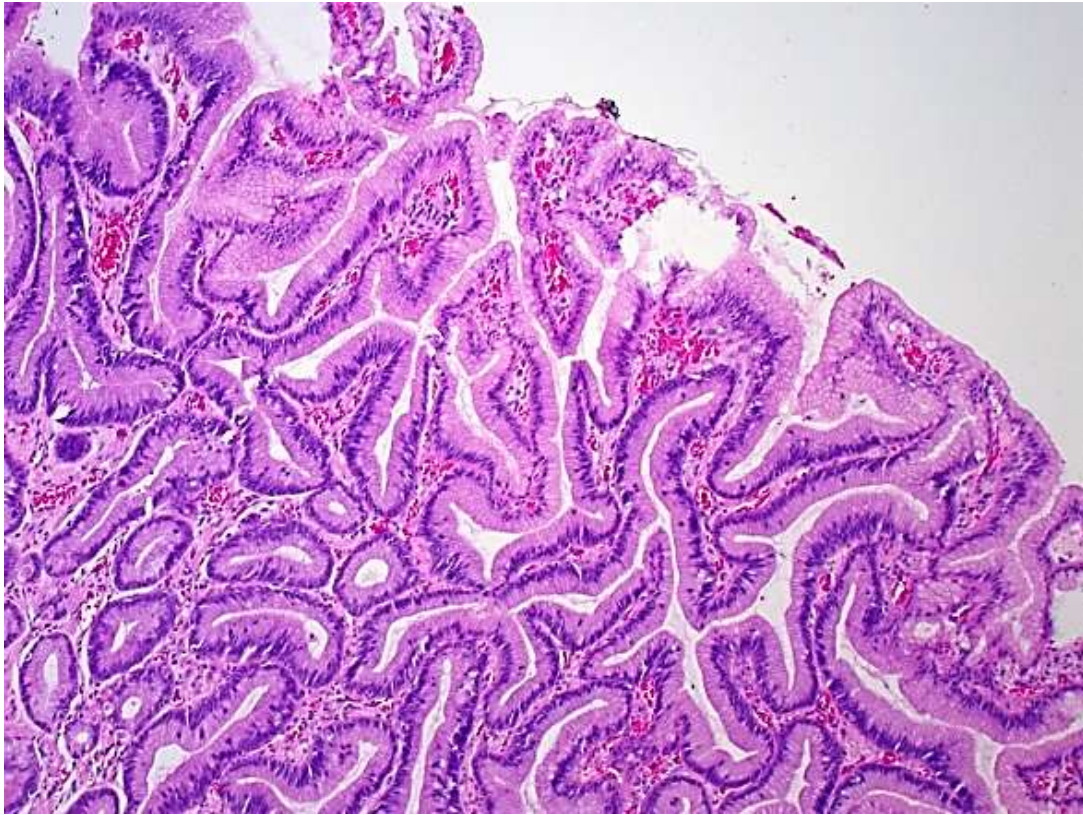
Gastric type adenoma

- Intestinal
- Foveolar
- Pyloric
- Chief cell/oxyntic
- (carcinoid)

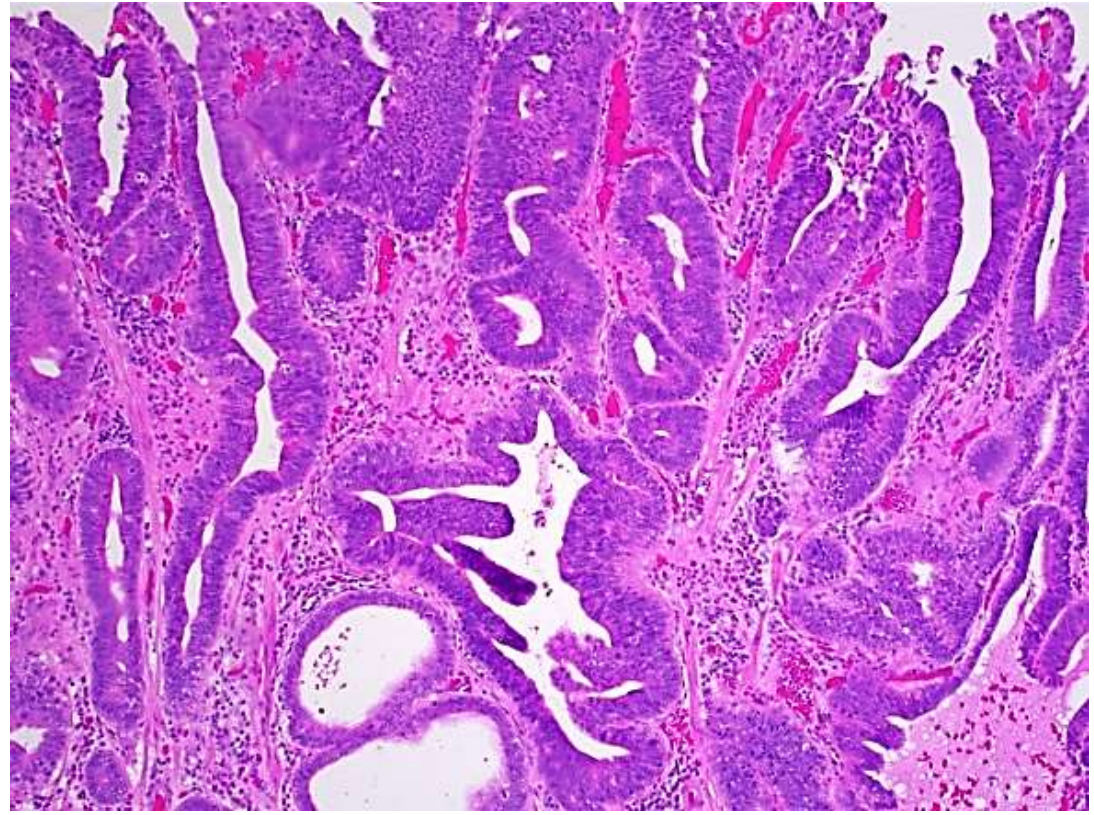
Pyloric gland adenoma



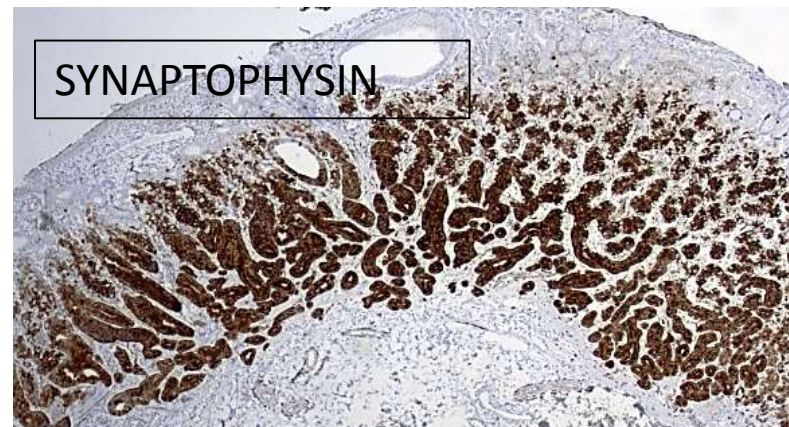
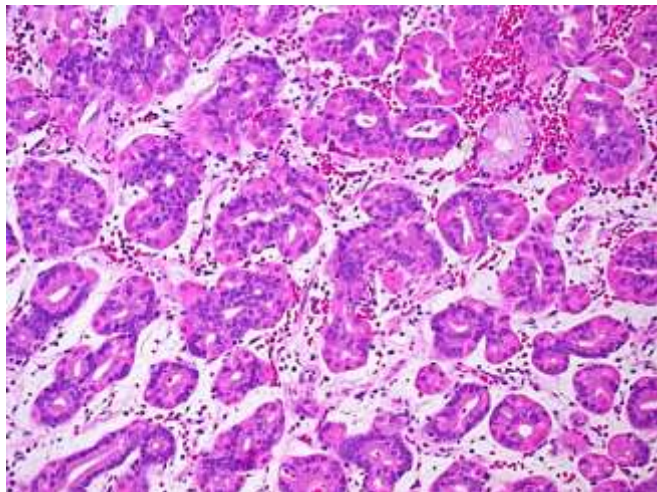
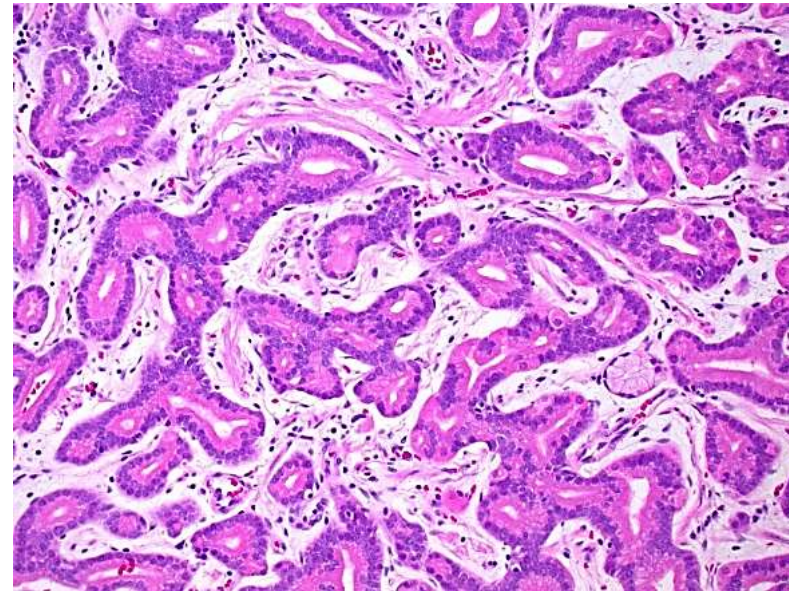
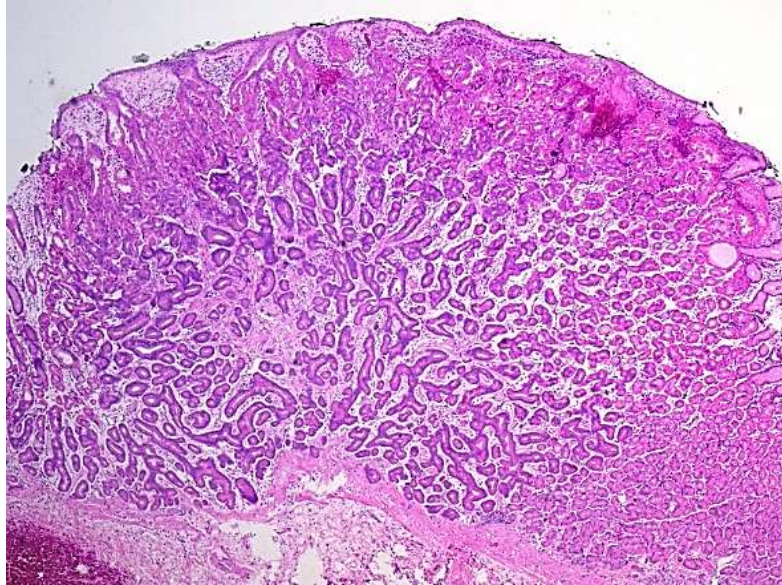
Foveolar adenoma



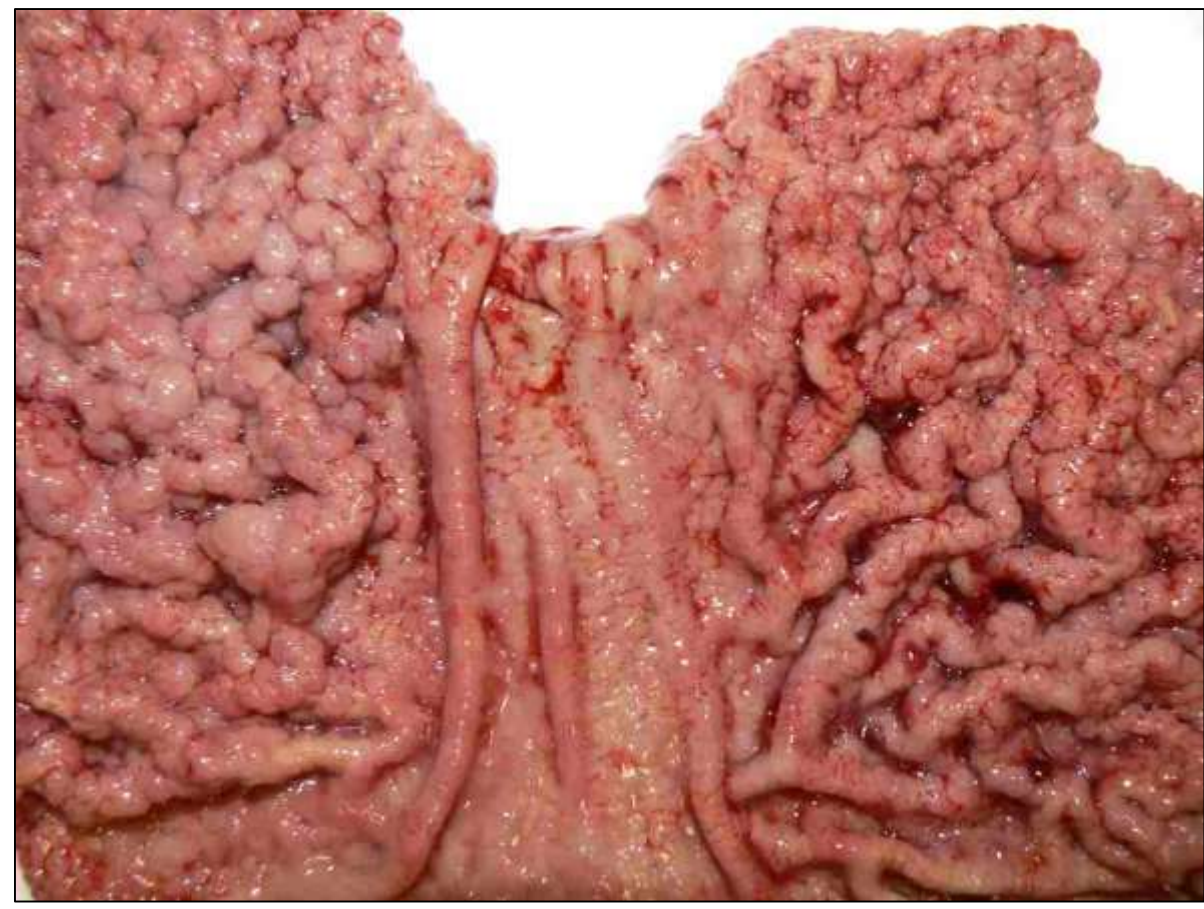
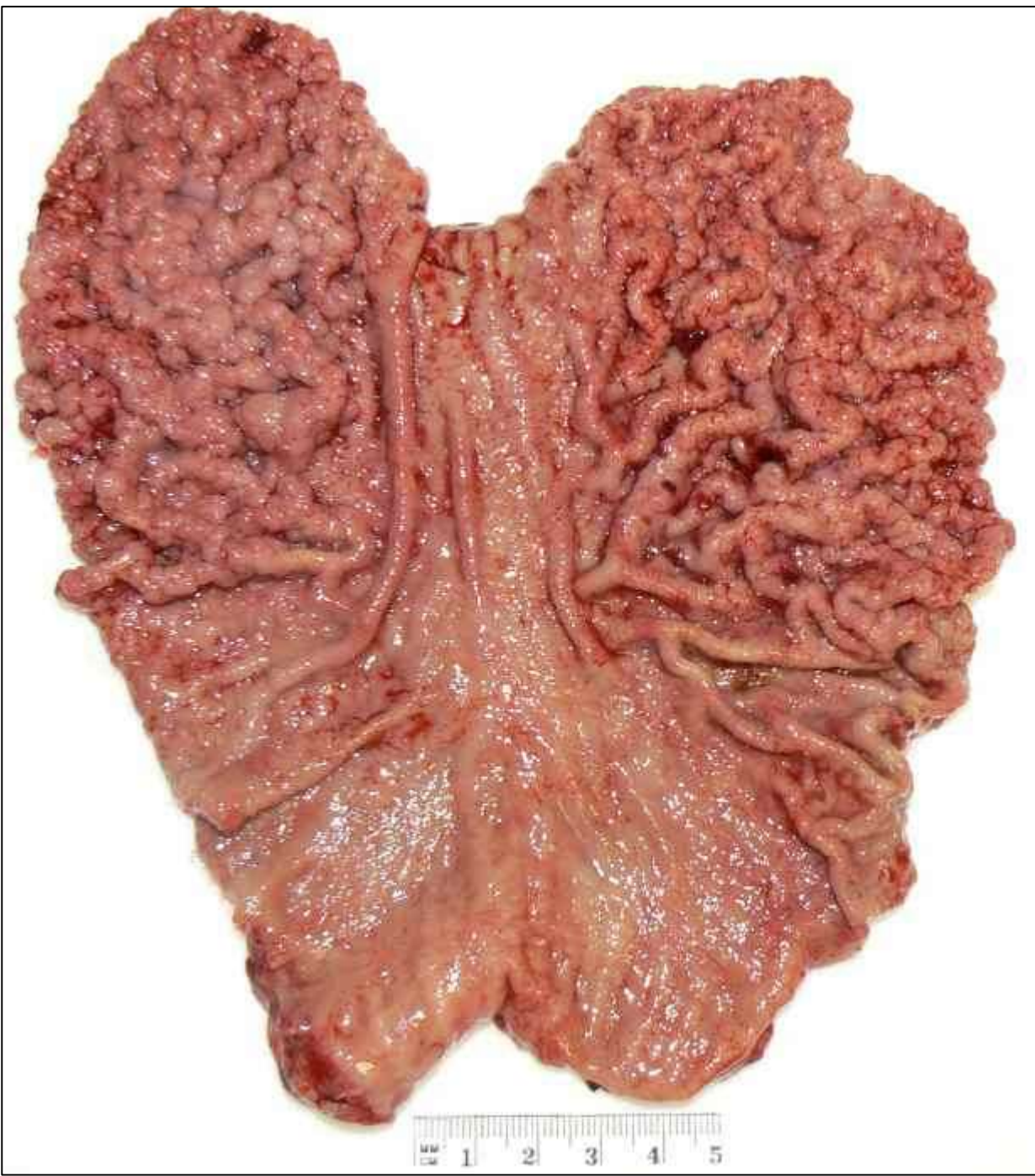
Intestinal type adenoma



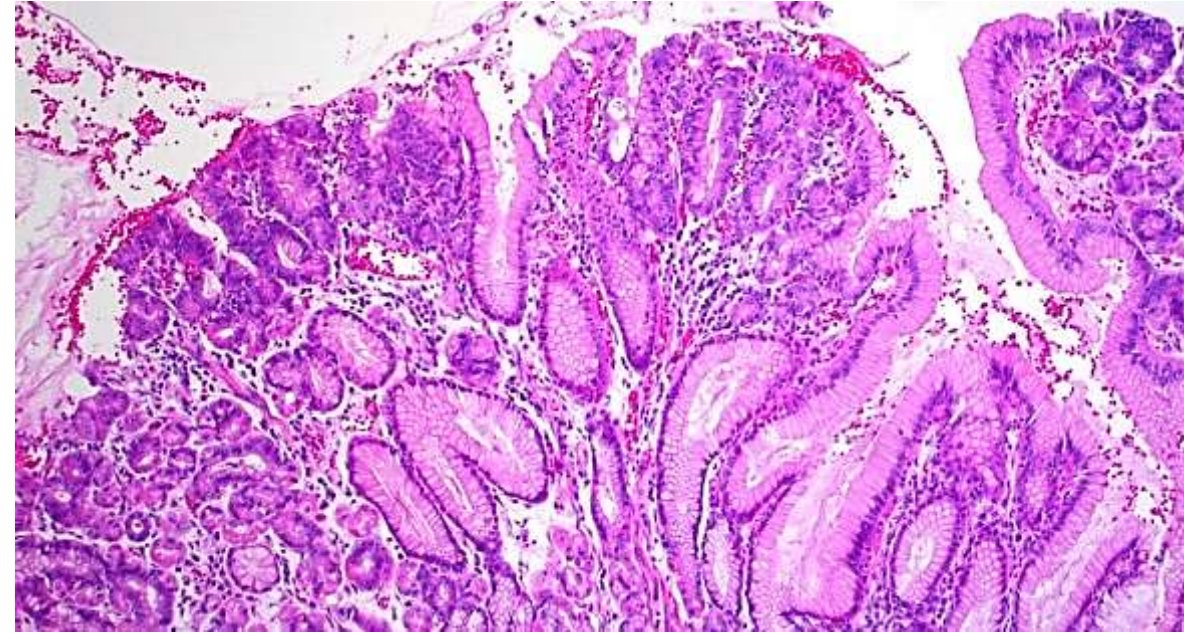
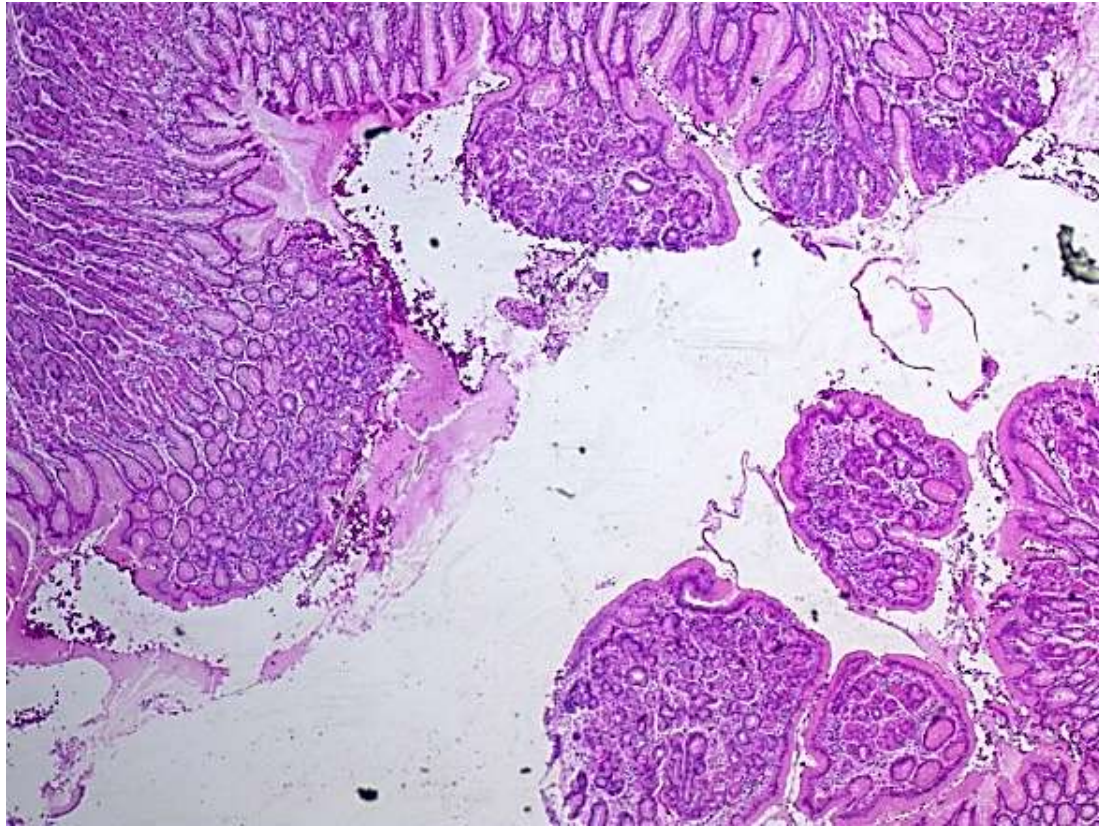
Chief cell predominant adenoma



Gastric adenocarcinoma with proximal polyposis syndrome (GAPPS)



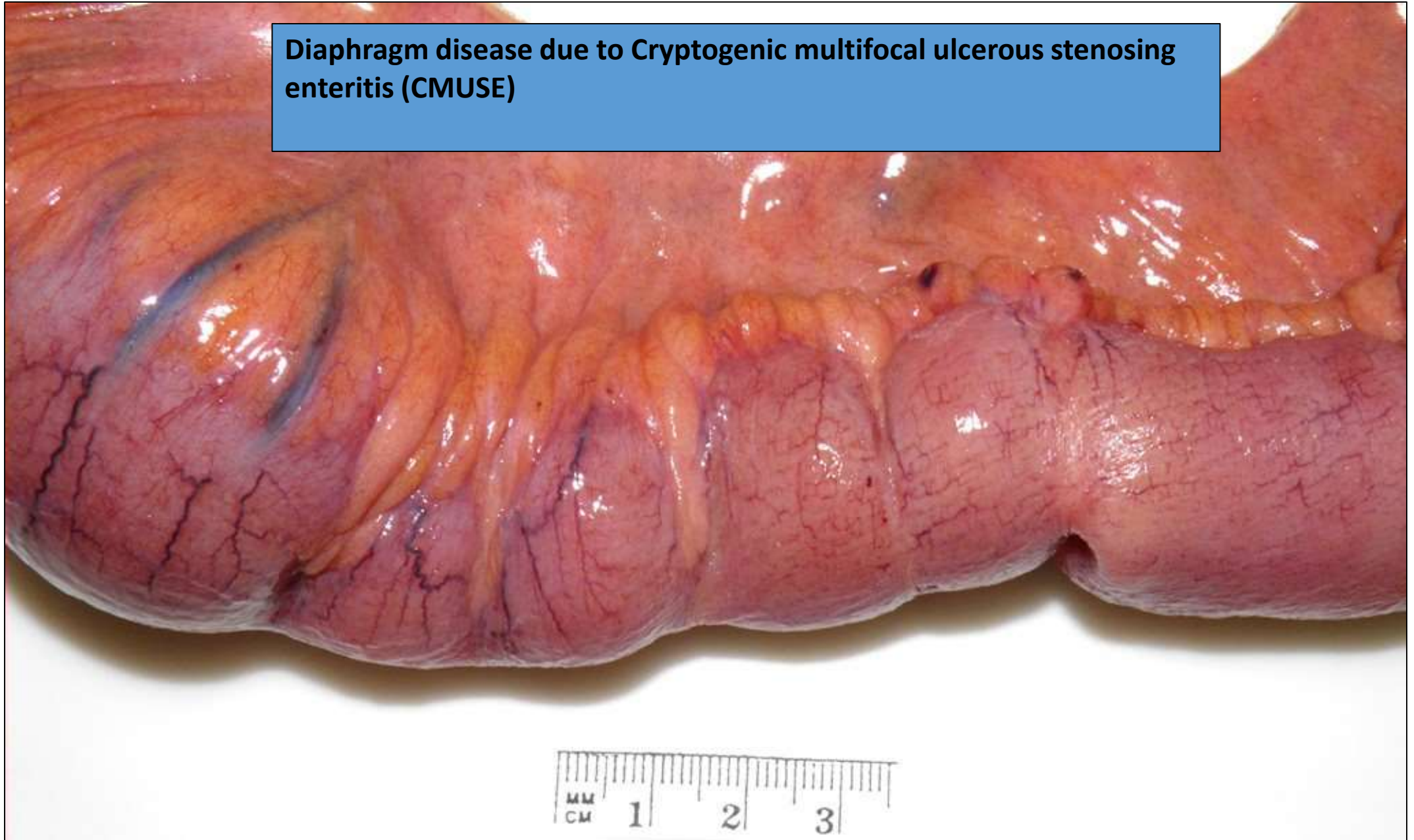
GAPPS

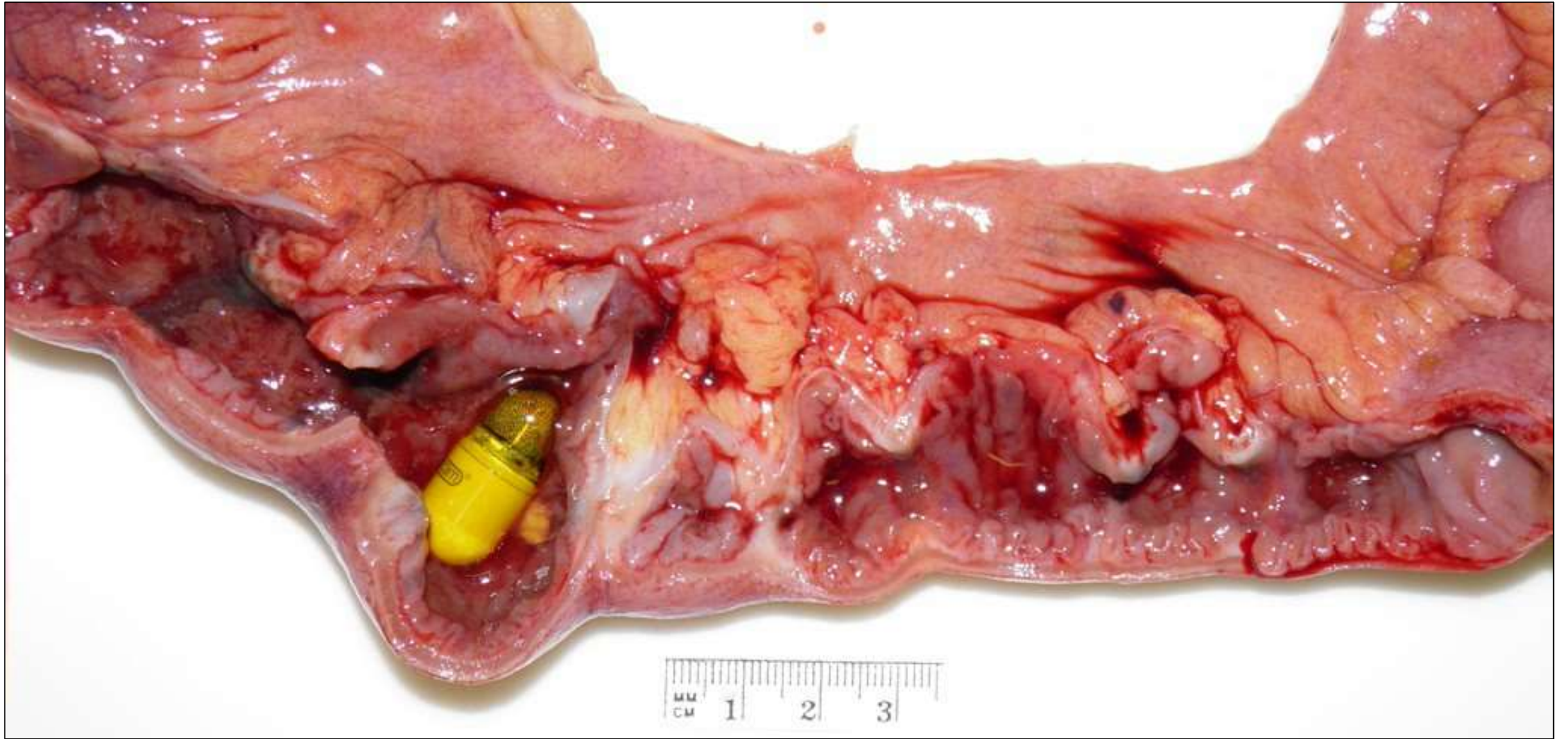


Multiple epithelial polyps in fundus

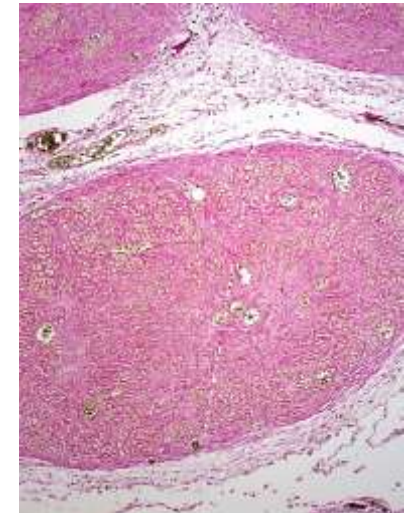
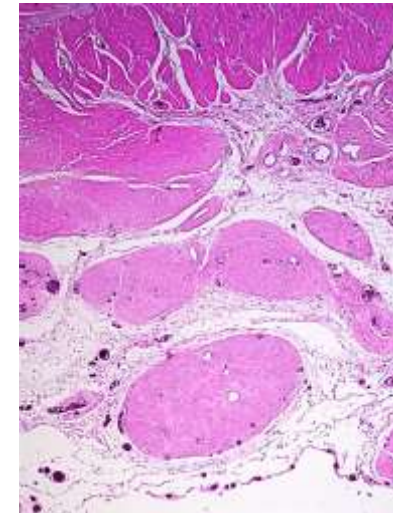
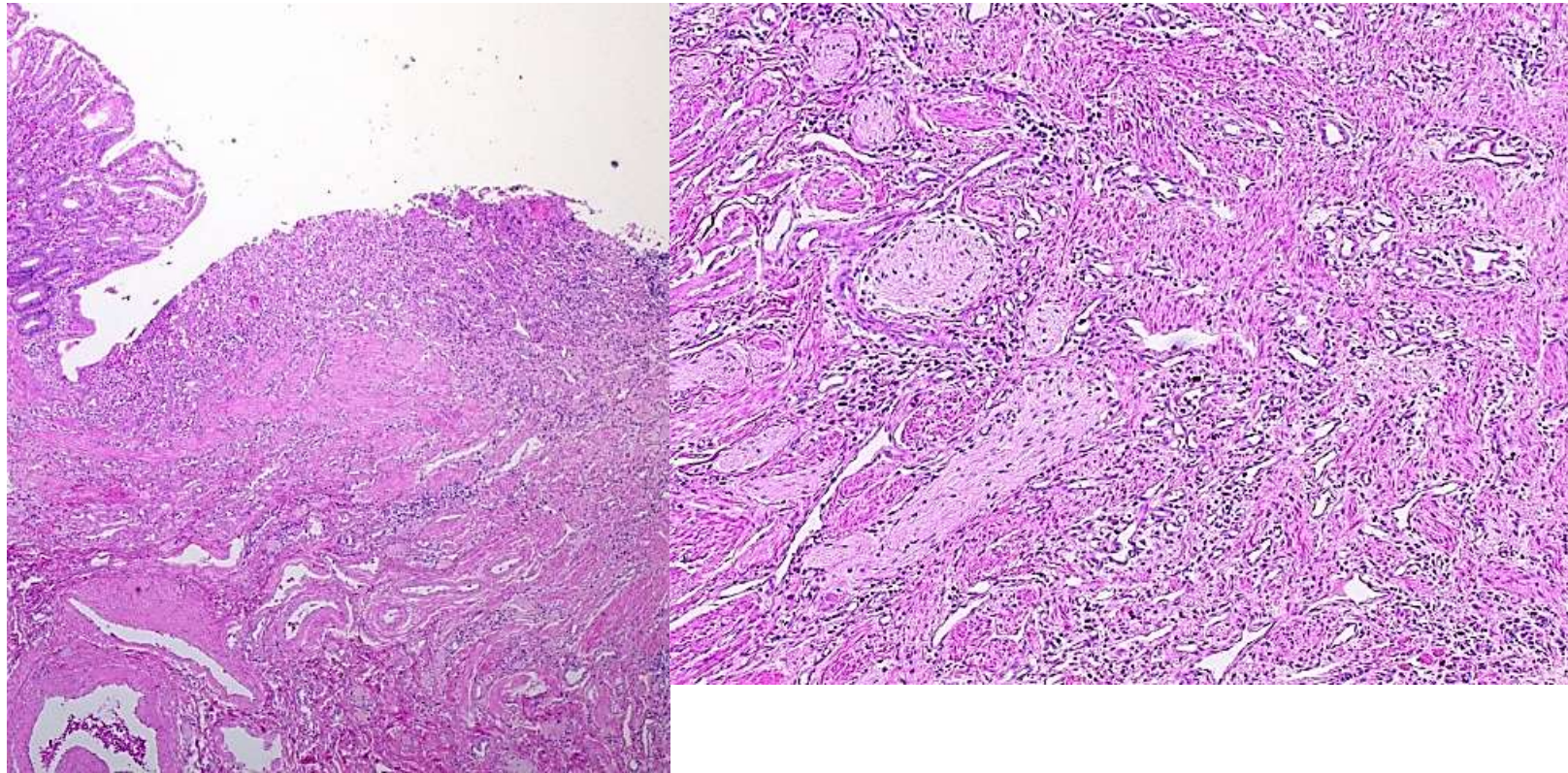
- FAP
- MutYH
- GAPPS
- 'hyperplastic polyposis'
- PJS
- Juvenile polyposis (can be localised with SMAD4 mutation)
- Cowden/PTHTS
- Cronkhite Canada syndrome
- Also
 - MEN1 NETs
 - Sporadic (PPI related) FGPs
 - AI gastritis related pseudopolyps
 - Menetriers and related hyperplastic fold diseases

Diaphragm disease due to Cryptogenic multifocal ulcerous stenosing enteritis (CMUSE)





Cryptogenic multifocal ulcerous stenosing enteritis (CMUSE)



Vessel wall changes

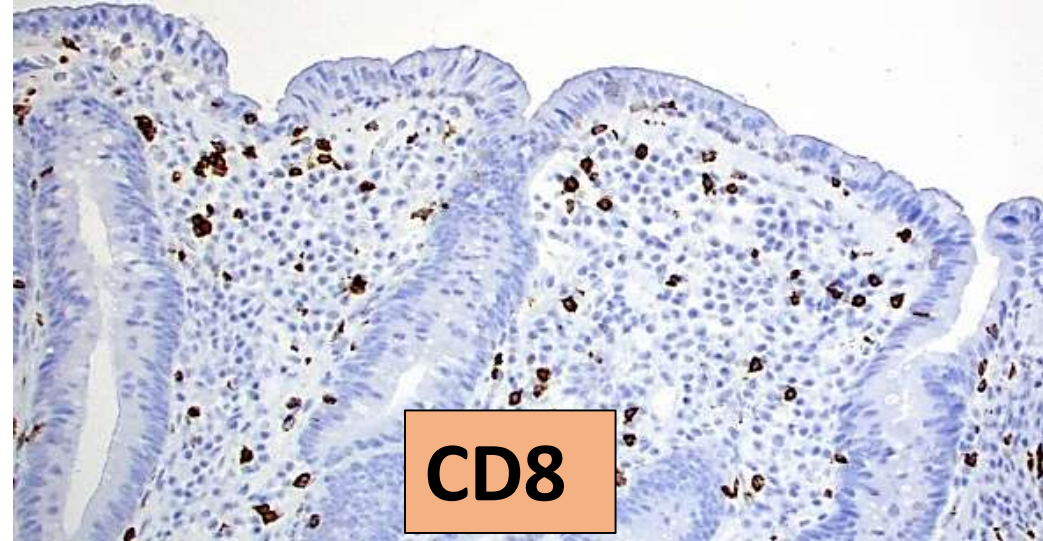
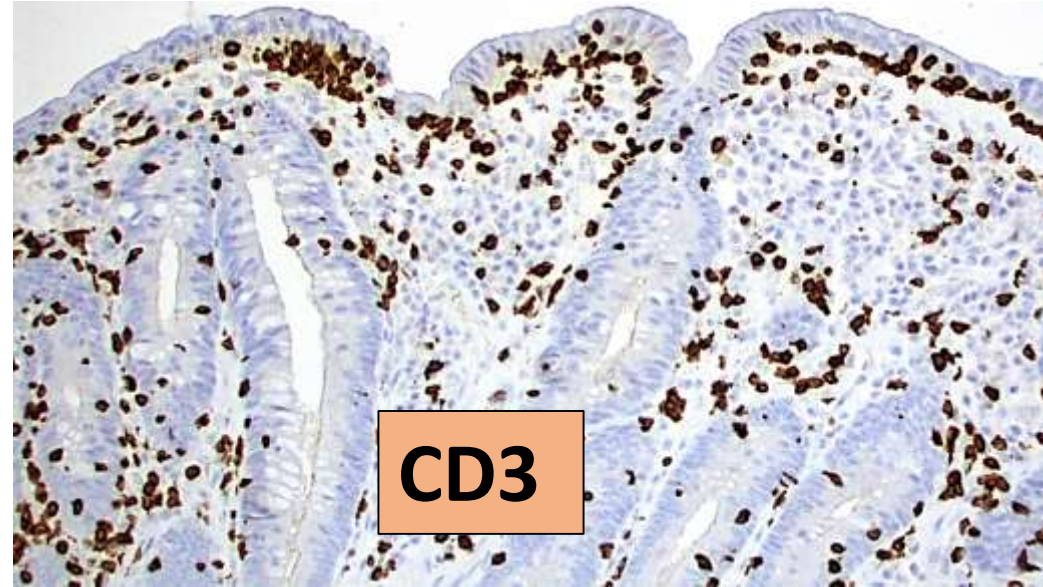
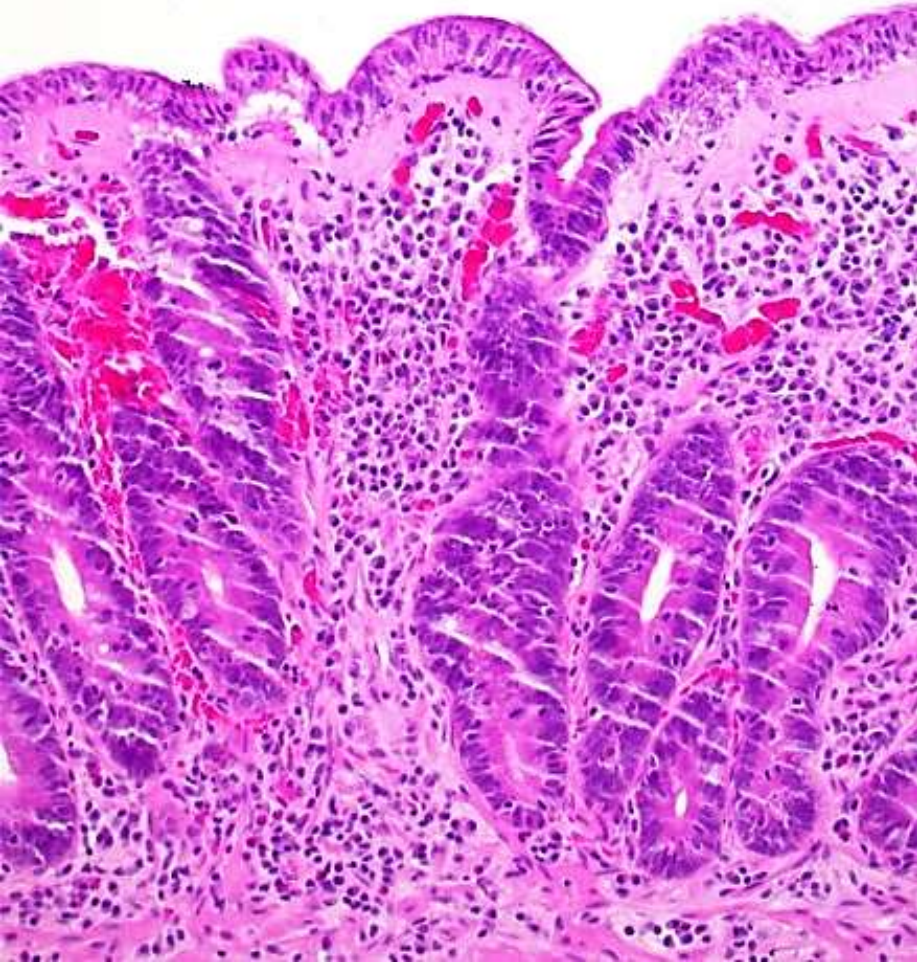
Causes of multifocal small bowel ulceration

- Cryptogenic multifocal ulcerous stenosing enteritis (CMUSE)
- Crohn's disease (with proximal small bowel involvement)
- Complicated celiac disease (ulcerative non-granulomatous jejunoileitis, ulcerated mucosal lymphoma)
- Infectious agents (eg., Campylobacter, Yersinia)
- Medication induced (eg., pharmaceutical agents, NSAIDs; biological agents, ipilimumab)
- Gastrin-secreting tumor with Zollinger–Ellison syndrome
- Traumatic injuries (including endoscopic treatment and seat belt injury)
- Ischemia (eg., collagen vascular diseases, vasculitis)

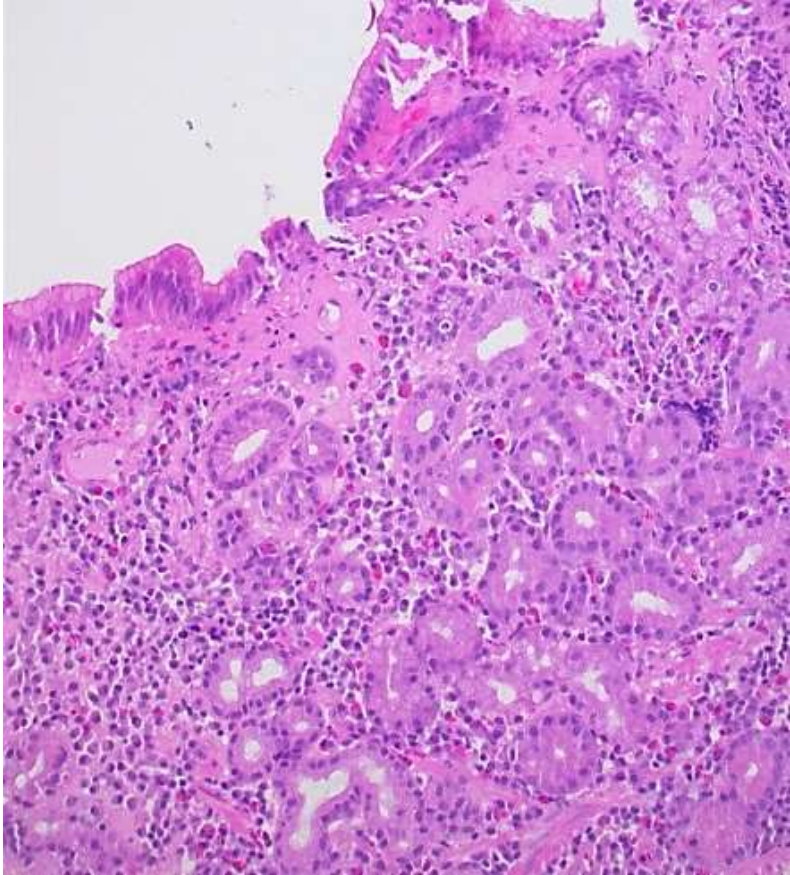
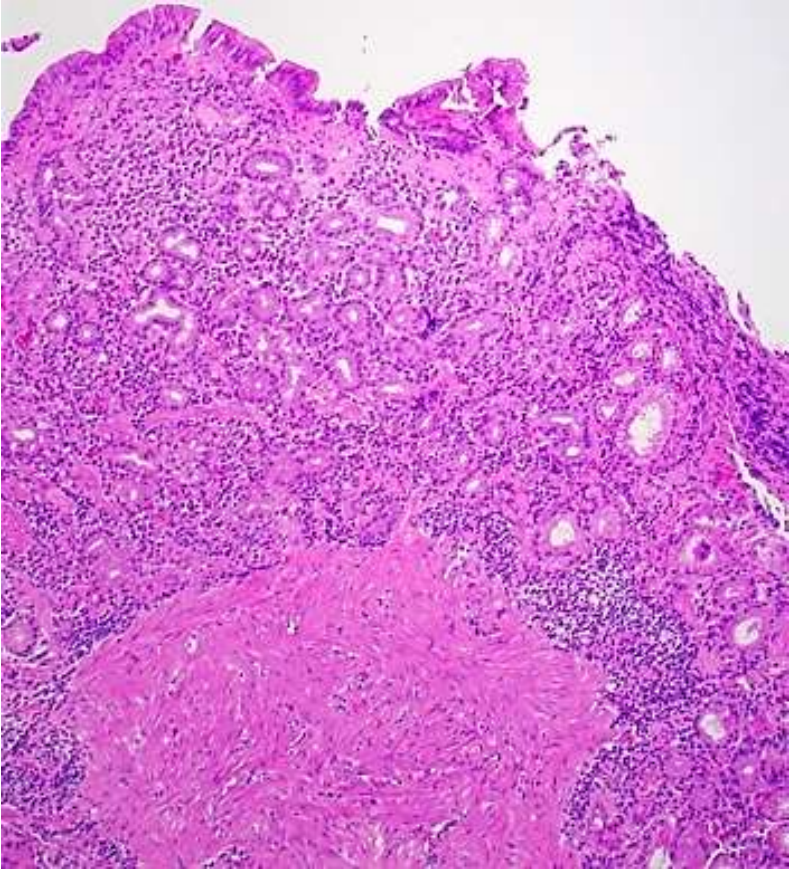
Causes of small intestinal diaphragms

- NSAID
- Crohn's
- Neuromuscular and vascular hamartoma
- CMUSE
- (any other cause of chronic ulceration e.g. vasculitis, ischaemia)

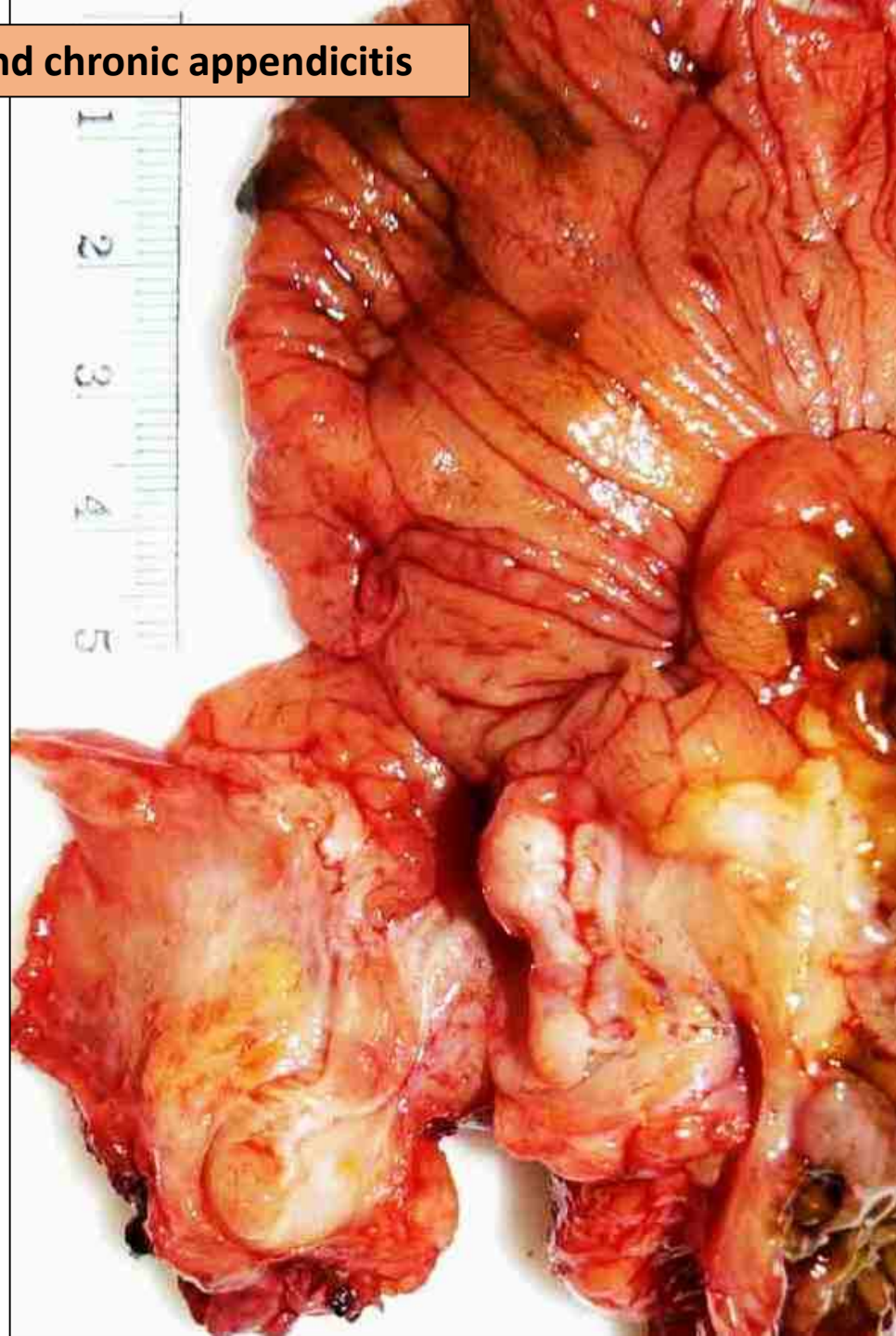
Collagenous sprue in coeliac disease



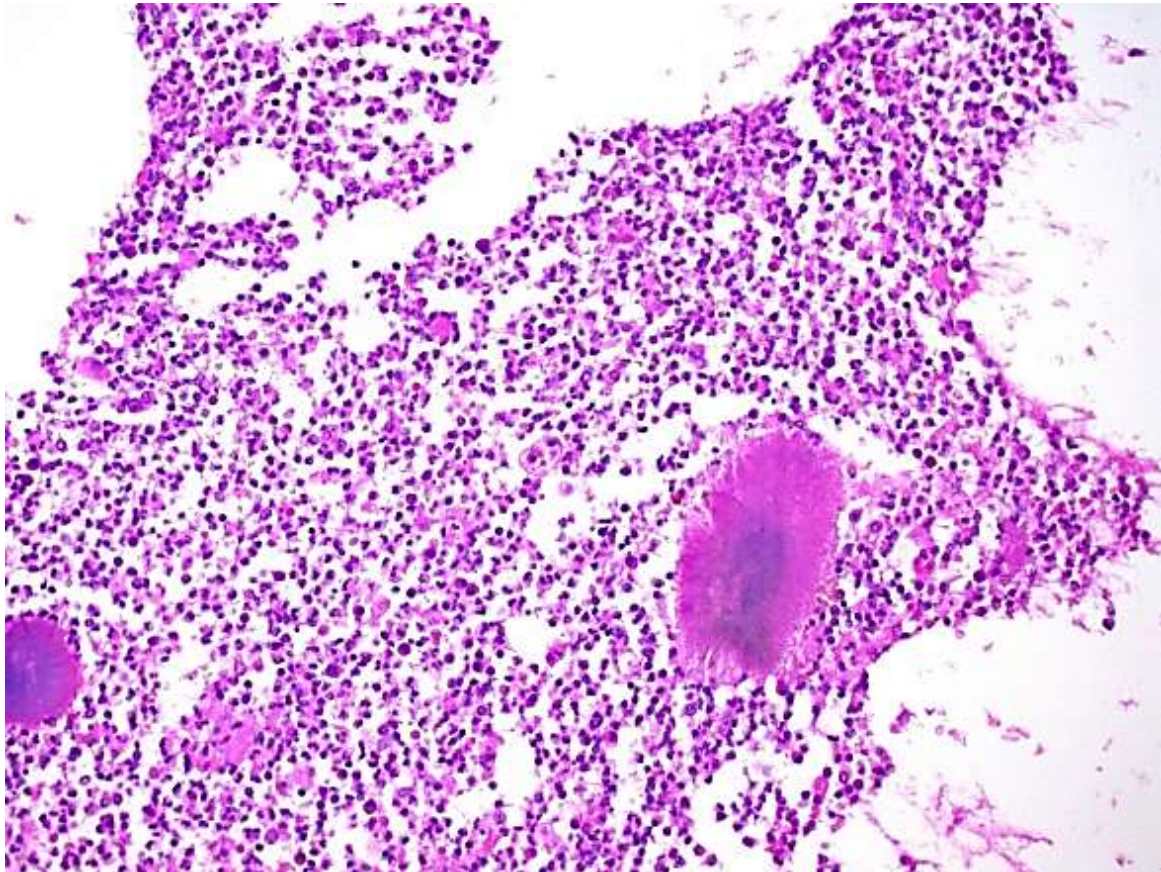
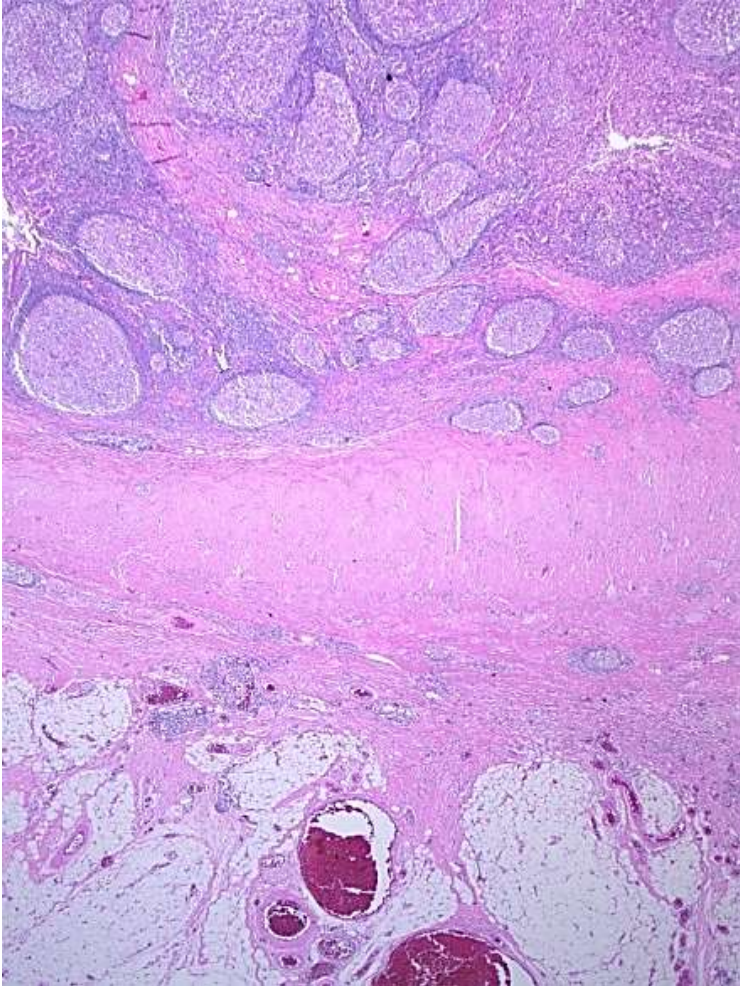
Autoimmune pattern with collagenous gastritis



Actinomycetes and chronic appendicitis

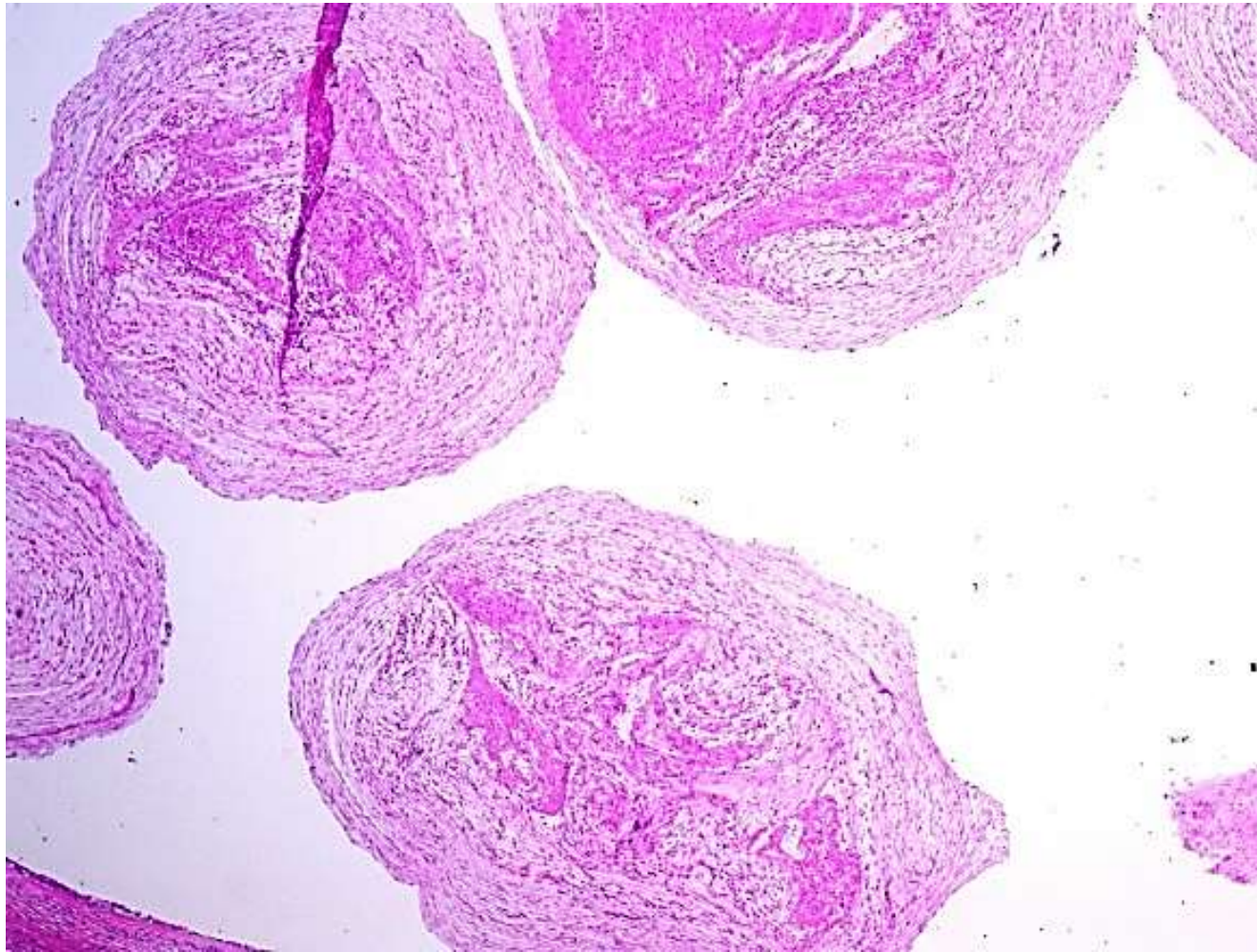


Actinomycete related chronic appendicitis





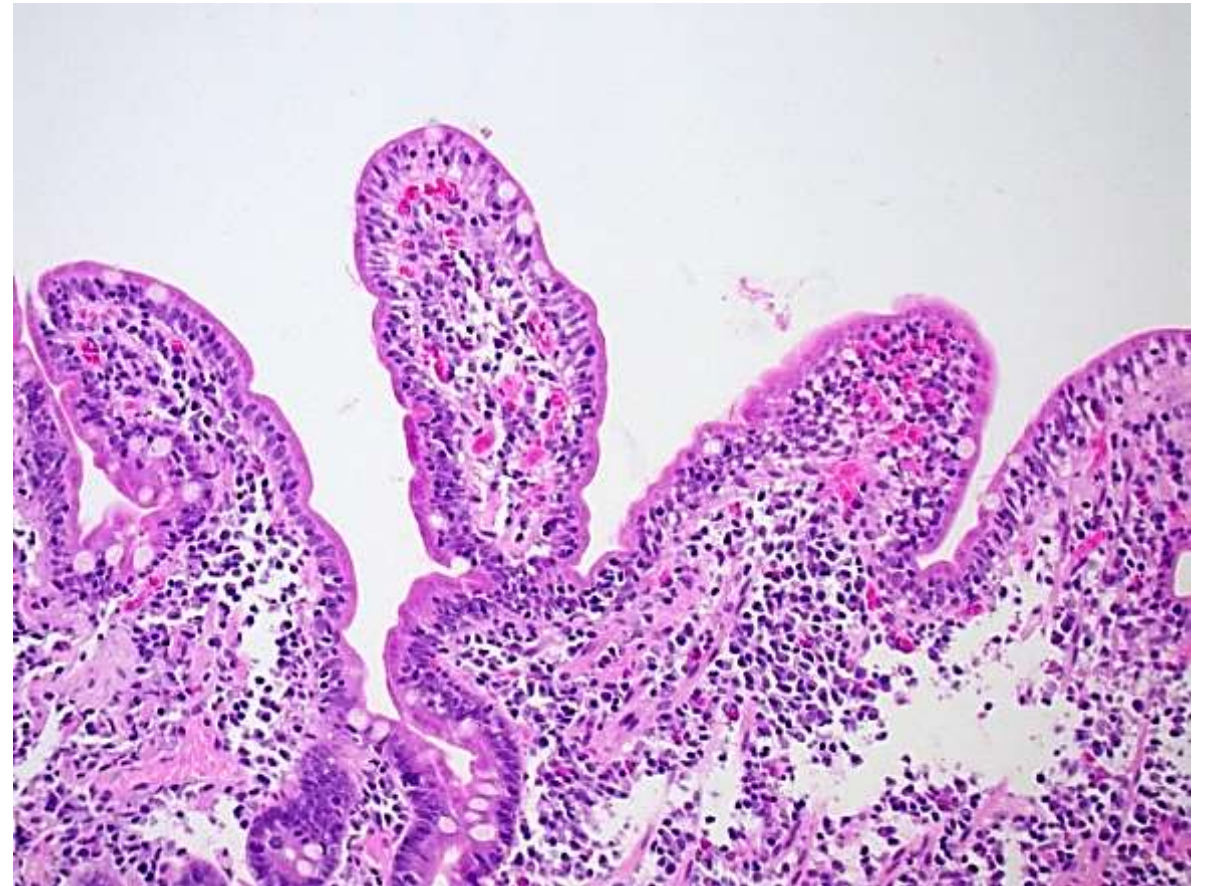
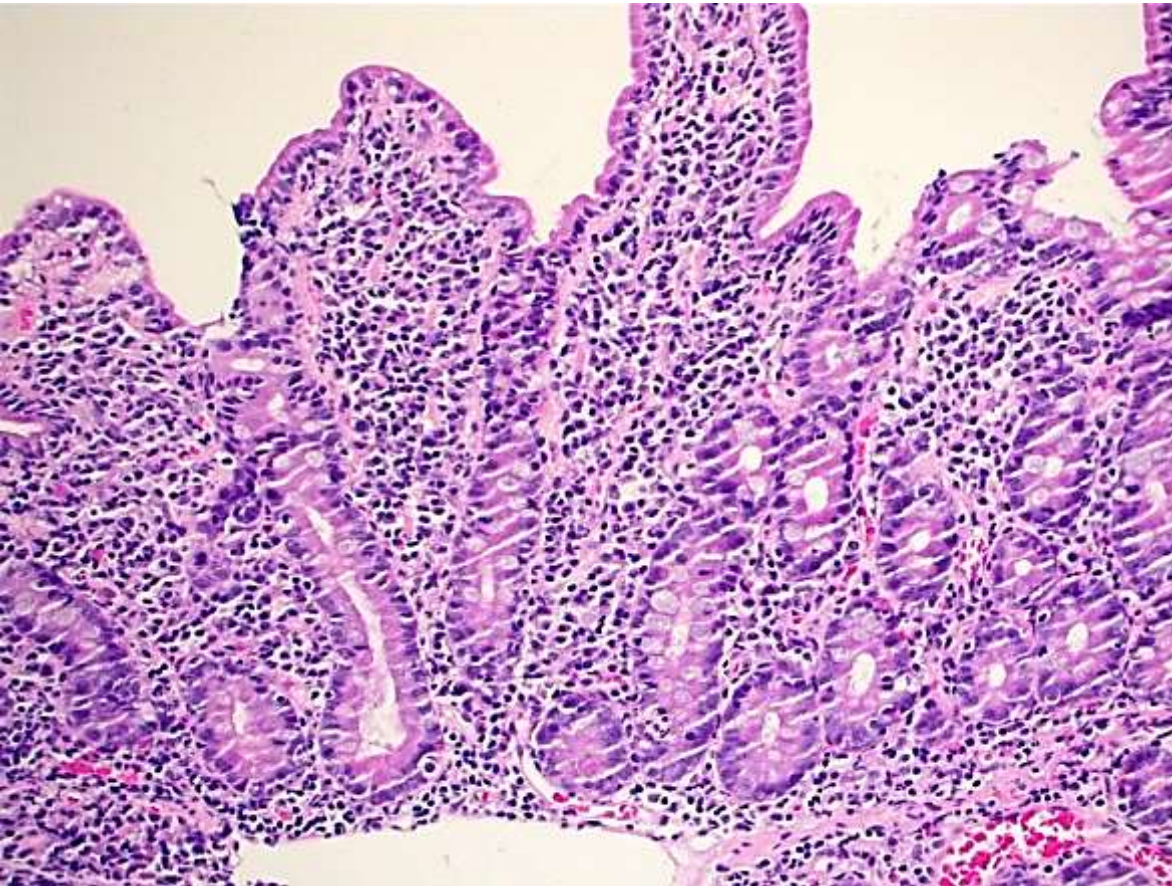
Myxoglobulosis of appendix



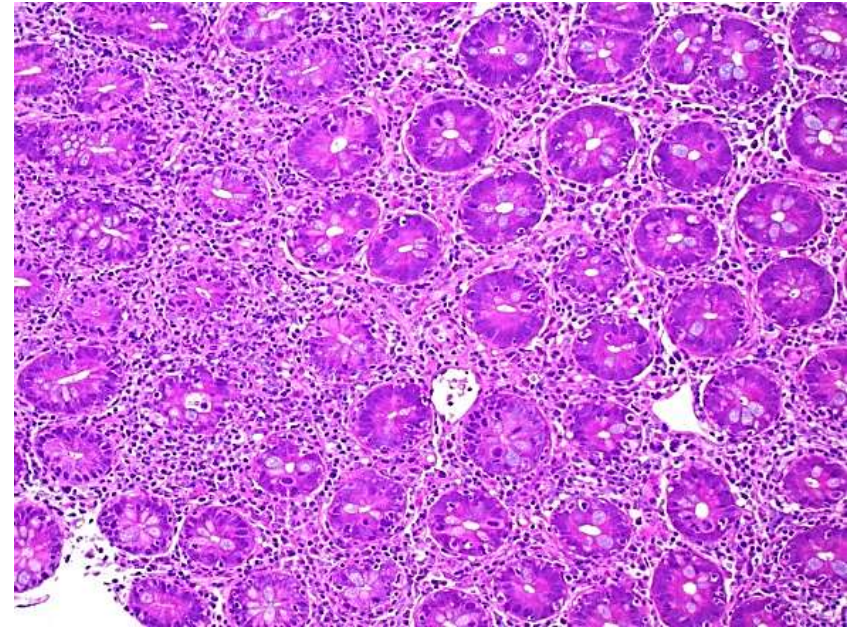
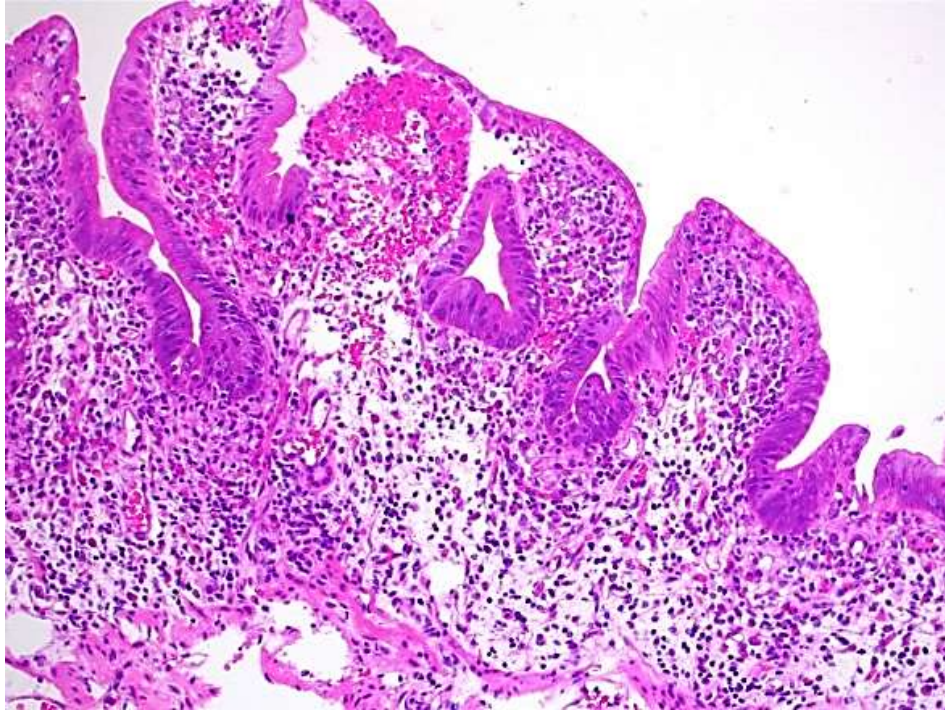
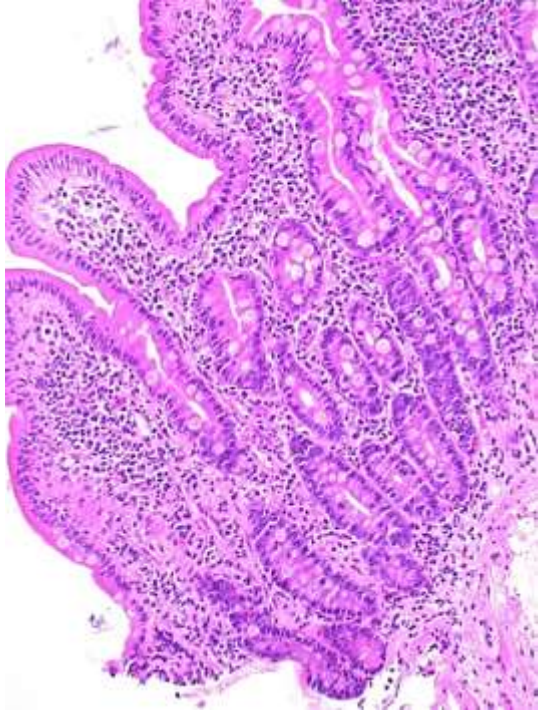
Villous blunting and intraepithelial lymphocytosis

- Coeliac disease
- Non gluten food hypersensitivity
 - cows milk, soy products, fish, rice and chicken
- Infection
 - viral enteritis, tropical sprue, parasites
- Autoimmune enteropathy
- Immunodeficiency disorders
 - IgA deficiency, CVID
- Medications
 - Sartan family (A2R antagonists)
- Crohn's disease
- Idiopathic (often self limited)

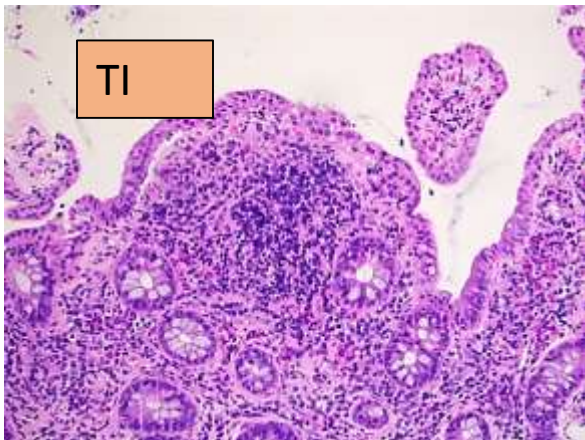
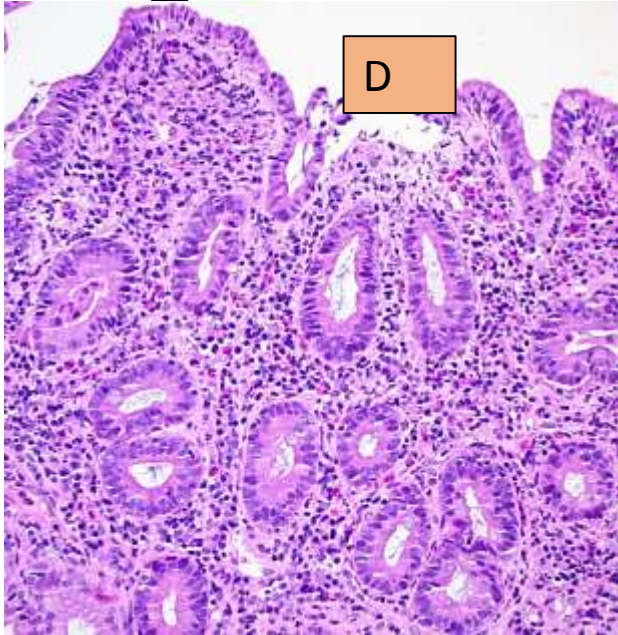
Infective (viral) enteritis



Autoimmune enteropathy patterns – 3 cases



Sartan family – angiotensin 2 receptor agonists



Sartan enteropathy pathogenesis – 2015

AP&T Alimentary Pharmacology and Therapeutics

Immunopathogenesis of olmesartan-associated enteropathy

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SUMMARY

Background
Olmesartan-associated enteropathy (OAE) is characterised by diarrhoea, nausea, vomiting, abdominal pain, weight loss and severe sprue-like enteropathy, all of which are resolved after discontinuation of olmesartan medoximil.

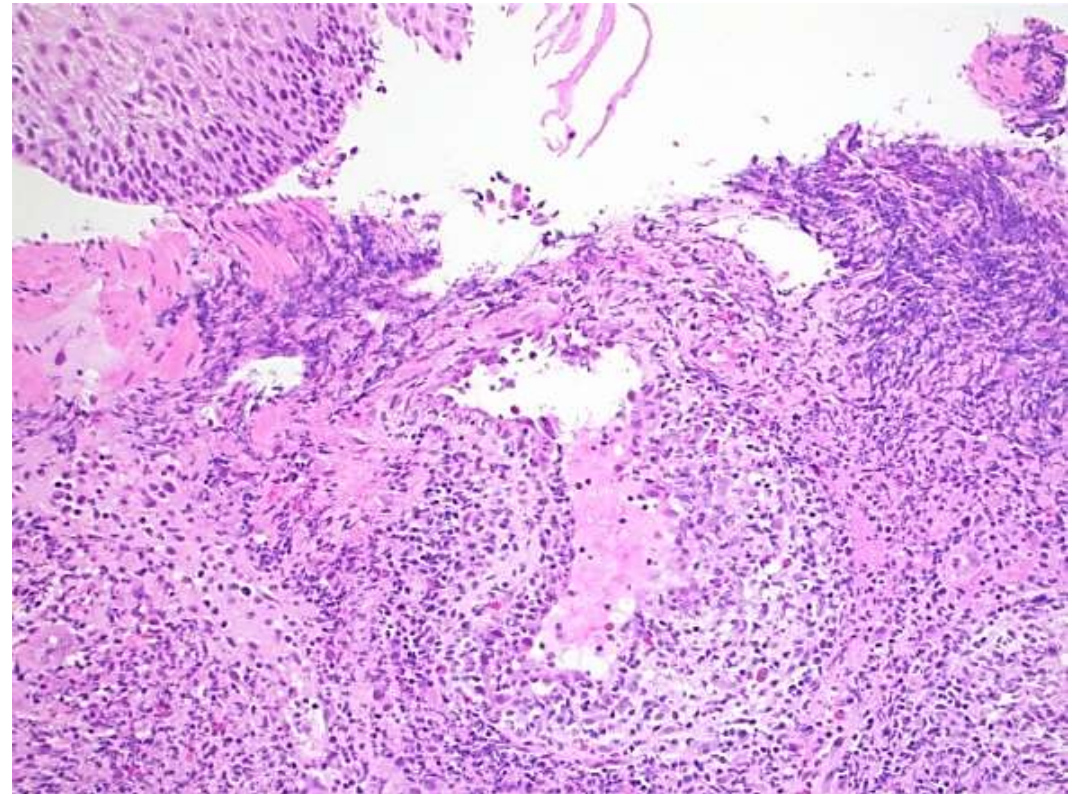
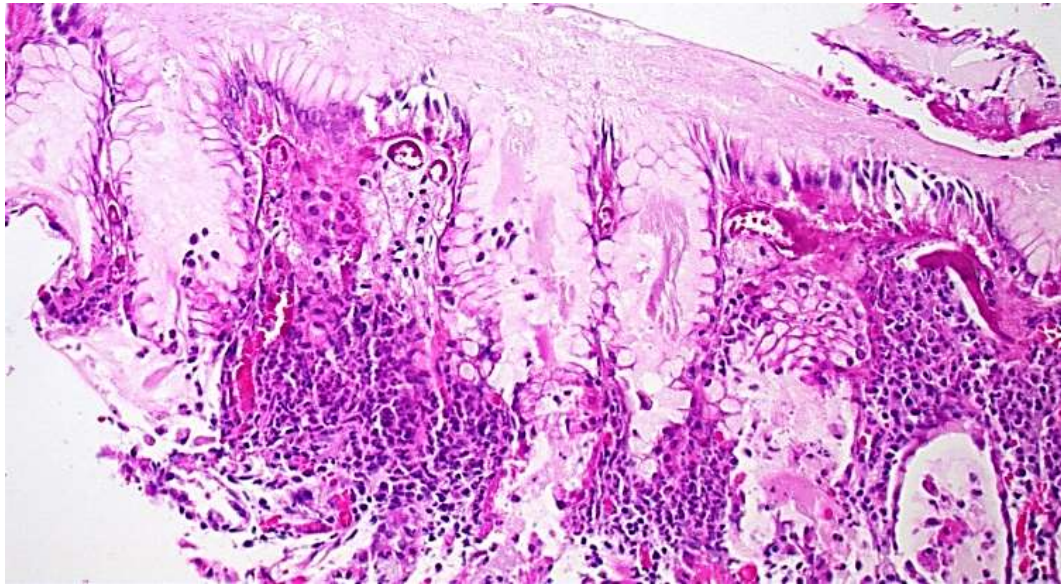
Aim
To determine the mechanistic similarities of OAE with coeliac sprue.

Methods
Duodenal biopsies were extracted from OAE patients before ($n = 11$) or after ($n = 17$) discontinuation of olmesartan medoximil (on or off olmesartan medoximil). There were seven 'on/off' paired samples. Formalin-fixed biopsies were stained for CD8, CD4, FoxP3, IL-15R and psmad 2/3. Caco2 cells (human colonic epithelial line) were treated with olmesartan medoximil and stained for IL-15, IL-15R and ZO-1.

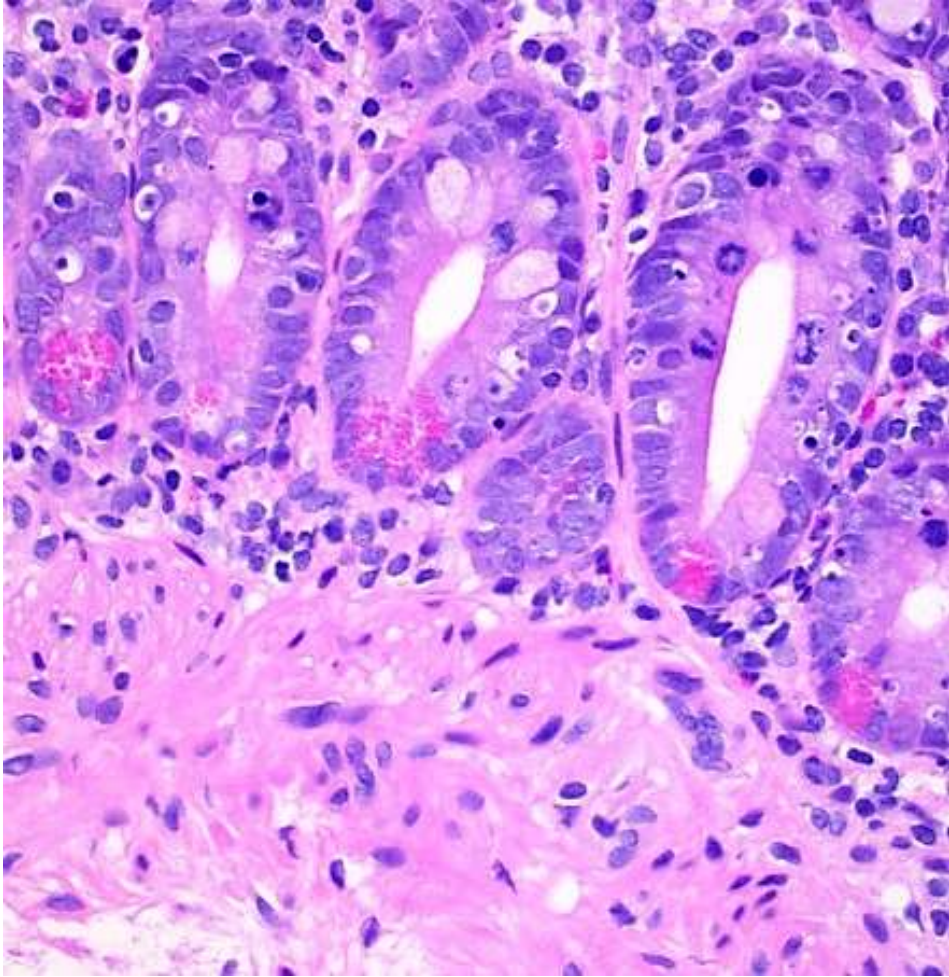
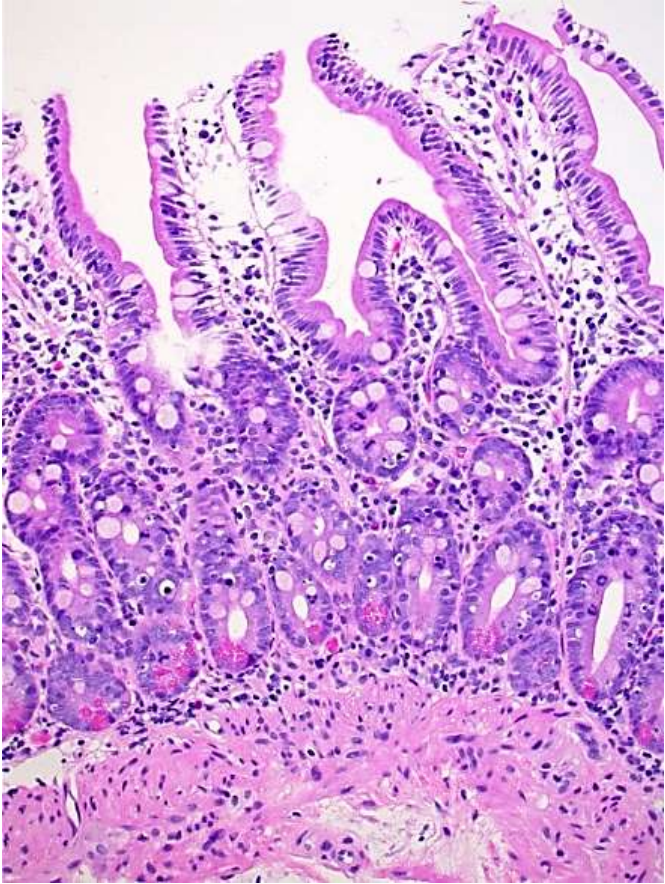
Results
In the 'on olmesartan medoximil' duodenal biopsies, a significant increase in the numbers of CD8+ cells and the number of cells that are FoxP3+ (a regulatory T-cell marker) are present in the duodenum as compared to the duodenal biopsies from patients who discontinued olmesartan medoximil. IL15R expression is also increased with olmesartan medoximil use. Evaluation of the effect of olmesartan medoximil upon Caco-2 cells demonstrated that IL15 expression is increased in response to olmesartan medoximil treatment. Further, ZO-1, a tight junction protein, is disrupted in olmesartan medoximil-treated Caco-2 cells.

Conclusions
Olmesartan-associated enteropathy shares many features with coeliac disease, including symptoms and immunopathogenic pathways, such as increased numbers of CD8+ cells and corresponding overexpression of IL15 by epithelial cells. Taken together, the treatment of epithelial cells with olmesartan medoximil induces a response by intestinal epithelial cells that is similar to the innate effects of gluten upon the epithelium of coeliac patients.

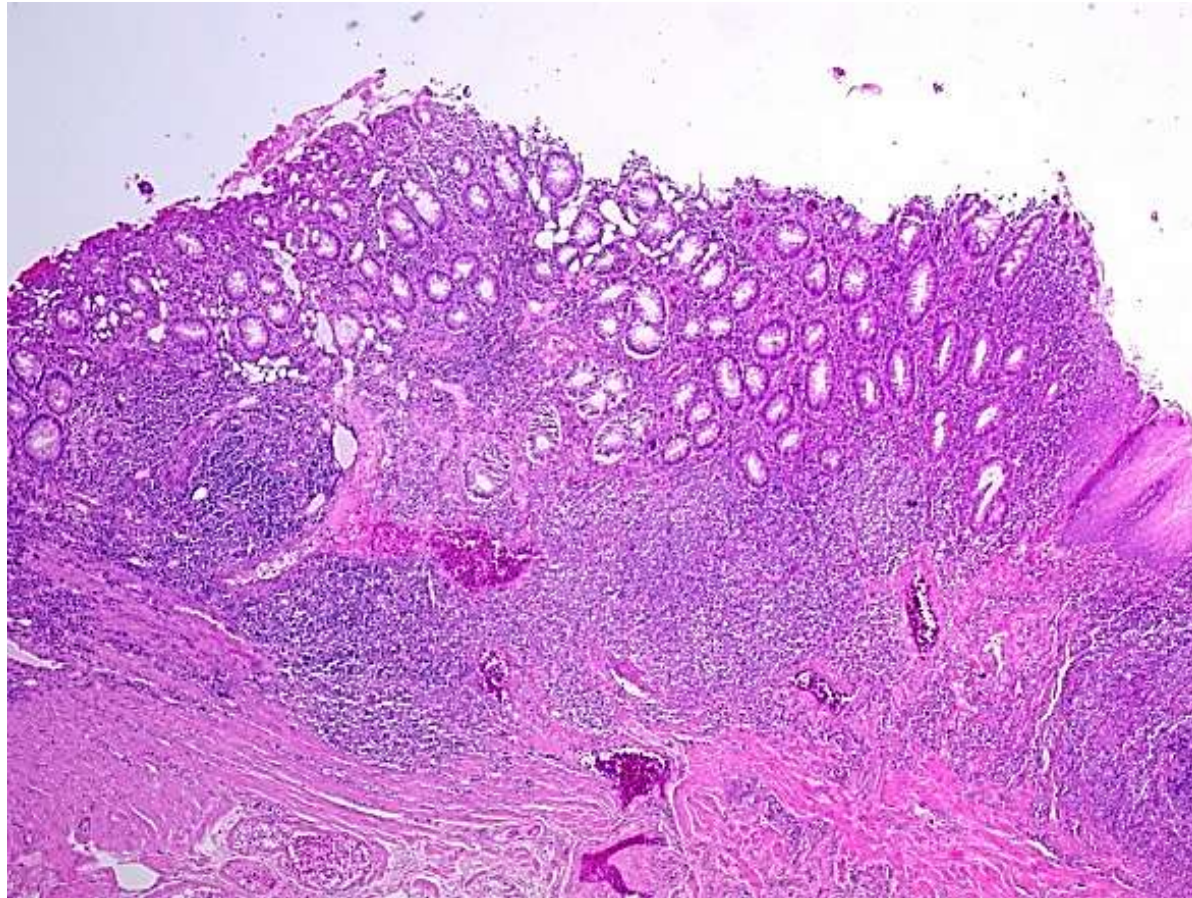
Doxycycline injury stomach and oesophagus



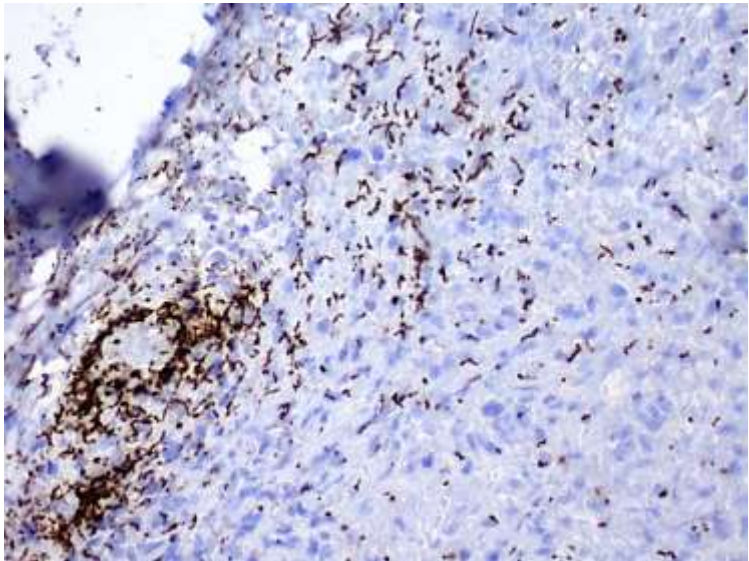
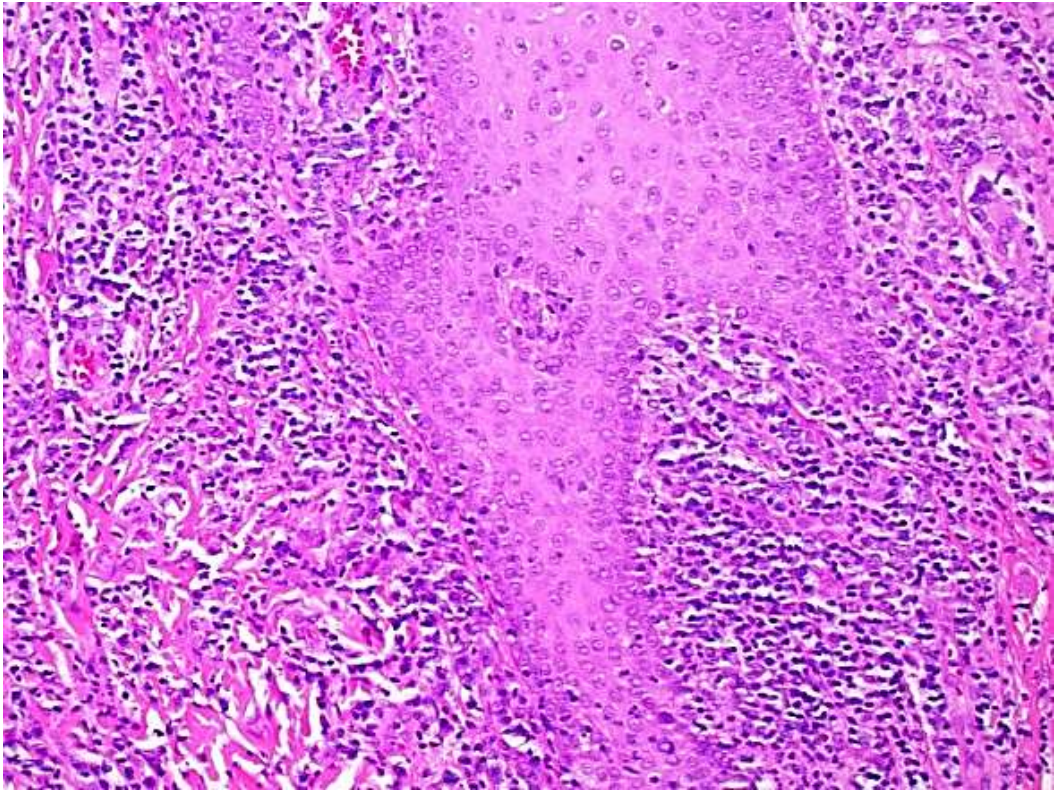
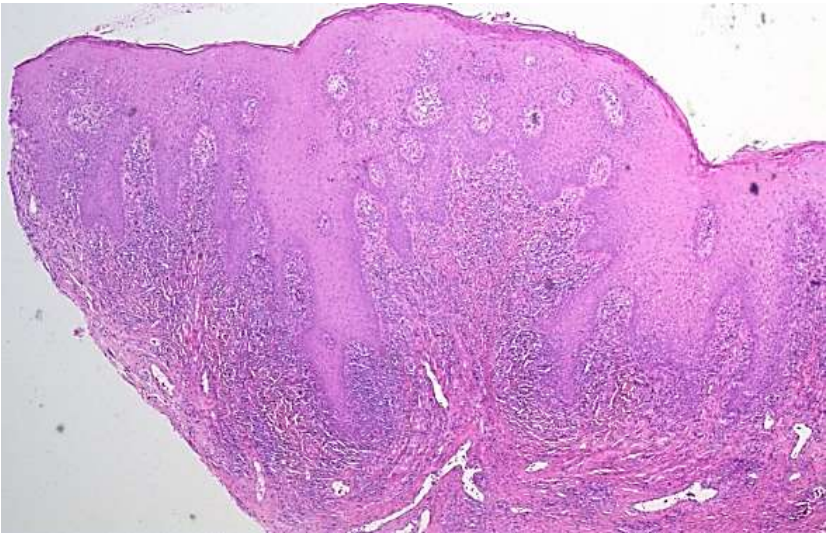
Taxane chemotherapy effect



STI proctitis - chlamydia



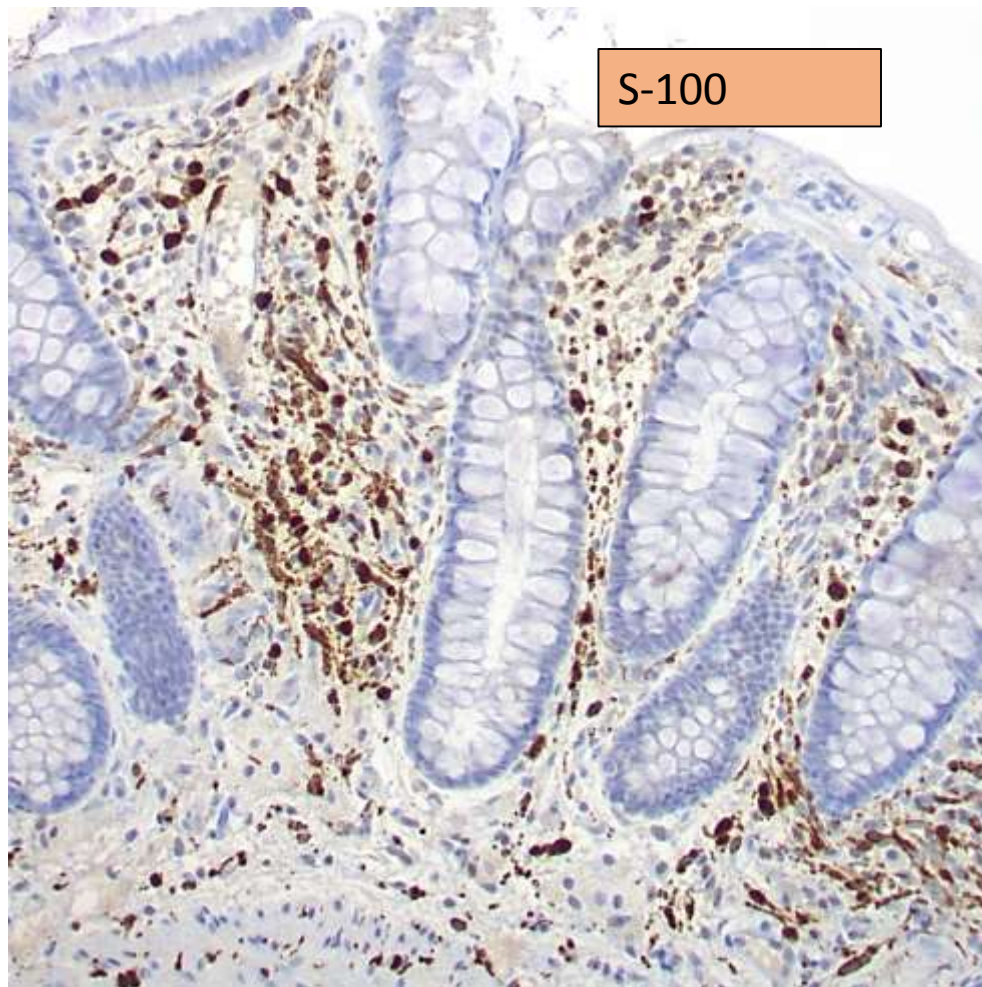
Anal syphilis



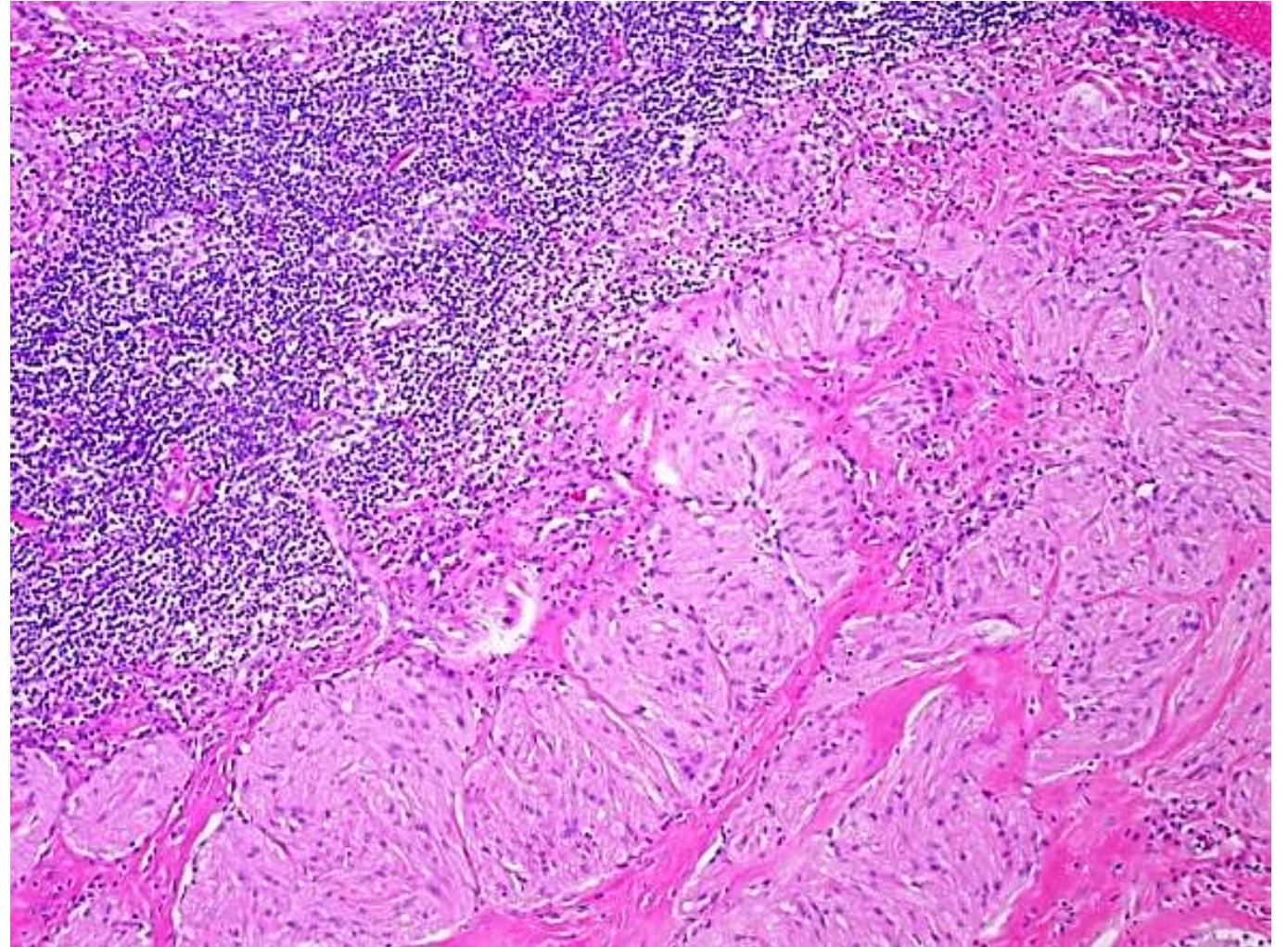
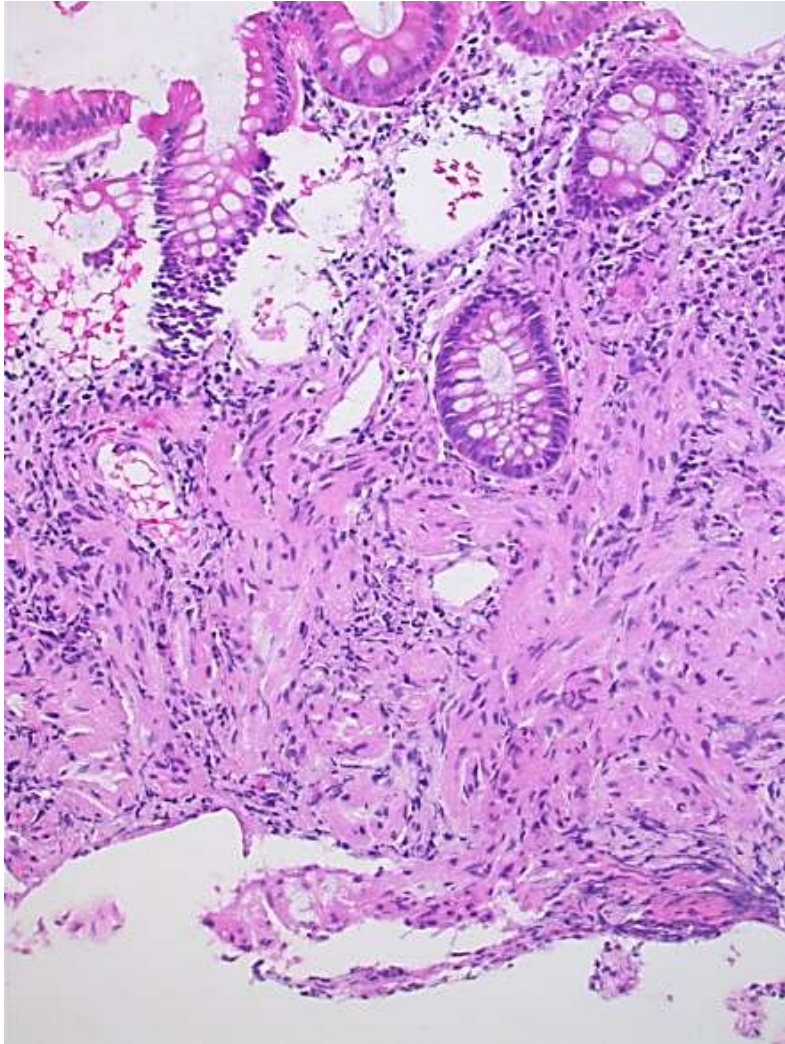
S-100 + spindle cell proliferations in GIT mucosa

- Schwann cell hamartoma
- Neuroma – neoplastic, traumatic
- Ganglioneuroma
- Granular cell tumour
- Neurofibroma
- Schwannoma
- Gangliocytic paraganglioma
- Metastatic melanoma
- Pacinian corpuscle like bodies
- (GIST)

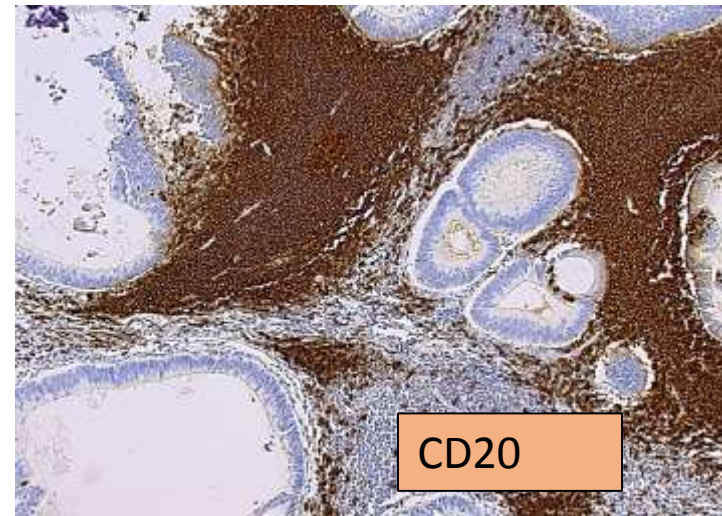
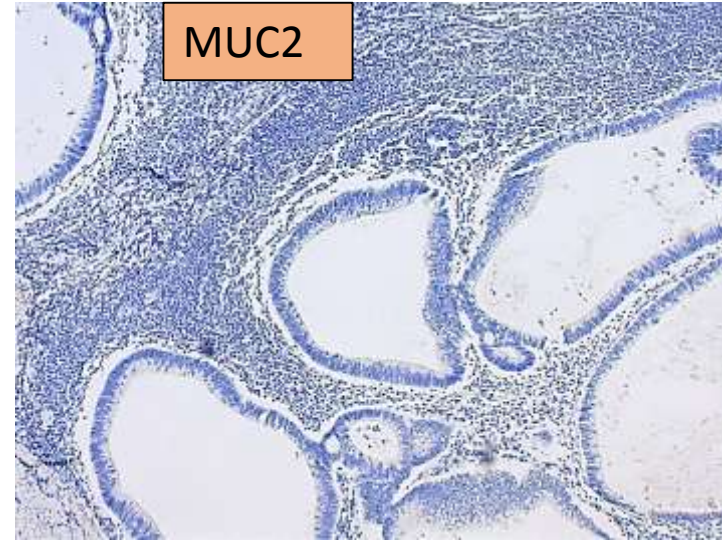
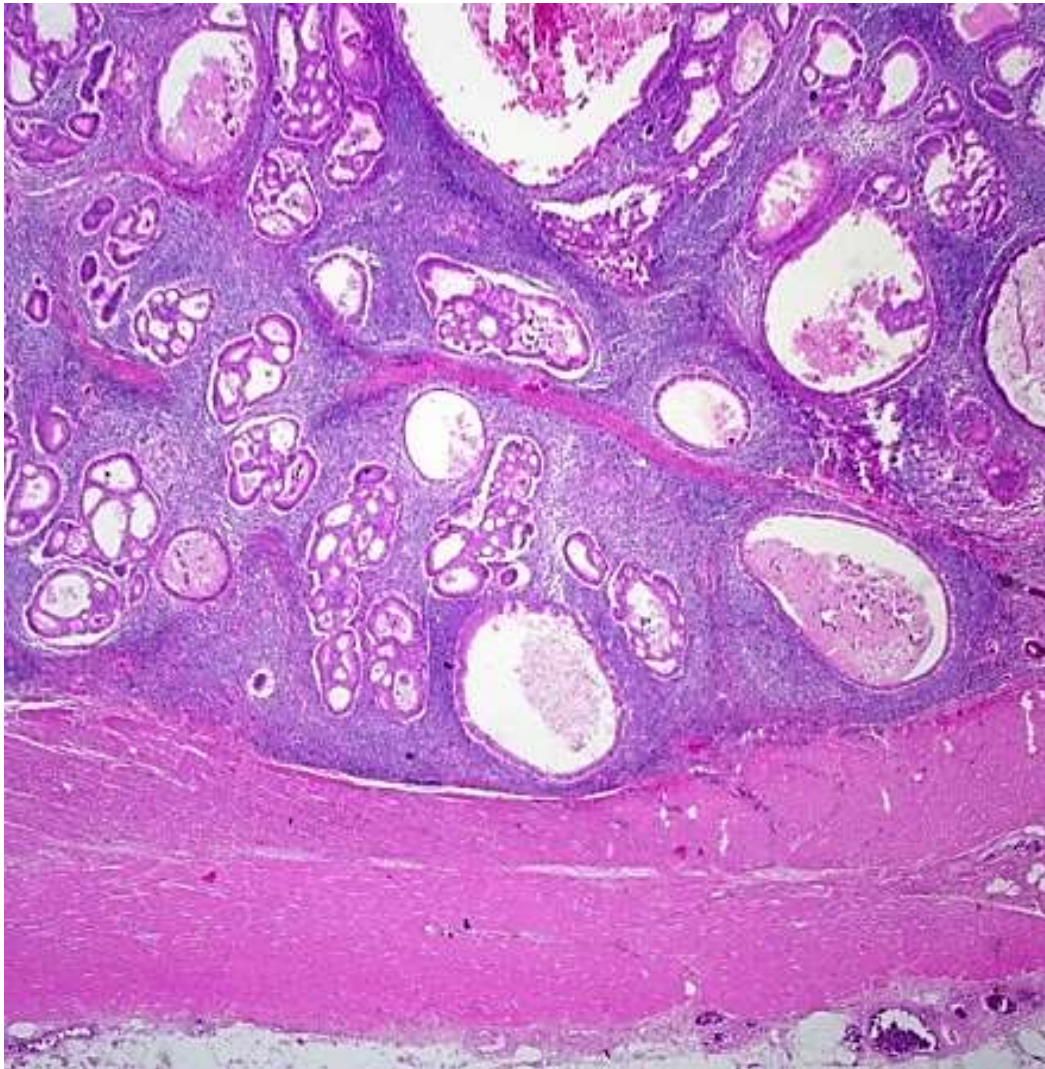
Schwann cell hamartoma



Granular cell tumour



Dome type colorectal carcinoma



Gastric glomus tumour

