

Pathology of Inflammatory Bowel Disease
From Presentation to Surveillance

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Arizona Society of Pathologists, Tucson, AZ

Disclosure

Nothing to disclose



Practice-based presentation

Outline

Confident diagnosis of IBD at the time of presentation

Gross and microscopic features of UC and Crohn's

Classifying IBD (indeterminate and overlapping)

Surveillance in IBD (inactive, flare, dysplasia, pouch)

Polyps in IBD (inflammatory, DALM, sporadic adenoma)

IBD at Presentation

Initial diagnosis is crucial

IBD is a *clinicopathological* diagnosis
.....and neither purely histological nor purely clinical

Two step process:

IBD > other conditions

If it is IBD – then classify IBD

Use every available information.....

(clinical, endoscopic, imaging,

lab data – ESR, CRP, fecal calprotectin)

Diseases that famously mimic IBD

Recurrent /severe acute infectious colitis

Lymphogranuloma Venereum (LGV) or Chlamydia

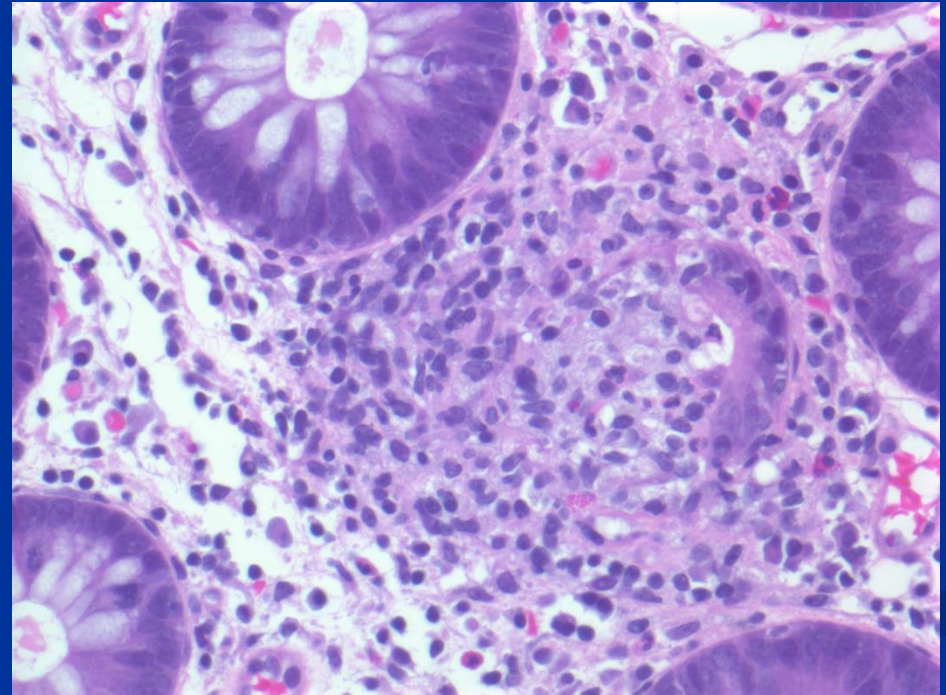
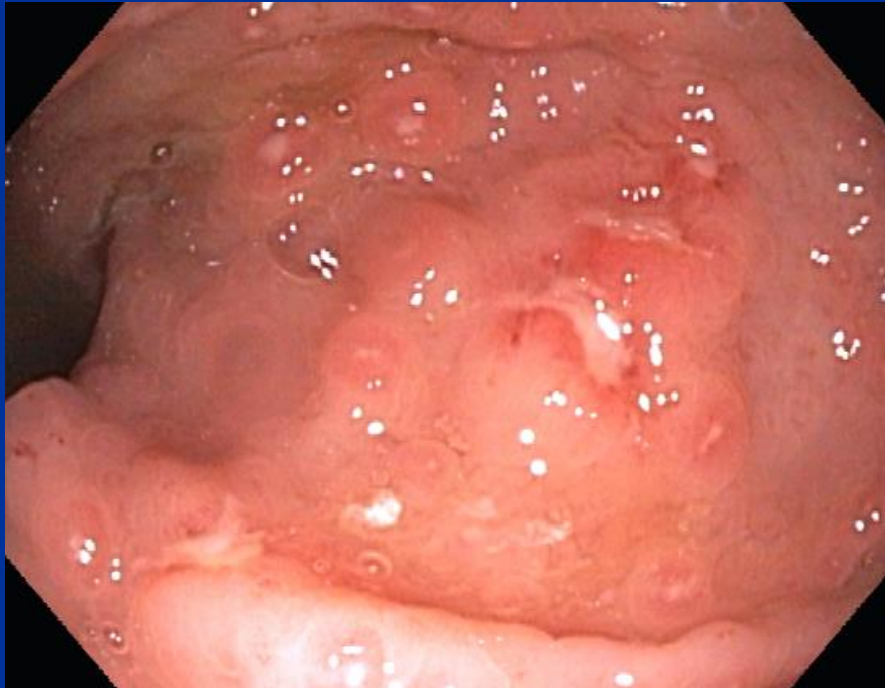
Diversion colitis (inflammation in bypassed colon)

SCAD (Segmental colitis associated with diverticulosis)

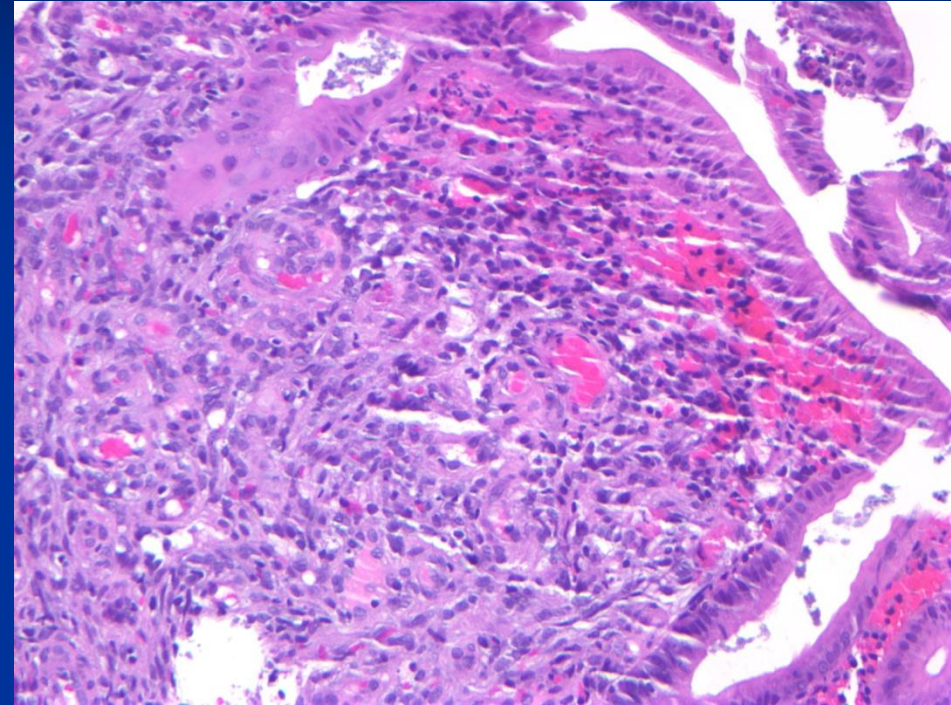
Severe allergic or eosinophilic colitis

Behcet's syndrome (oral/genital ulcers, ocular, HLA B51)

30 M presents with 3 weeks of rectal bleeding
Sigmoidoscopy and biopsies

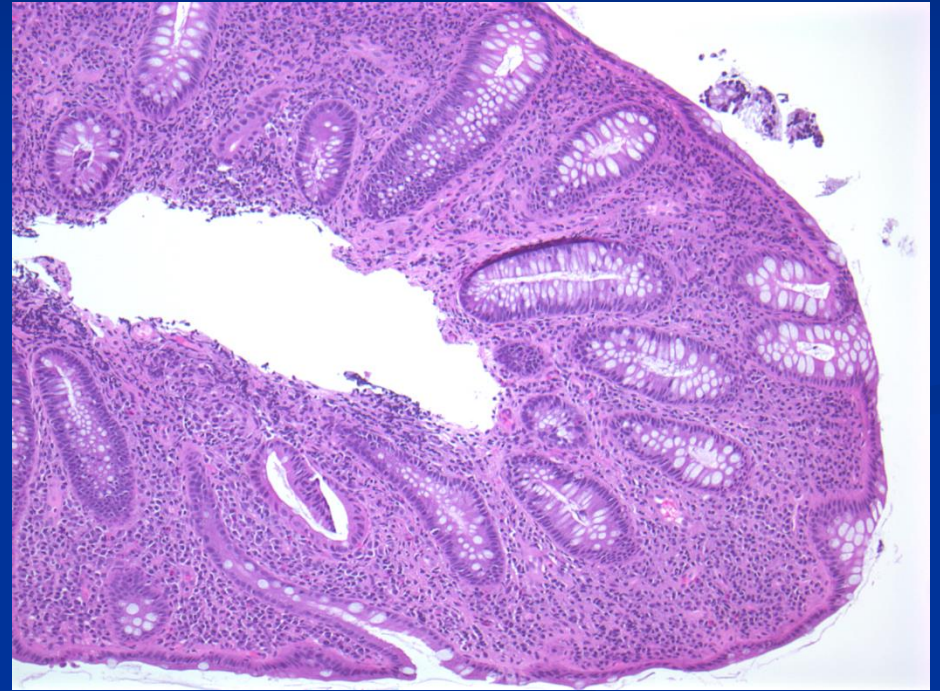
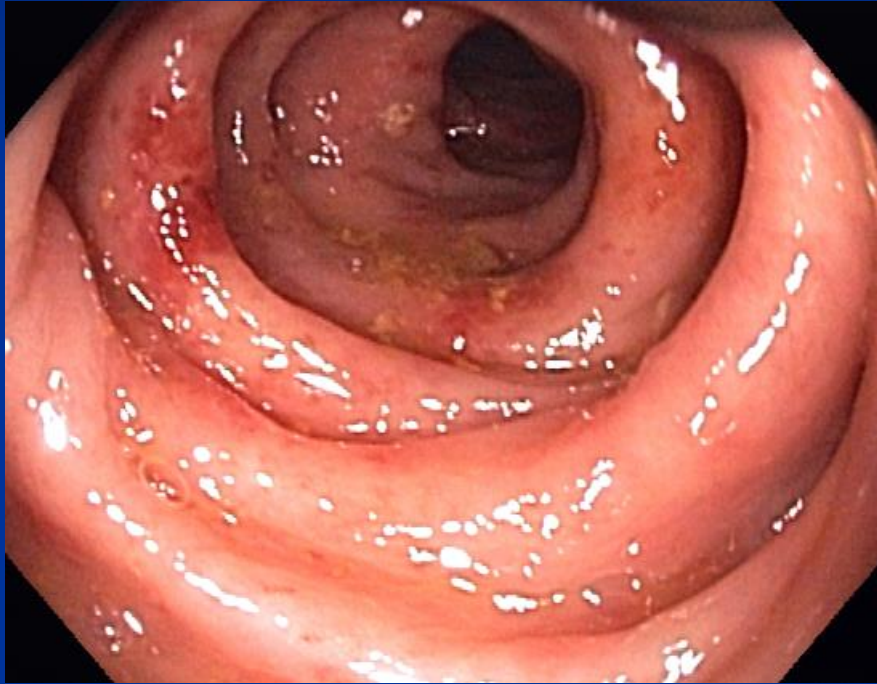


One week later full colonoscopy showed Kaposi in cecum
Serology was positive for HIV and Chlamydia trachomatis

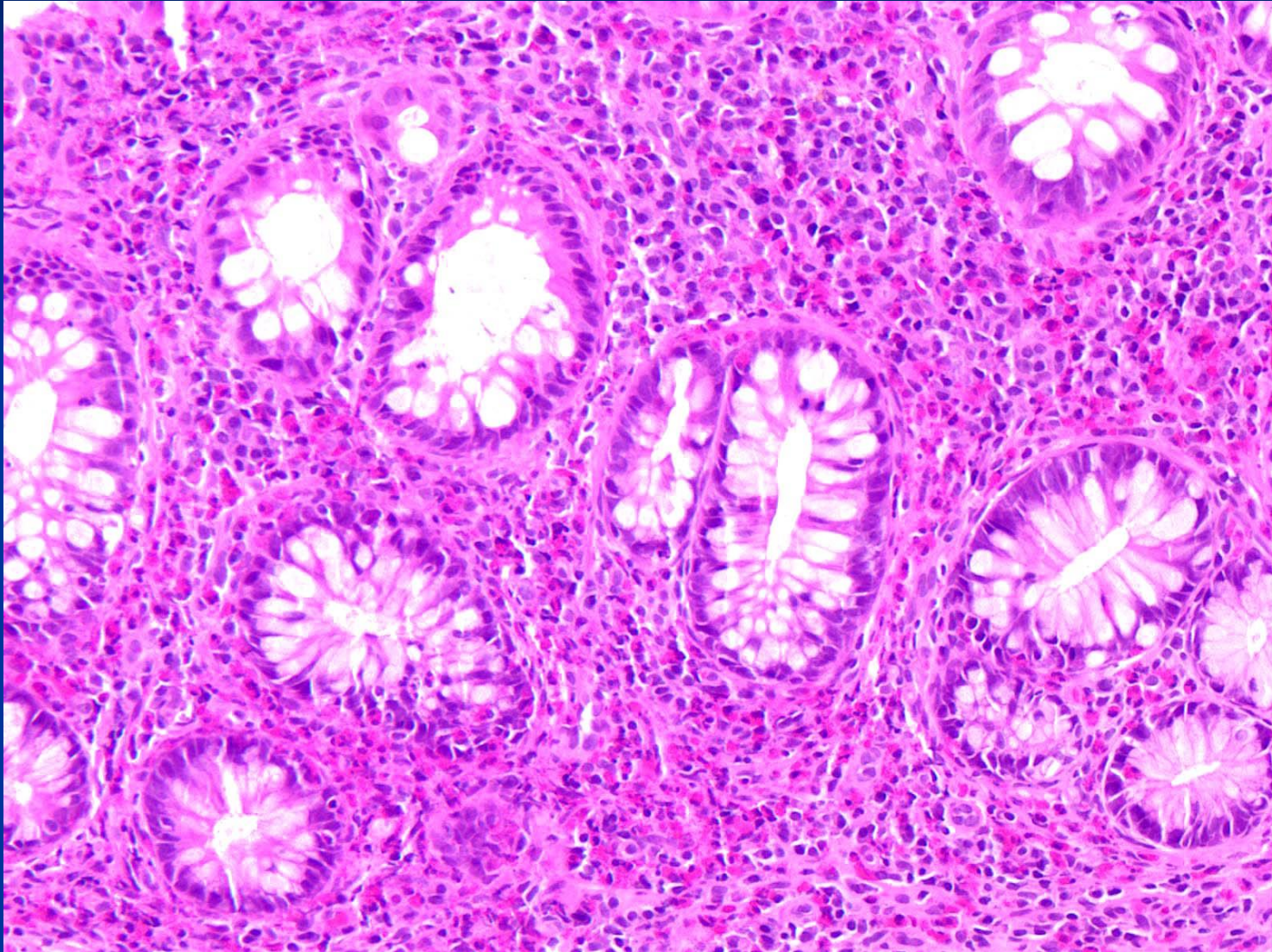


Lymphogranuloma venereum proctosigmoiditis is a mimicker of inflammatory bowel disease

SCAD (Segmental colitis associated with diverticulosis)



Long standing allergic or eosinophilic colitis mimics IBD



Clinical aspects of IBD at presentation

Chronicity (temporal, not histological)

Characteristic presentations

UC - Bloody diarrhea (acute infectious trigger)

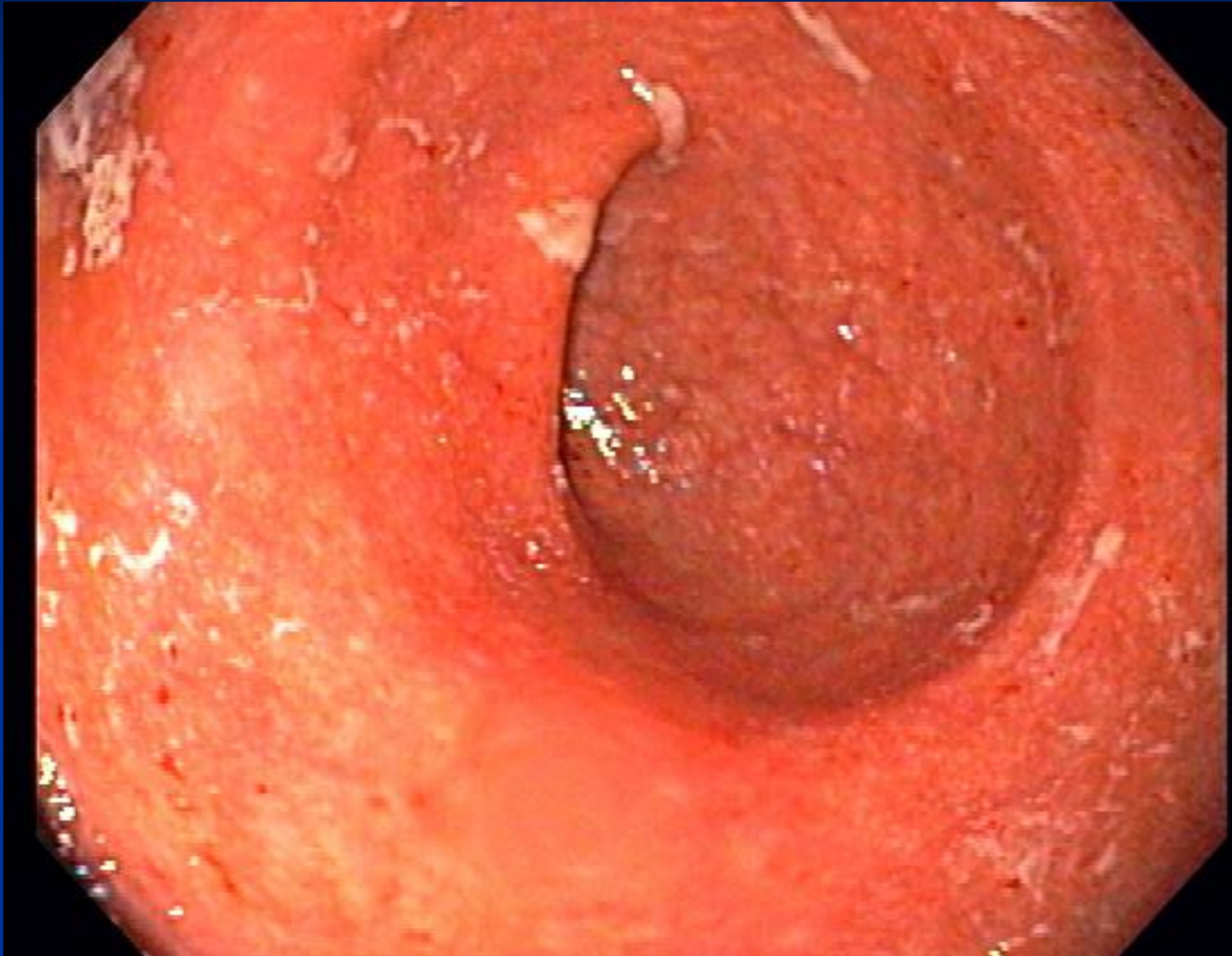
Crohn's (may show atypical presentation)

Perianal disease, fistula, TI thickening

Endoscopy – loss of vascular pattern, friability
aphthous ulcers, cobblestoning

Family history (5-10% patients have FH)

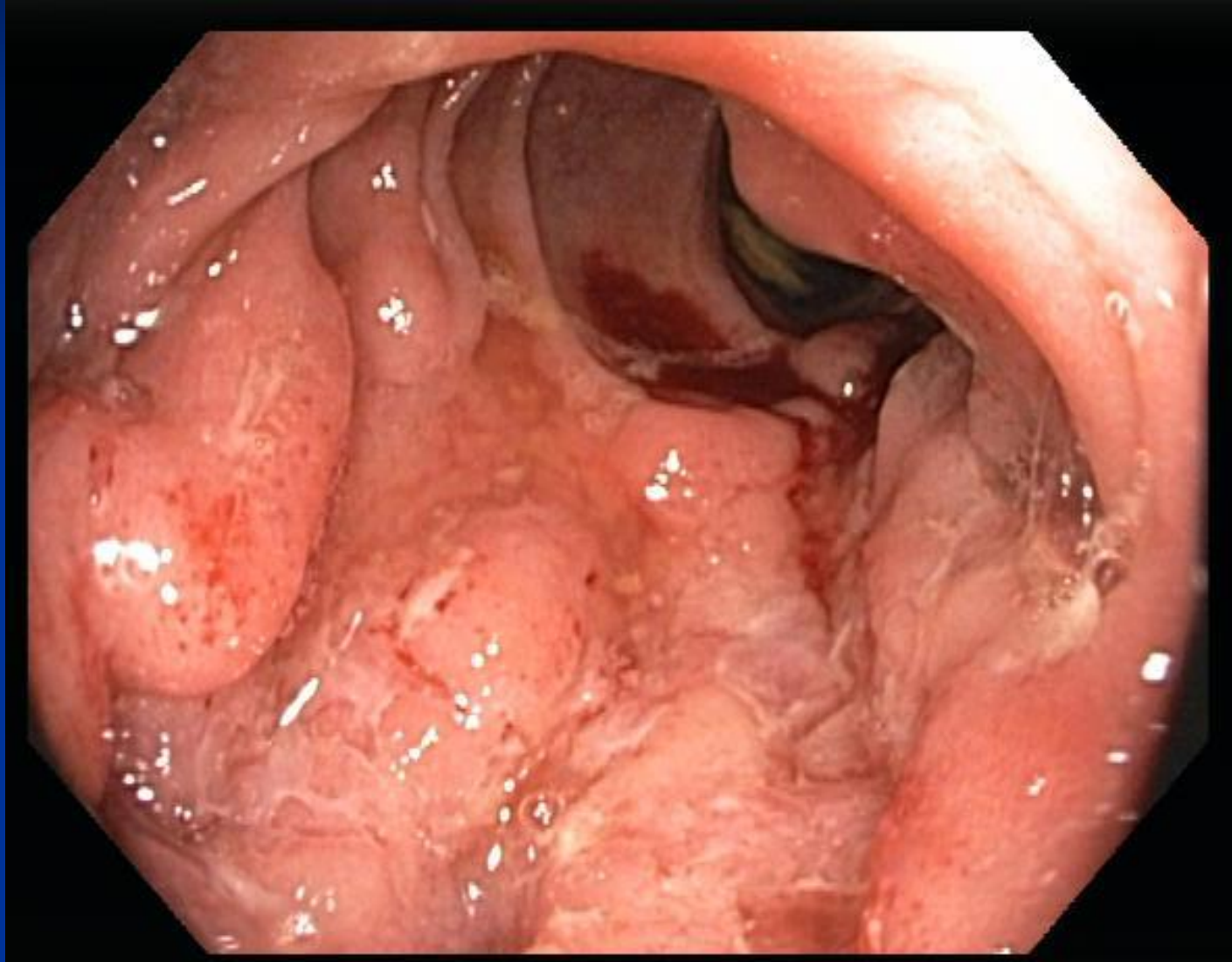
Endoscopic features of UC



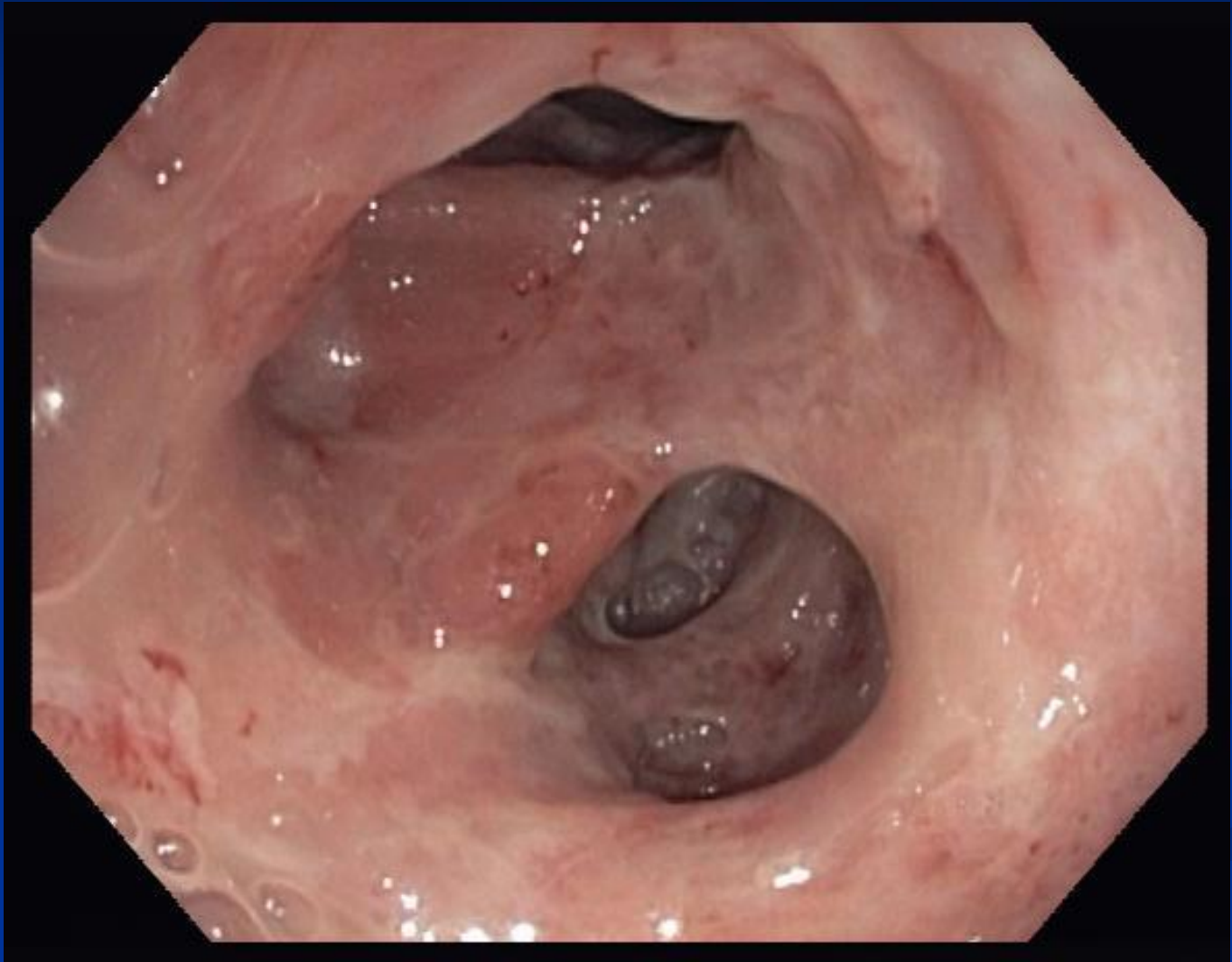
Endoscopic features of Crohn's



Endoscopic features of Crohn's



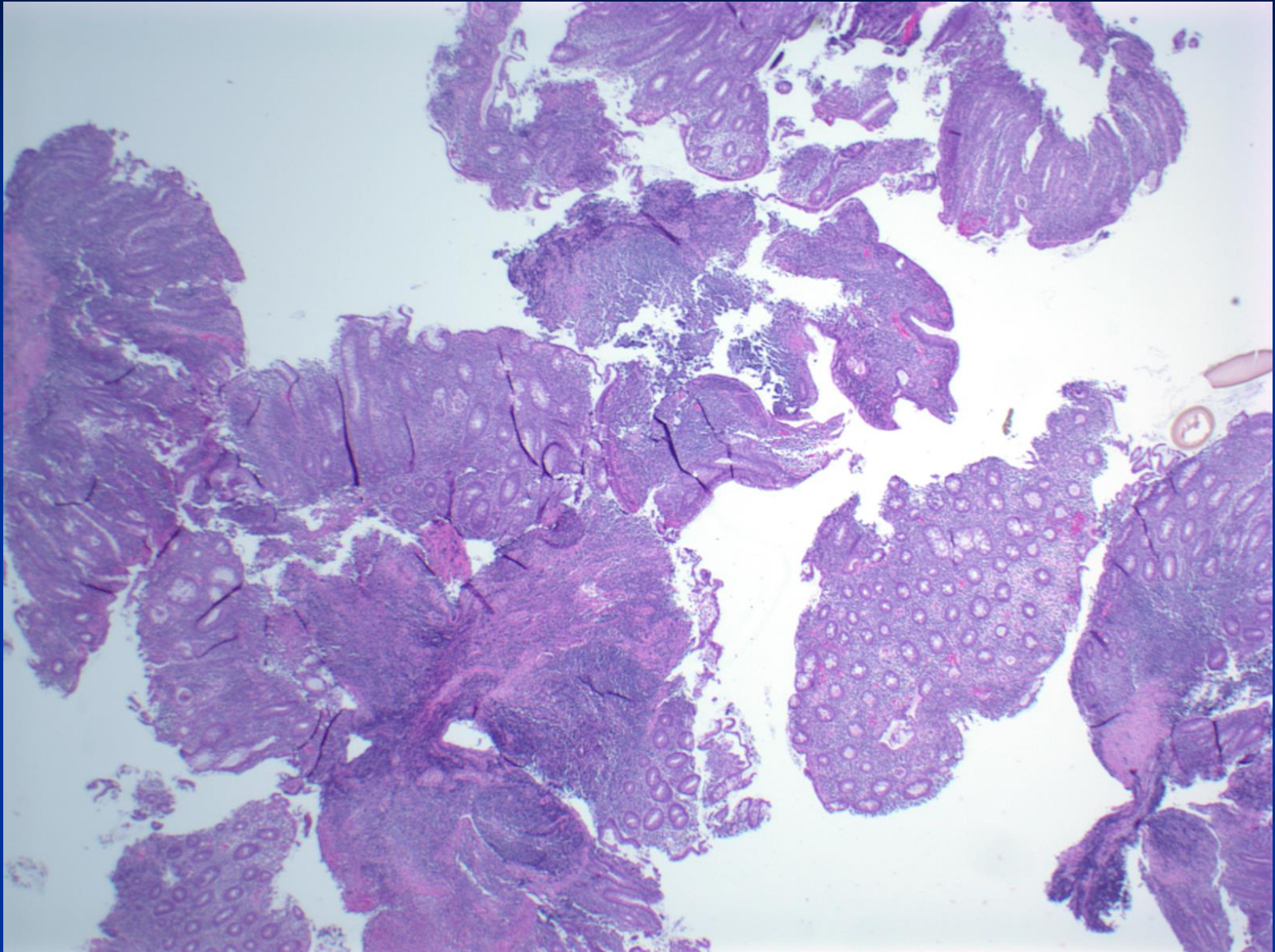
Endoscopic features of Crohn's



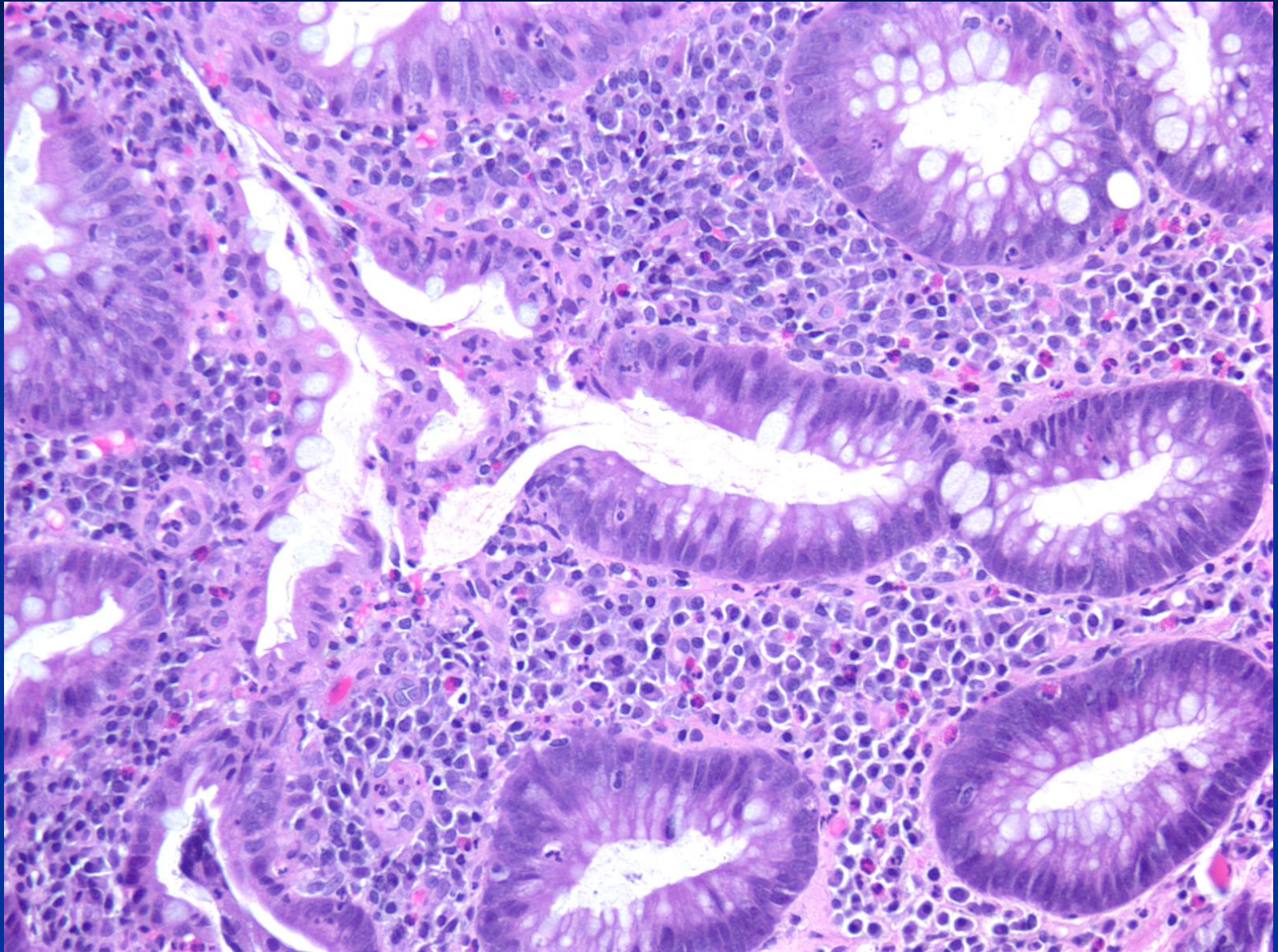
Complex perianal disease in Crohn's



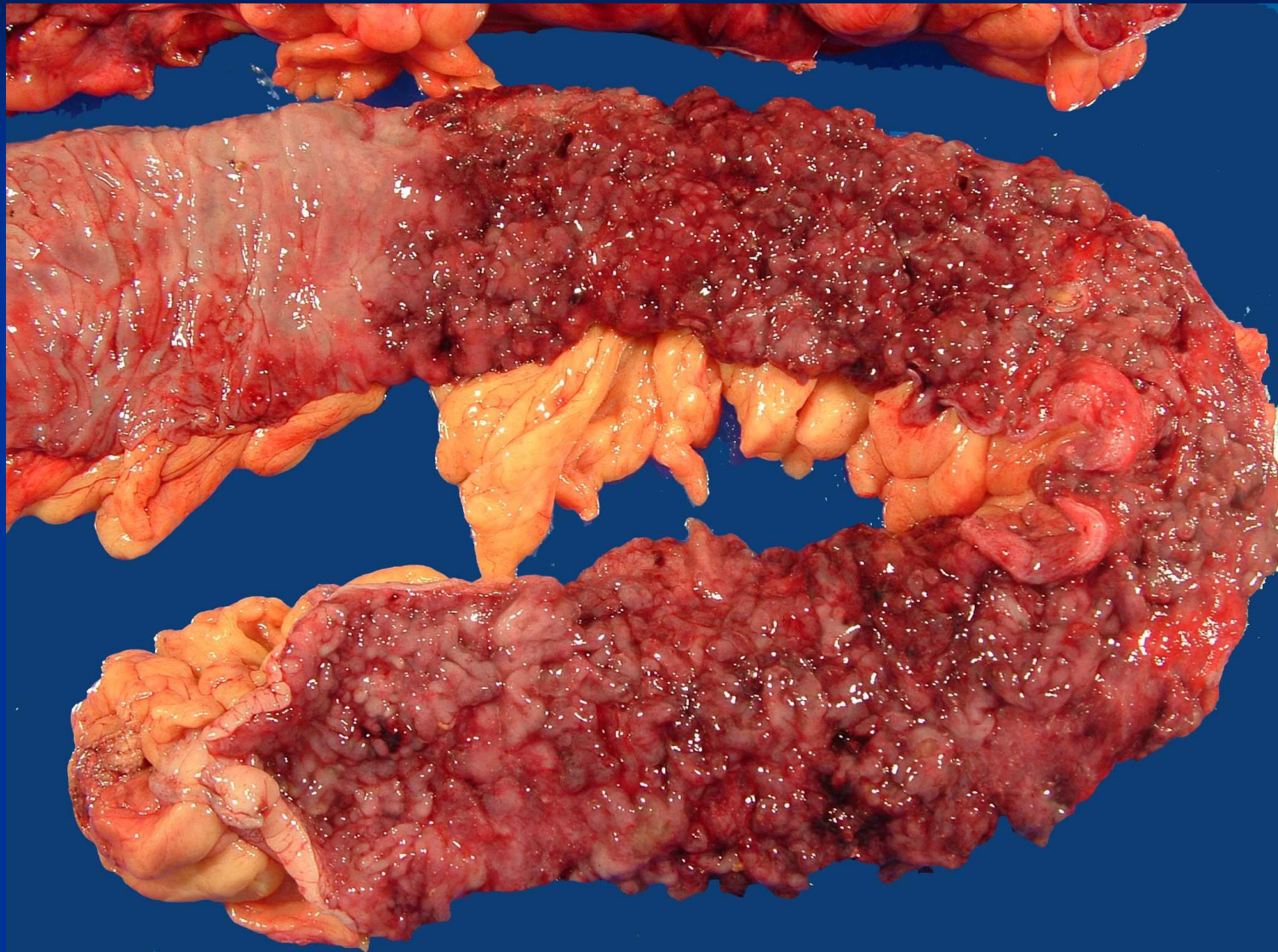
Microscopic features of active UC



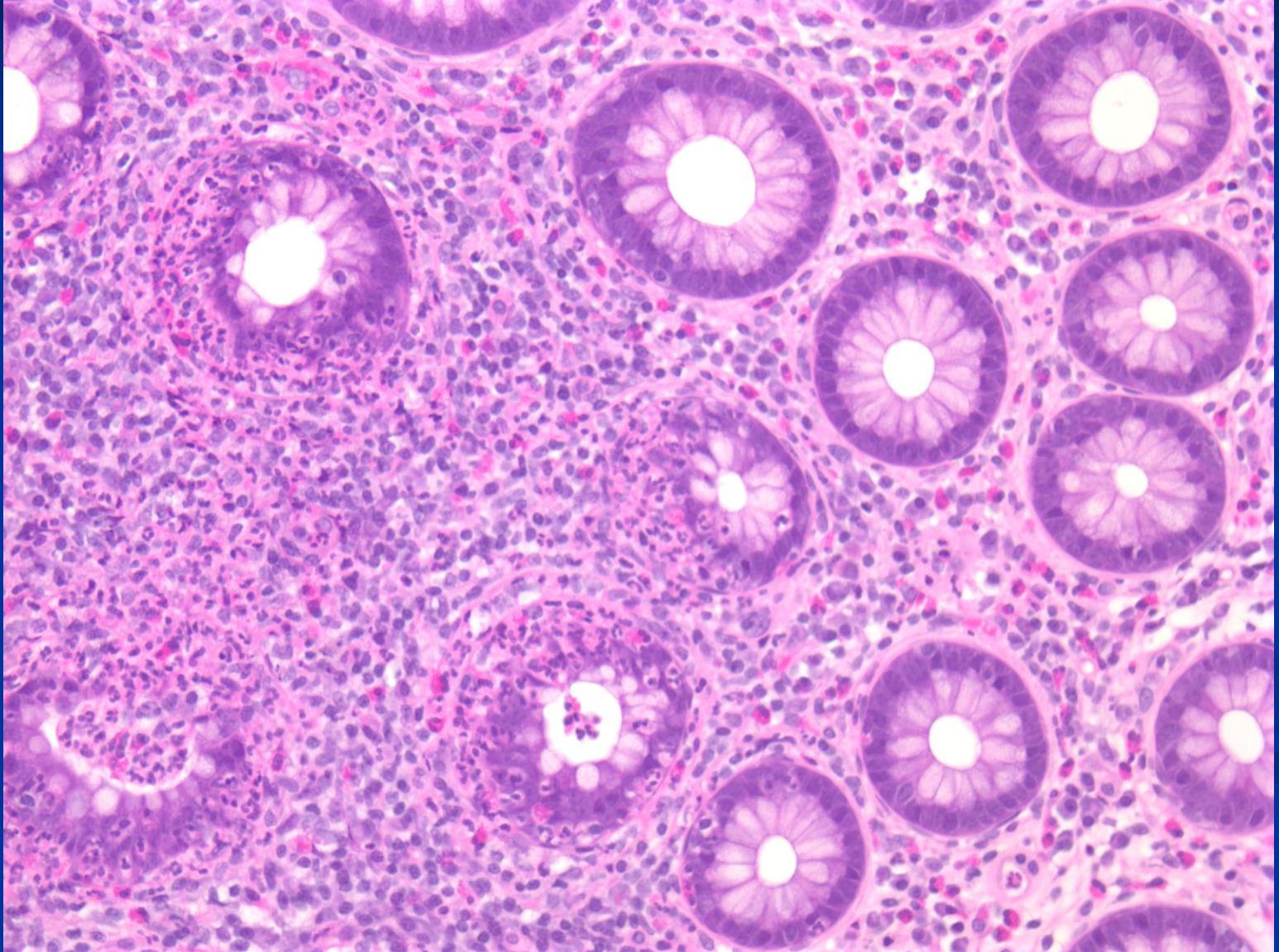
Microscopic features of active UC



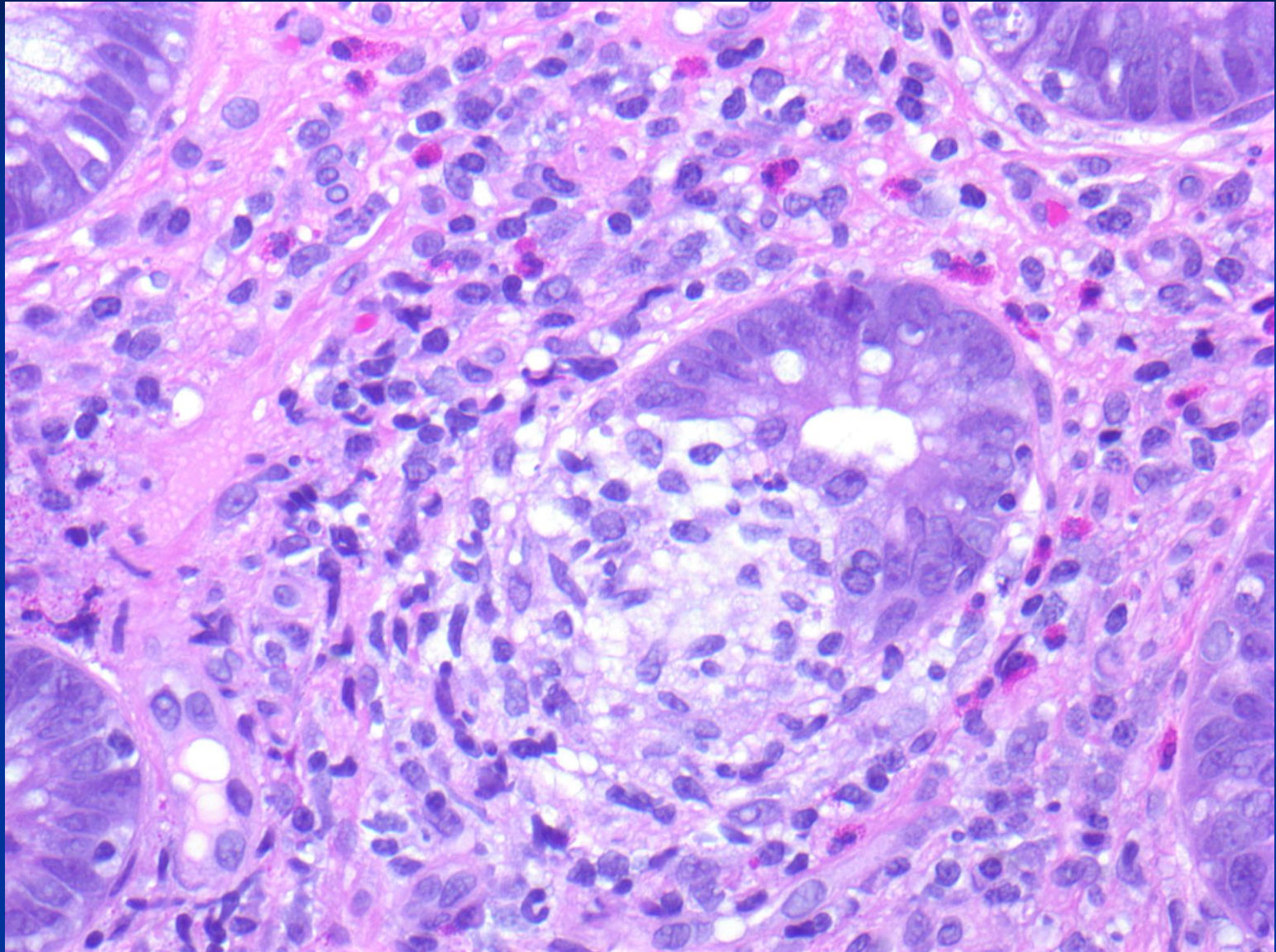
Gross features of UC



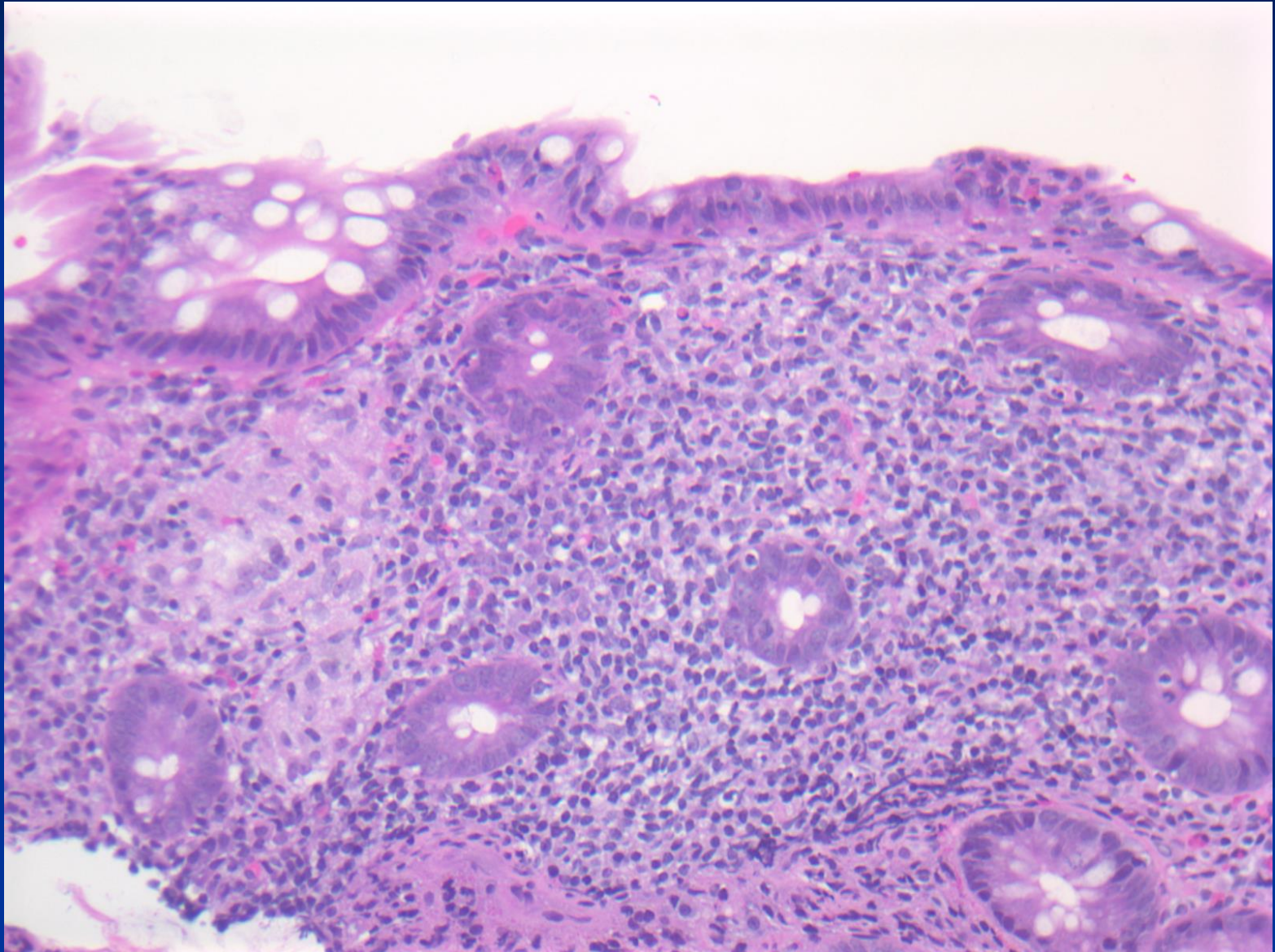
Microscopic features of Crohn's



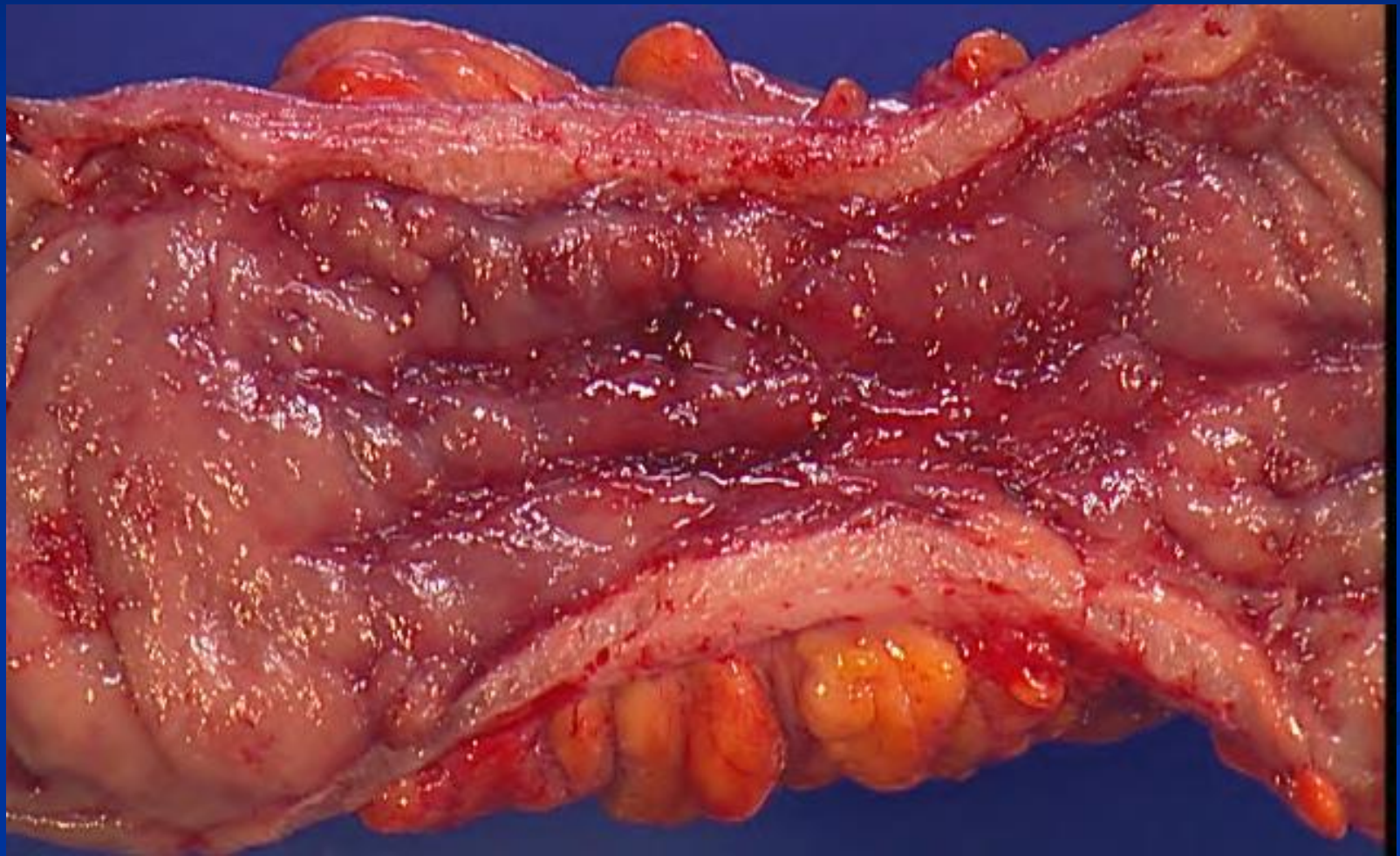
Microscopic features of Crohn's



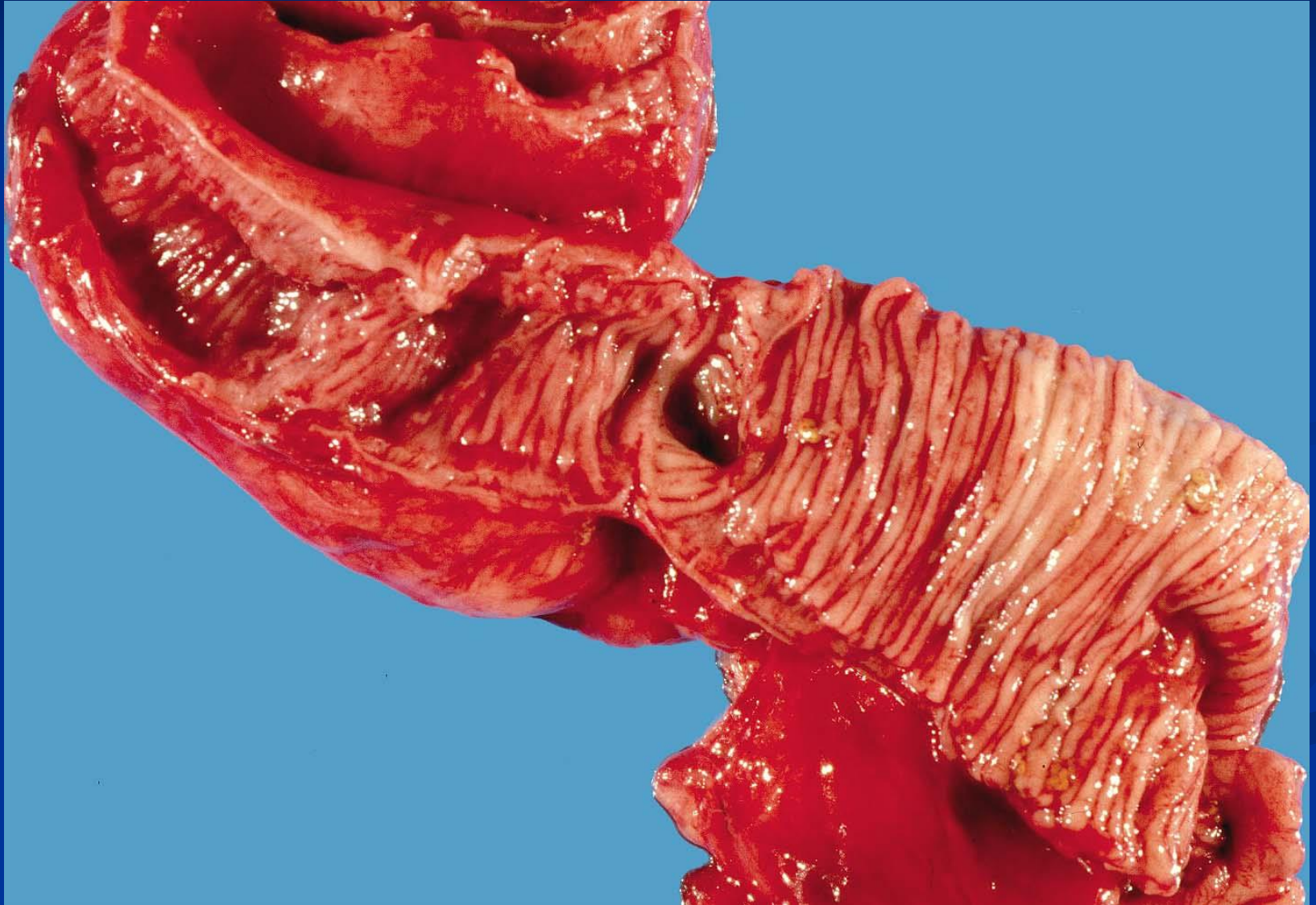
Microscopic features of Crohn's



Gross features of Crohn's



Gross features of Crohn's



Classifying IBD

Ulcerative colitis

Crohn's disease

Indeterminate IBD (try to clarify)

Overlapping:

Synchronous (UC – left colon, Crohn's proximally)

Metachronous ('Neo-Crohn's' post UC colectomy)

Clarifying Indeterminate IBD

Cecal patch (UC)

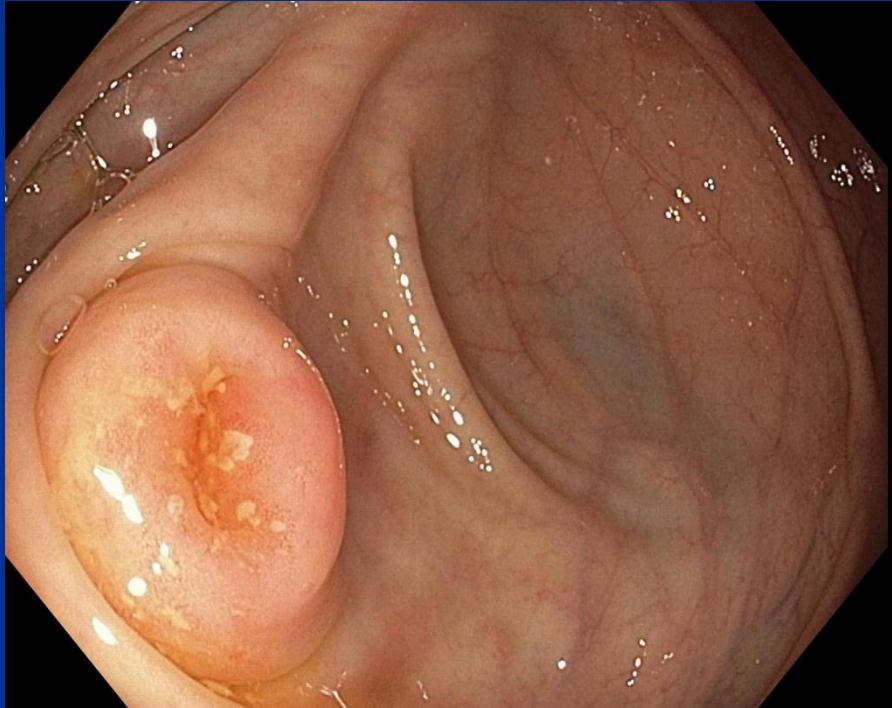
Rectal sparing (still likely UC)

Focally enhancing gastritis (Crohn's)

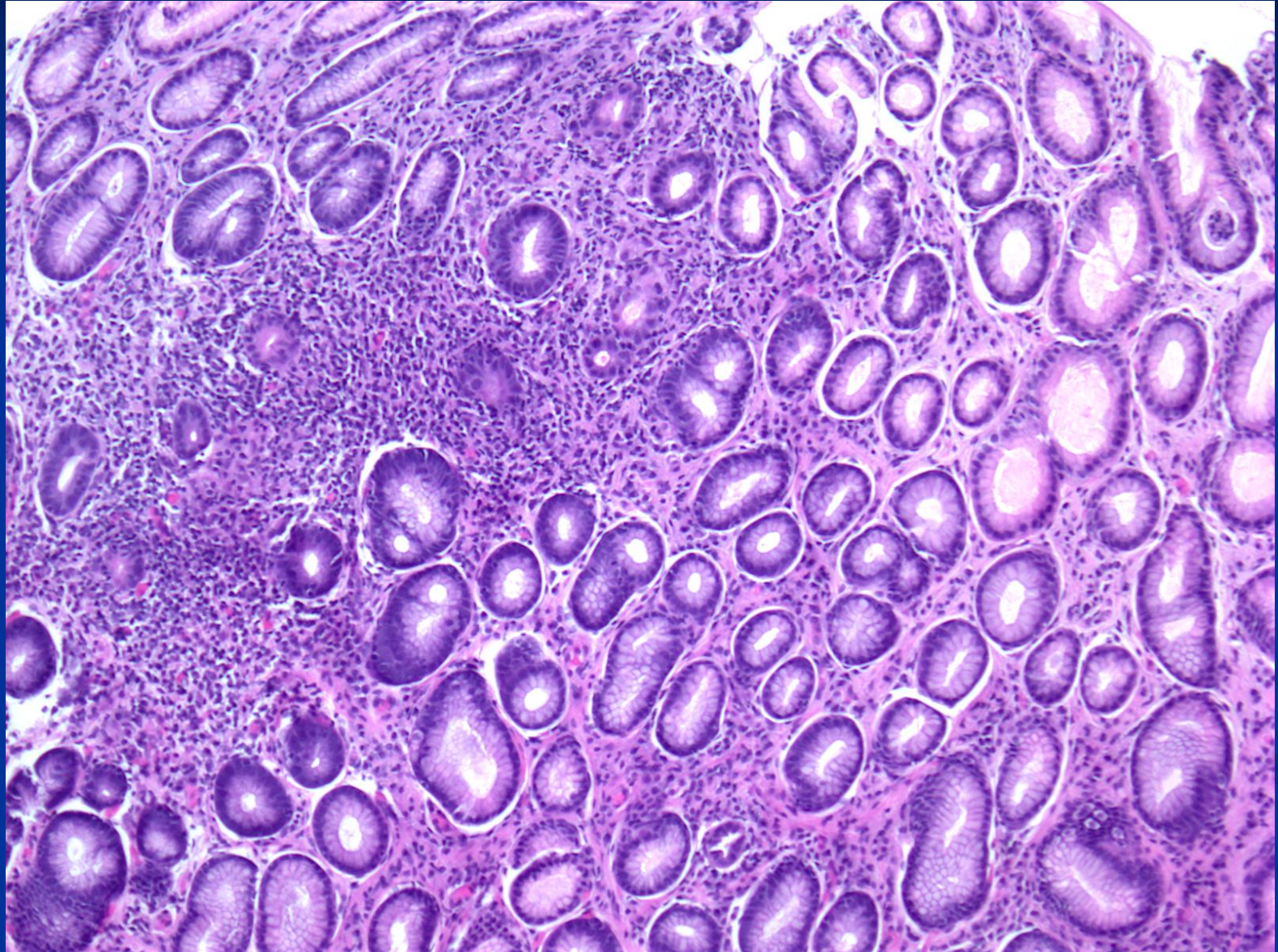
Thickened TI on imaging (Crohn's)

Complex perianal disease (Crohn's)

Cecal patch is a sign of ulcerative appendicitis manifested in the region of appendiceal orifice and not Crohn's colitis



Focally enhancing gastritis associated with Crohn's



Surveillance in IBD

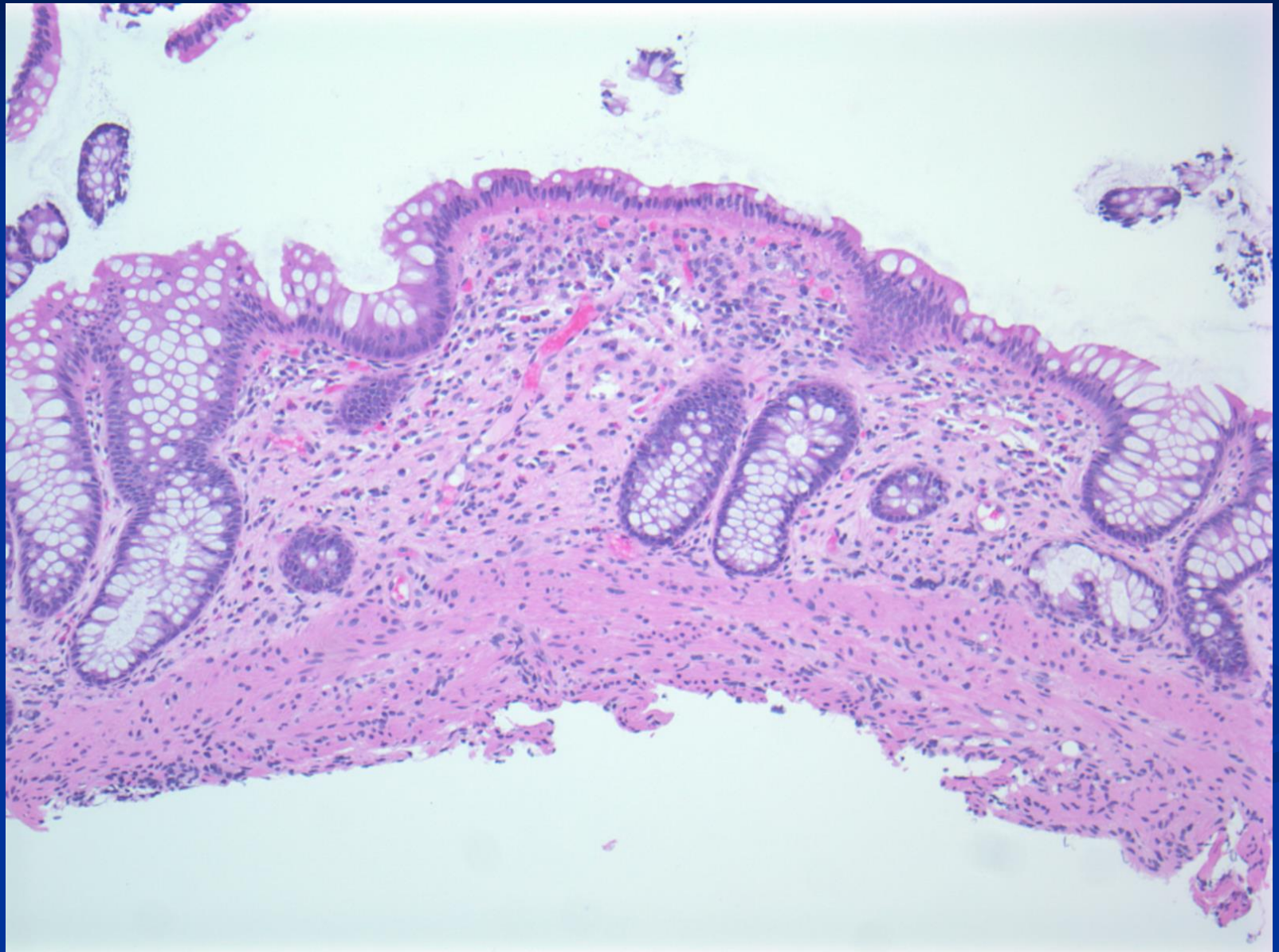
Inactive or quiescent IBD (remission)

Acute flare (relapse – IBD or infectious?)

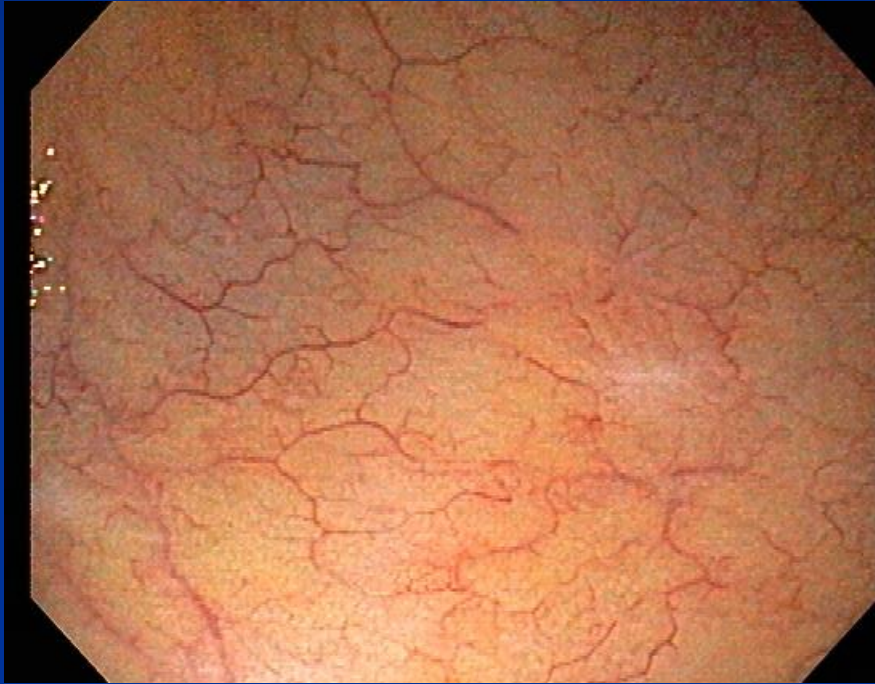
Flat (invisible) dysplasia (new SCENIC guidelines)

Ileo-anal pouch assessment (post-colectomy)

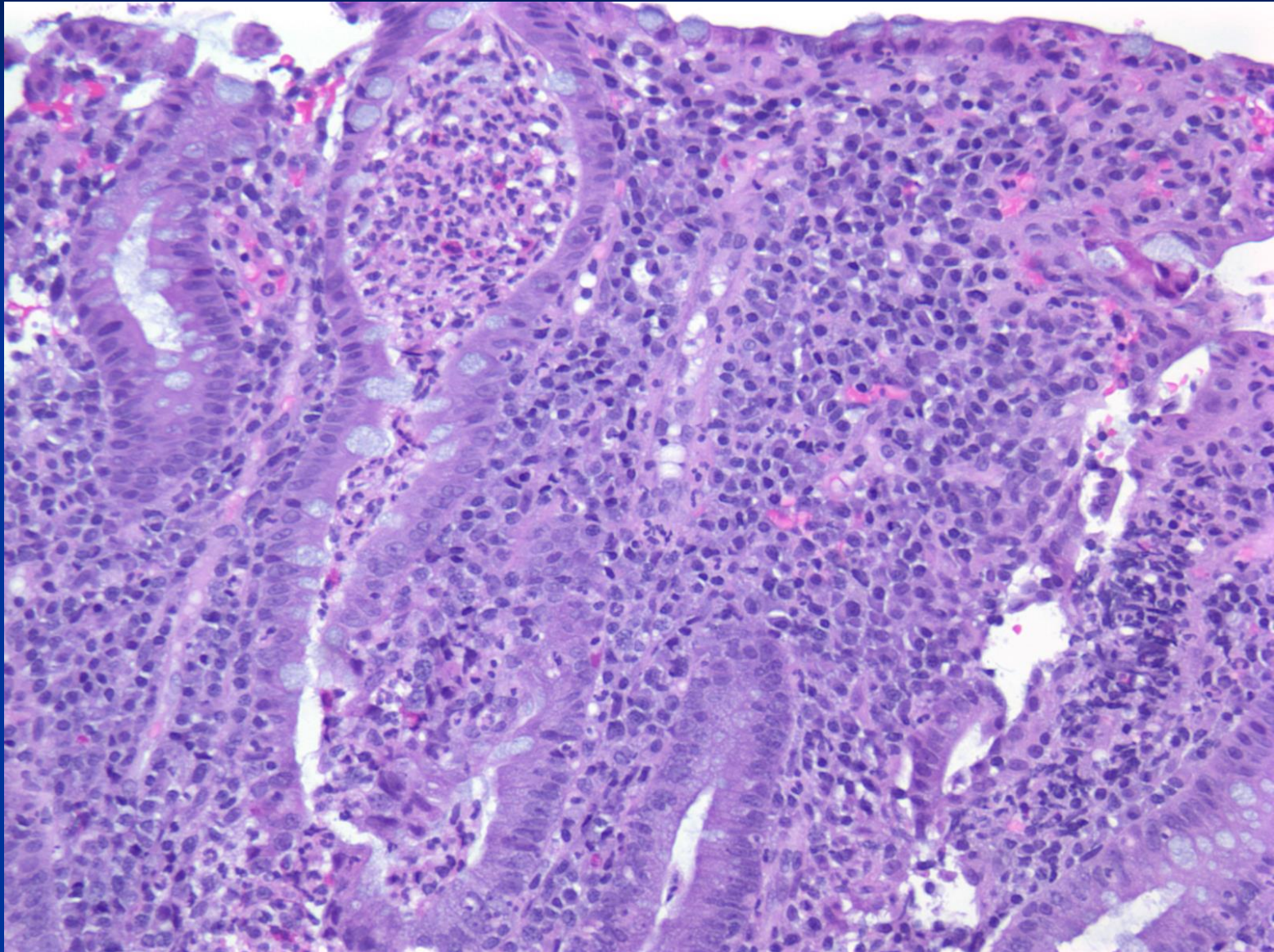
Inactive ulcerative colitis (remission)



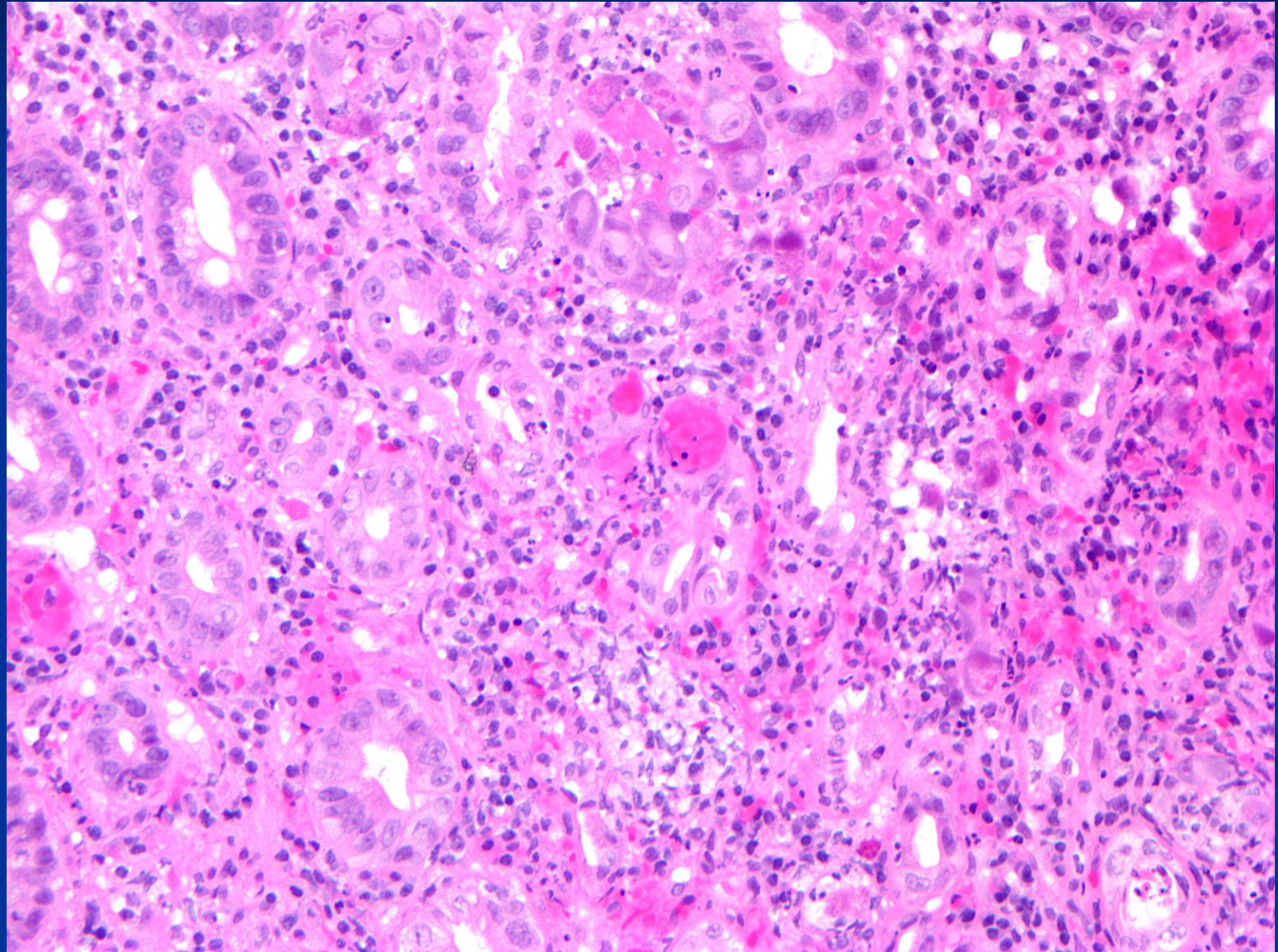
Inactive or quiescent IBD (deep remission)



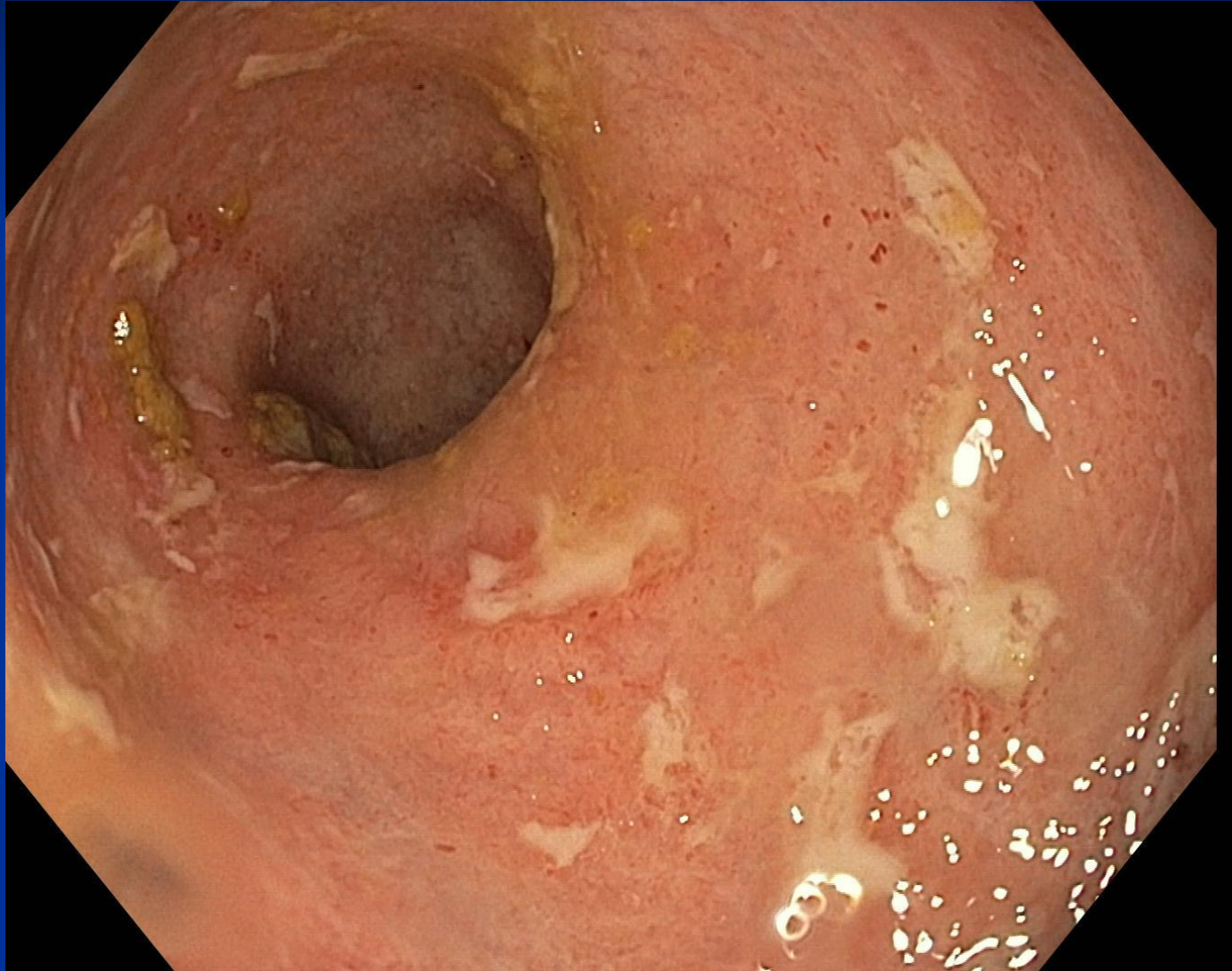
Acute flare – ulcerative colitis relapse



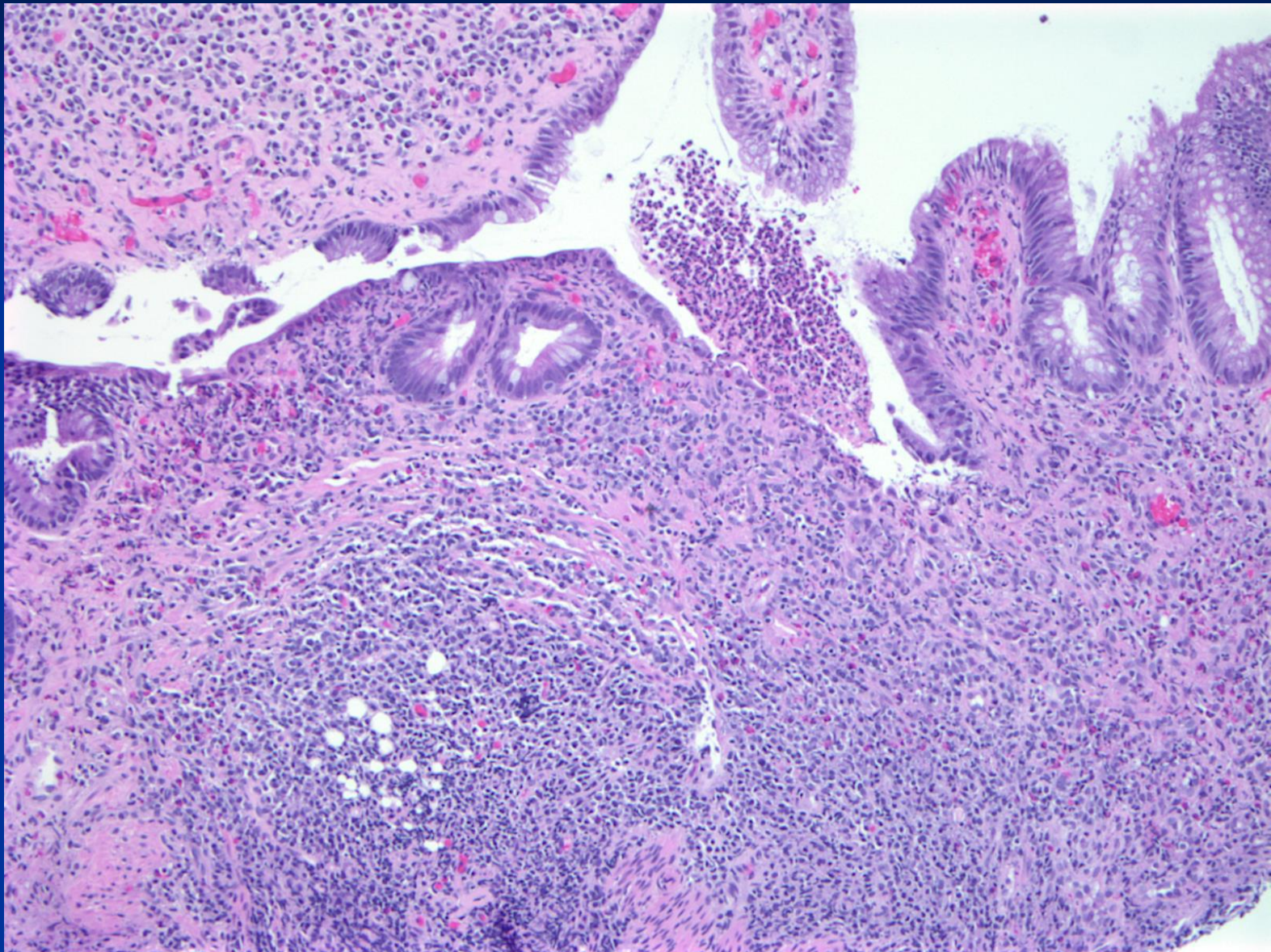
Acute flare due to CMV infection



Acute flare due to C. Diff infection



Acute flare due to C. Diff infection



C.DIFF TOXIN PCR

Status: Final result (Collected: 3/16/2016 9:02 AM)

Specimen Information

Specimen Source: **Stool**
NPN ID: 169042890

Collected: 3/16/2016 9:02 AM

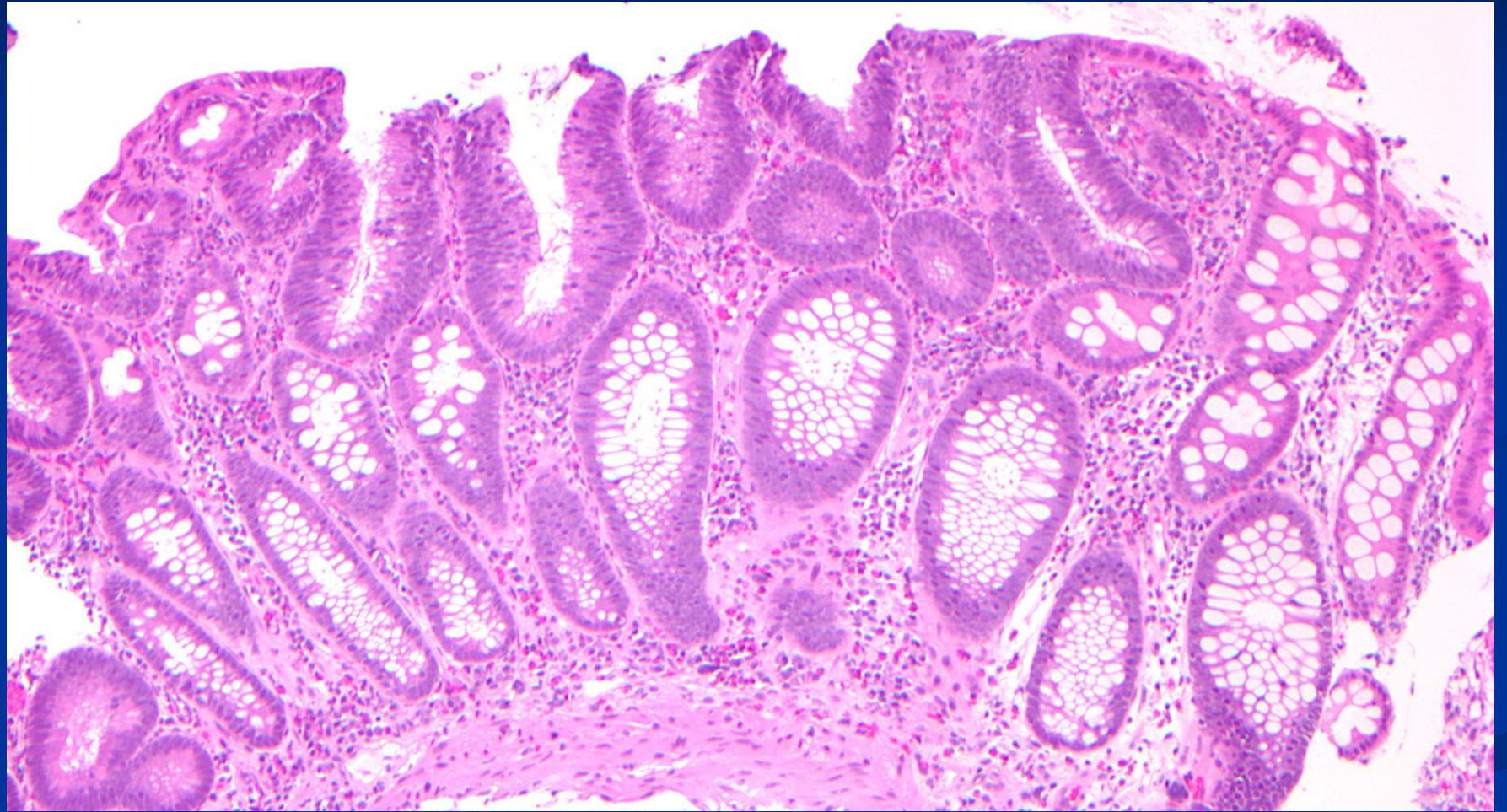
Component Results

| Component | Value | Flag | Ref Range |
|-----------------------------|-----------------|------------|--------------|
| C.DIFFICILE CYTOTOXIN ASSAY | DETECTED | (A) | NOT DETECTED |
| <u>Comment:</u> | | | |

Surveillance for flat dysplasia in IBD

Flat (invisible) dysplasia - Bxs every 10 cm x4





Paradigm Shift in Surveillance in IBD

Traditional surveillance methods do not take into account the advances in endoscopic techniques (high definitional endoscopy and chromoendoscopy)

Dysplasia is generally visible and can be targeted

Gastroenterology 2015;148:639–651

CONSENSUS STATEMENT

SCENIC International Consensus Statement on Surveillance and Management of Dysplasia in Inflammatory Bowel Disease

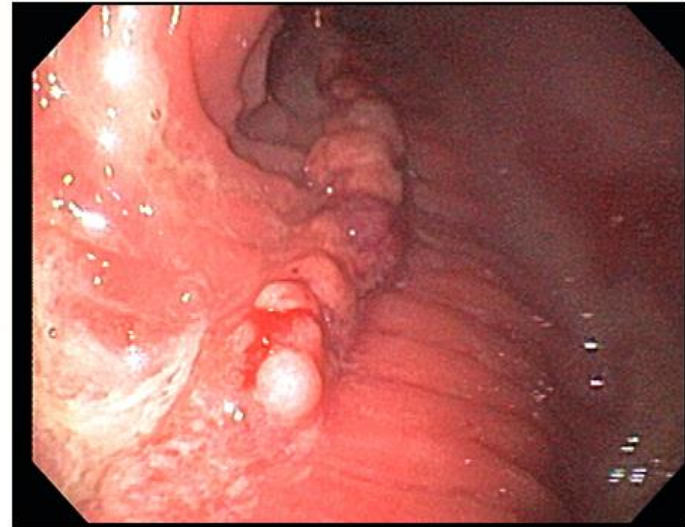
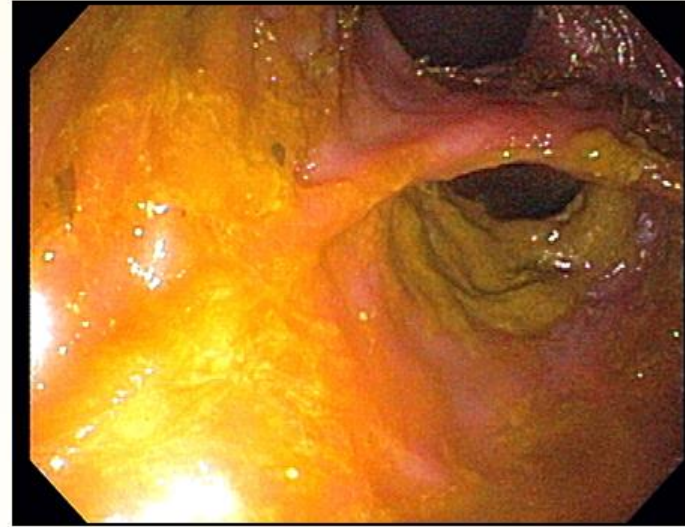
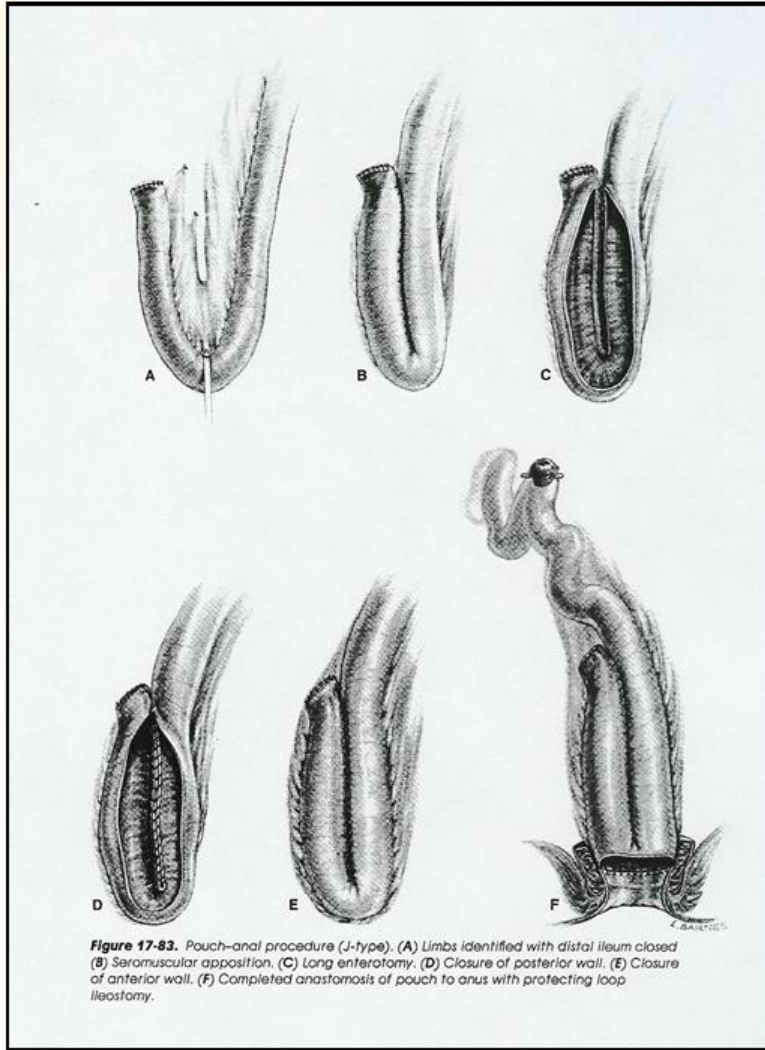


Loren Laine,^{1,2} Tonya Kaltenbach,³ Alan Barkun,⁴ Kenneth R. McQuaid,⁵
Venkataraman Subramanian,⁶ and Roy Soetikno,³ for the SCENIC Guideline Development Panel

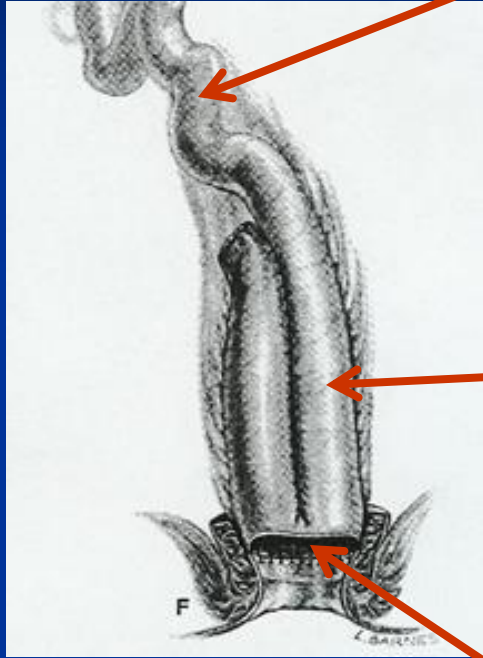
Surveillance for Colorectal Endoscopic
Neoplasia Detection and Management
In IBD patients: International Consensus
Recommendations (SCENIC)



Surveillance for Ileoanal pouch dysfunction

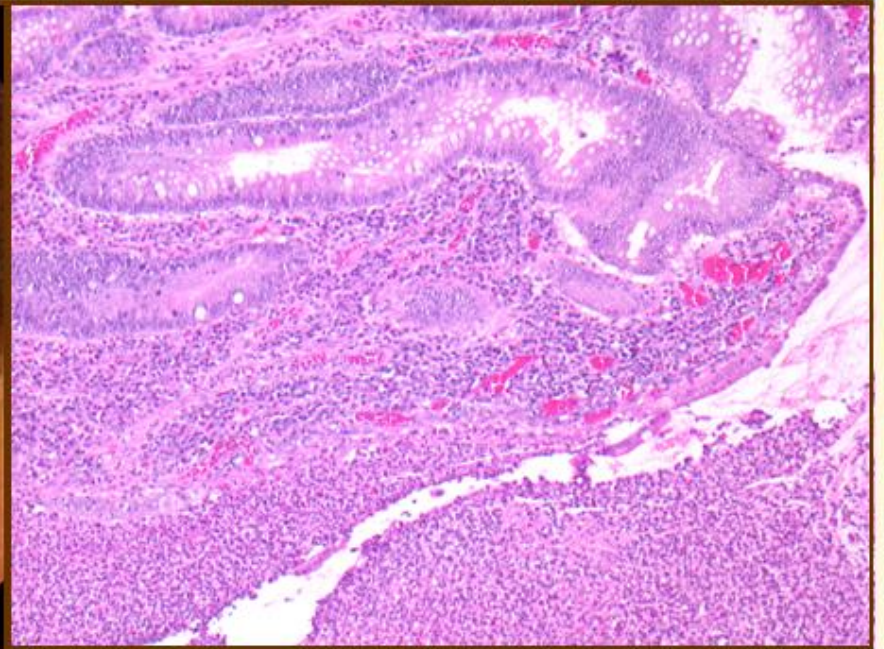


If ileal mucosa away from the pouch (afferent limb) is sampled, it may show normal ileum, nonspecific ileitis or 'neo-crohn's'



Pouch cavity (ileal mucosa) may show non-specific (infectious) pouchitis

If rectal cuff is sampled (retroflexion) it shows rectal mucosa with ongoing active ulcerative colitis



Neo Crohn's: Aphthae and fissures in proximal AL (>10 cm), and UC in reviewed colectomy >1 yr ago

Polyps in IBD

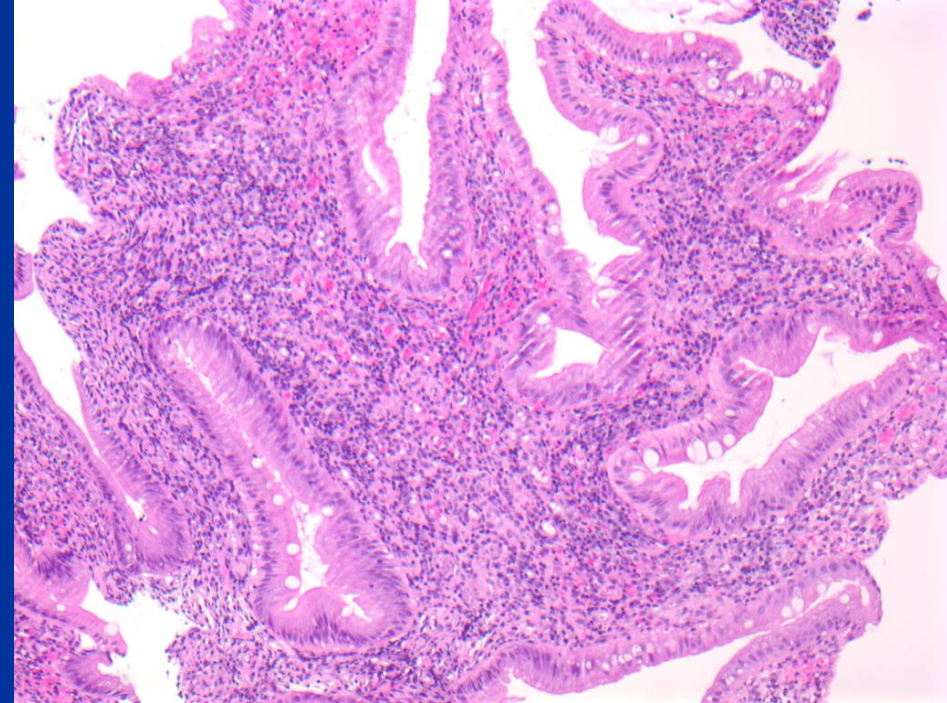
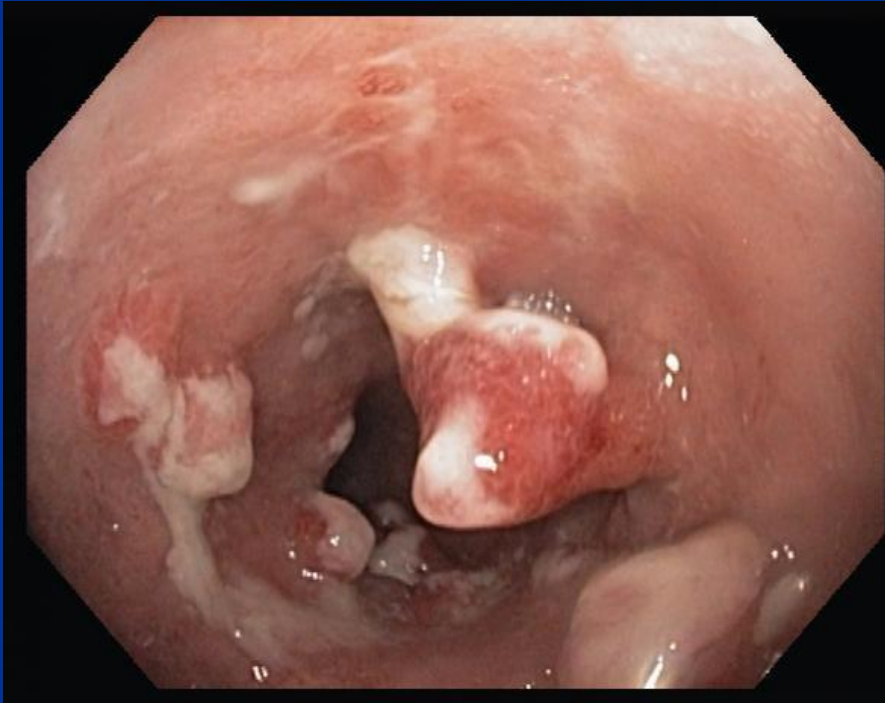
Inflammatory polyps or pseudo-polyps

Dysplastic polyp

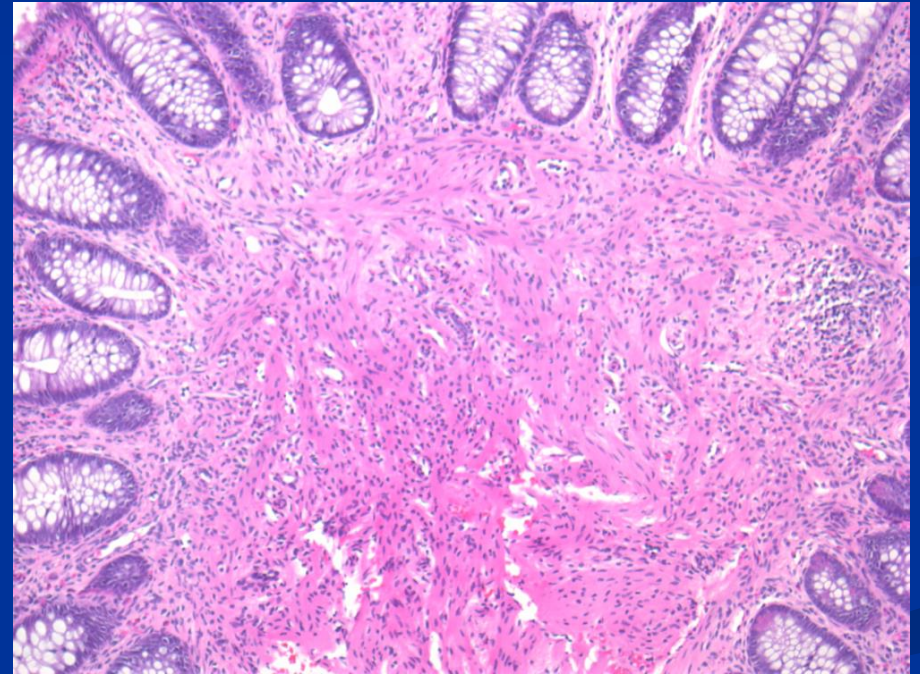
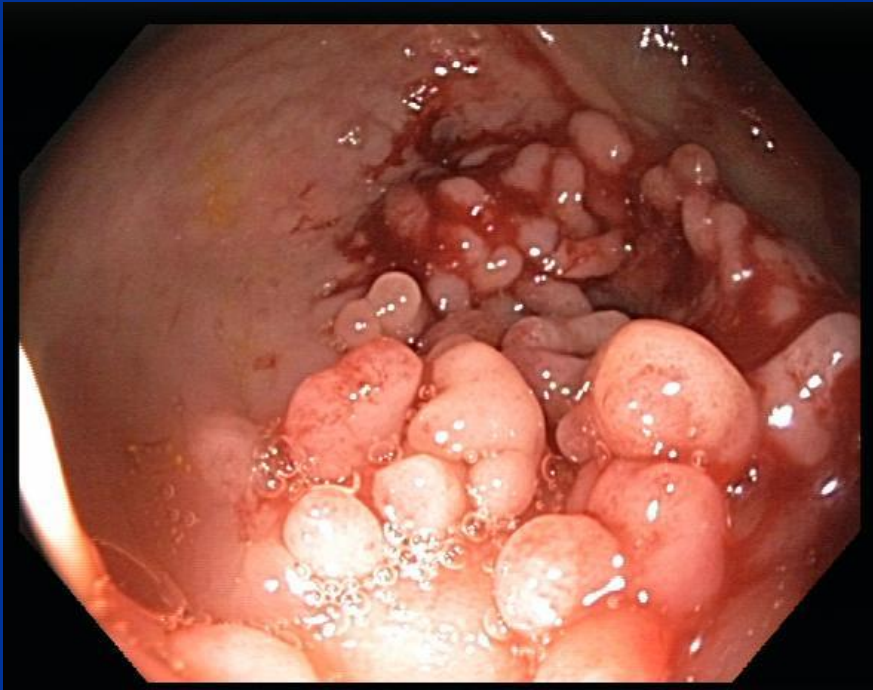
(DALM – dysplasia associated lesion or mass)

Sporadic adenomatous polyp in an IBD patient

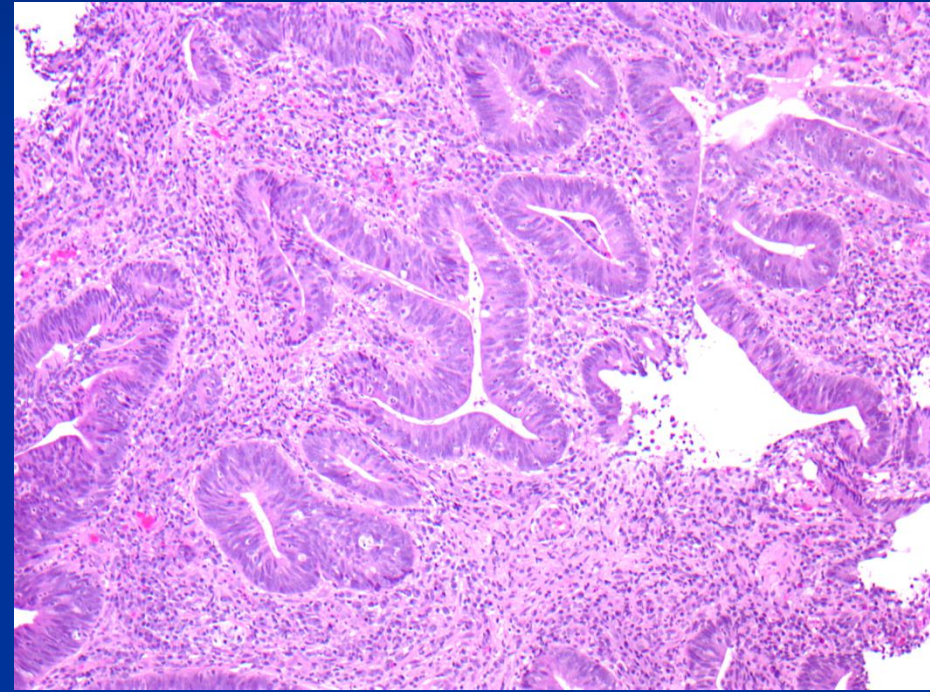
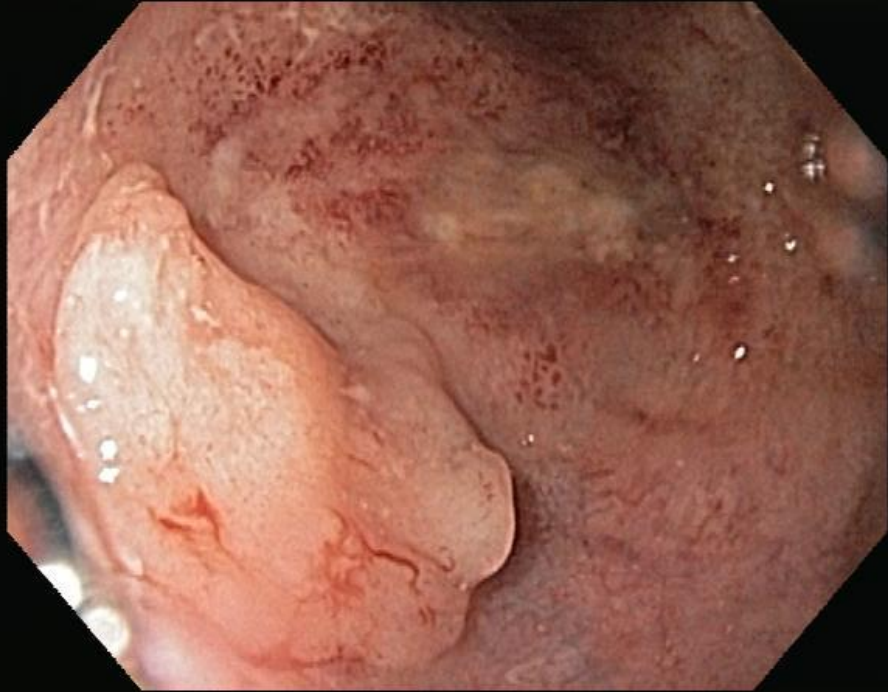
*Inflammatory polyps in ulcerative colitis
are mucosal and have exudates*



*Inflammatory polyps in Crohn's
are mixed epithelial-mesenchymal, clustered
and compact*



Dysplasia Associated Lesion or Mass
(DALM)



Sporadic adenoma in a patient with IBD



Sporadic adenoma

Any duration of IBD

Age >40

In uninvolved or inactive mucosa

Morphologically sporadic-appearing

Managed like usual adenomatous polyp

DALM in IBD

IBD usually >10 yrs

Any age

In involved/active mucosa

Morphologically DALM-like

Managed like DALM

Summary

IBD is a clinicopathological diagnosis that can usually be confidently diagnosed and correctly classified

Surveillance of IBD includes patients in remission, acute inflammatory flare and invisible dysplasia

A paradigm shift in surveillance is occurring (SCENIC) – dysplasia maybe visible

Polyps in IBD include inflammatory polyps, DALM and sporadic adenomatous polyps



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