CDC2021-6695 Celiac Sprue

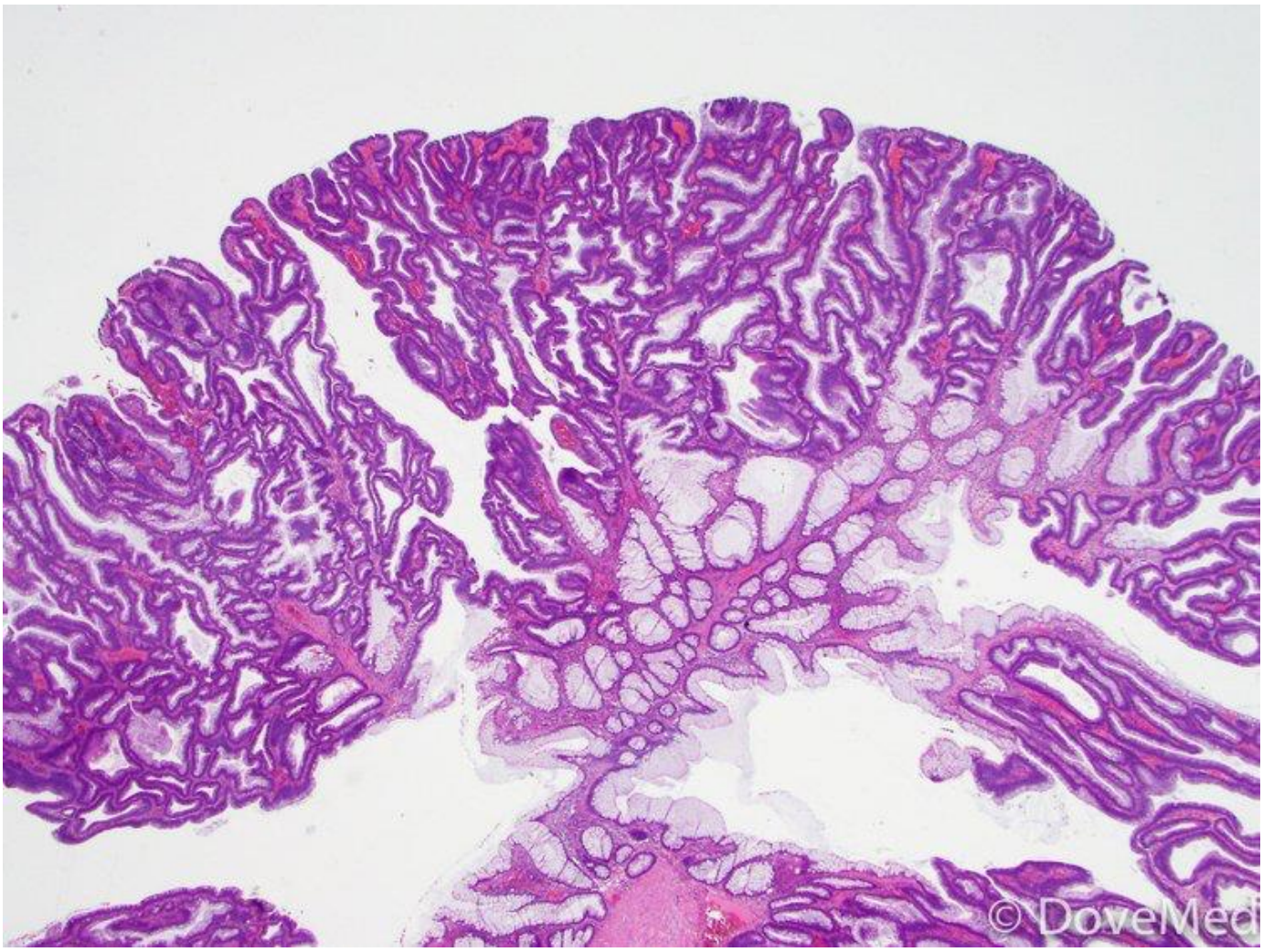
Microscopic (histologic) description

- Histological "elementary lesions" are (Dig Liver Dis 2011;43:S385, Semin Diagn Pathol 2014;31:124):
    - **Increased intraepithelial T lymphocytes (IEL)**: 25 to 29 IEL/100 enterocytes is considered borderline; > 30 IEL/100 enterocytes represents a pathological "lymphocytosis"
    - Decreased enterocyte height, flattening of enterocytes, intracytoplasmic vacuolation and reduction or absence of brush border are suggestive but not specific
    - **Crypt hyperplasia**: extension of the regenerative epithelial crypts associated with changes in the presence of more than 1 mitosis per crypt
    - **Villous atrophy**: decrease in villous height, alteration of normal crypt/villous ratio (3:1) until total disappearance of villi; this assessment requires proper orientation of the biopsies
- Diagnostic categories are based on these elementary lesions:
    - Modified Marsh-Oberhuber classification of histologic findings in celiac disease
    - Simplified systems (Corazza & Villanaci or Ensari), which may be more reproducible (Arch Pathol Lab Med 2010;134:826, Pathol Res Pract 2016;212:1174)
- Different grades of duodenal mucosal lesions:
    - **Grade A / type 1**: increased intraepithelial lymphocytes but no villous atrophy
    - **Grade B1 / type 2**: villi still present but shortened
    - **Grade B2 / type 3**: complete villous atrophy

CDC2021-72037 Tubular adenoma

Microscopic (histologic) description

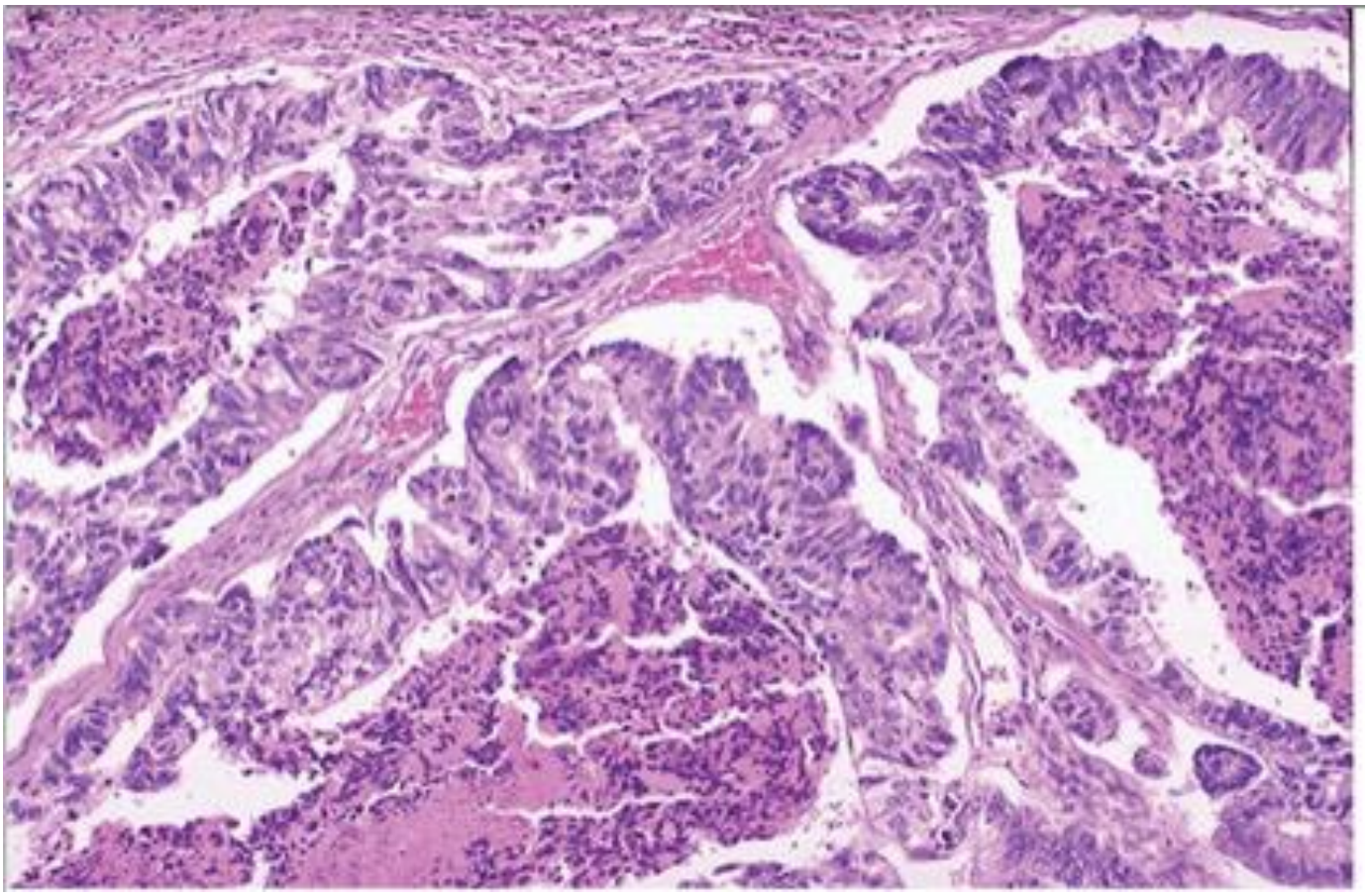
- Polypoid colonic mucosa covered with dysplastic epithelium comprised of hyperchromatic, elongated nuclei arranged in a pseudostratified manner
- Dysplasia is typically low grade but may also be high grade, with architectural (cribriforming, luminal necrosis) and cytologic changes (vesicular chromatin, nucleoli, loss of basal polarity)



CDC2021-69059 Colonic Adenocarcinoma

Microscopic (histologic) description

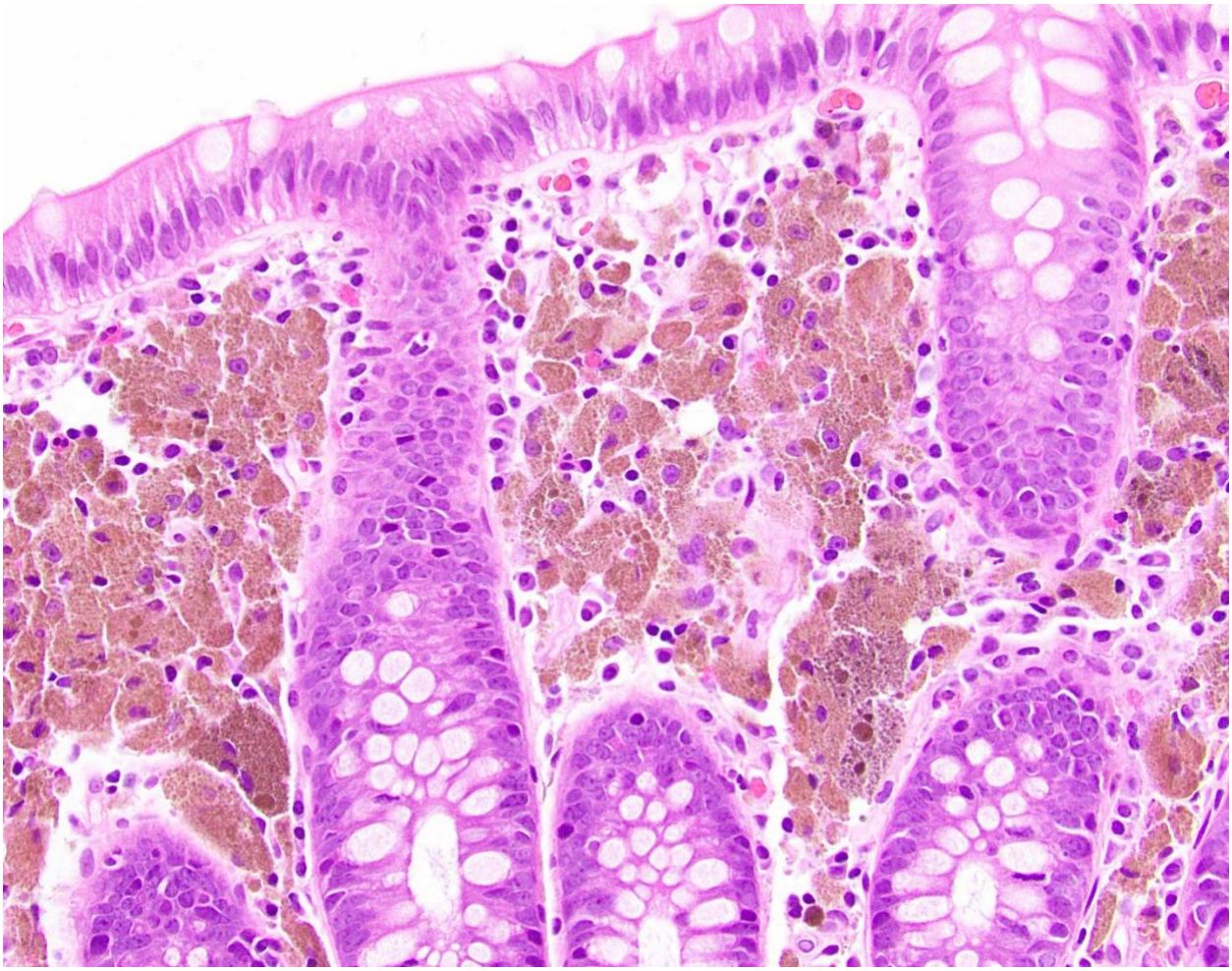
- Usually well or moderately differentiated gland forming carcinoma with marked desmoplasia, particularly at edge of tumor
- Glands often cribriform and filled with necrotic debris (dirty necrosis), in both primary and metastatic sites



CDC2021-47596 Melanosis coli

Microscopic (histologic) description

- Diffuse deposition of brown-iish pigment (melanized ceroid) in macrophages

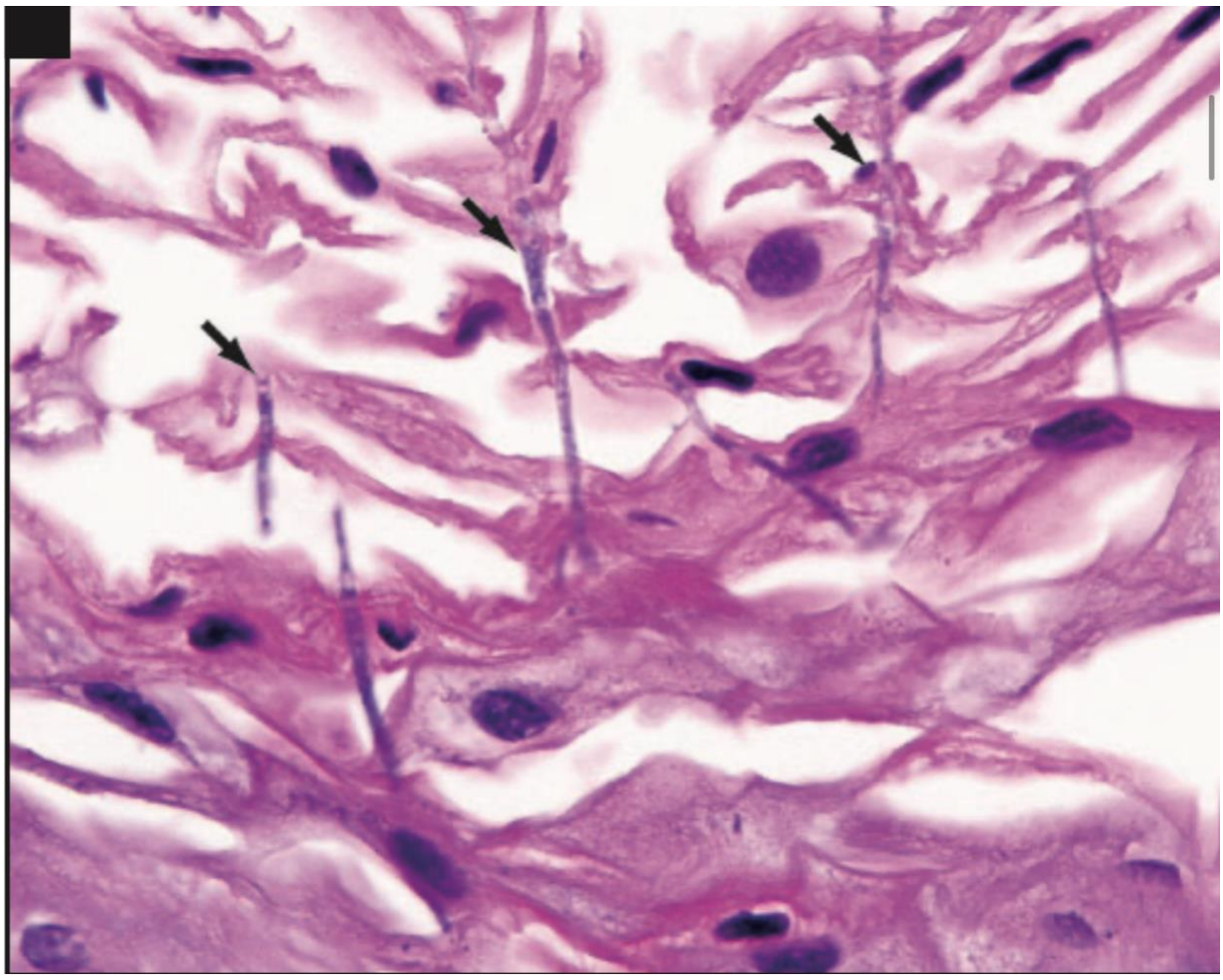


CDC2021-68459 Candida

CDC2021-68459 Candida

Microscopic (histologic) description

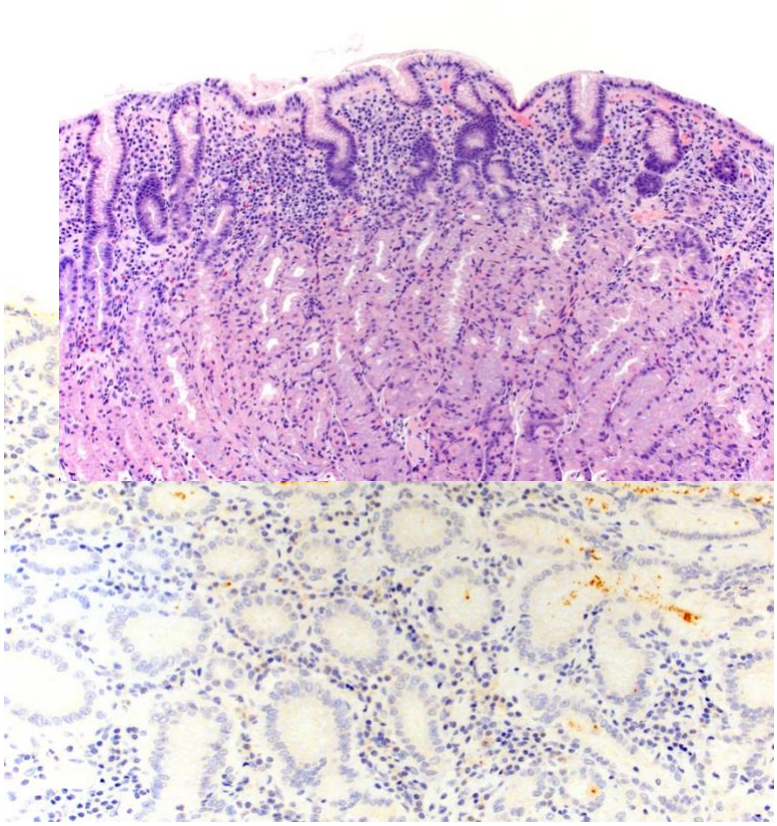
- Densely matted pseudohyphae (see arrows) and budding spores in squamous debris,



CDC2021-70270 Helicobacter Gastritis

Microscopic (histologic) description

- Chronic antral gastritis: infiltration of lamina propria by plasma cells, lymphocytes and a small number of eosinophils seen as a superficial band of inflammation
- Active chronic antral gastritis: when the above is associated with neutrophils; this should prompt a search for organisms
- Lymphoid follicles in antral mucosa are common but nonspecific
- Variation in histologic patterns:
    - May present as corpus predominant gastritis or pangastritis
    - Duodenum may show foveolar metaplasia and duodenitis, with or without *H. pylori* organisms
    - Use of PPIs facilitates proximal migration of the organisms to the oxyntic mucosa; the organisms also migrate deeper into the oxyntic glands
    - May be associated with hyperplastic polyps; eradication of *H. pylori* is recommended in patients with hyperplastic polyps (**Ann Intern Med 1998;129:712**)
    - An acute gastritis - initial transient stage followed by either resolution or onset of chronic gastritis
    - Coccoid morphology of *H. pylori* is found most often in patients with recent PPI use or eradication therapy; this morphology of *H. pylori* has a diameter that is one half to one third the length of spiral forms (**Am J Clin Pathol 2002;118:719**)



- CDC2021-74060 anal intraepithelial neoplasia (AIN), carcinoma in situ (if high grade, AIN 3)

  - High grade squamous intraepithelial lesion:
    - The current preferred terminology though often the clinicians will requests AIN 2 or AIN 3 be specified in parenthesis
    - **AIN 2:** Used to be called indermediate grade; dysplasia reaches to the middle 1/3 of the epithelium
    - **AIN 3:** Dysplasia reaches to the upper 1/3 of the epithelium
      - Some people use this interchangeably with carcinoma in situ, others split them into two groups based on if there is any maturation or "does the top look like the bottom"
      - Note: There is some support for calling this lesion high grade squamous intraepithelial lesion (AIN 3) instead of carcinoma in situ for insurance purposes

  - Related to HPV, similar to the cervix