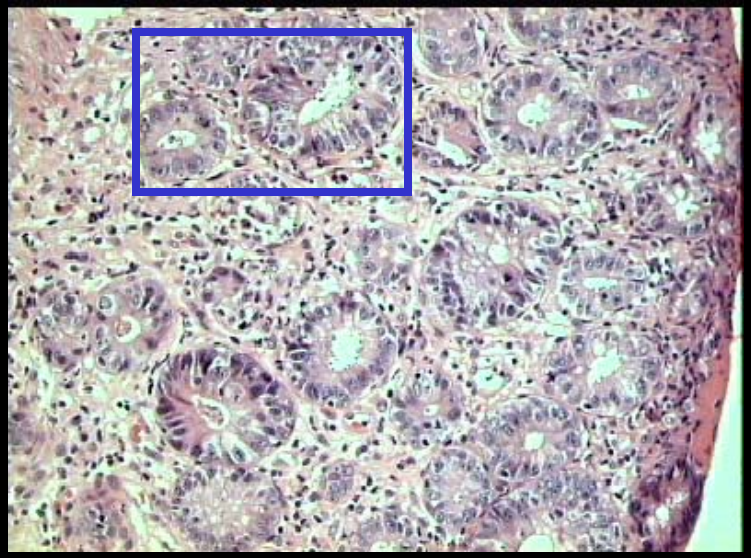
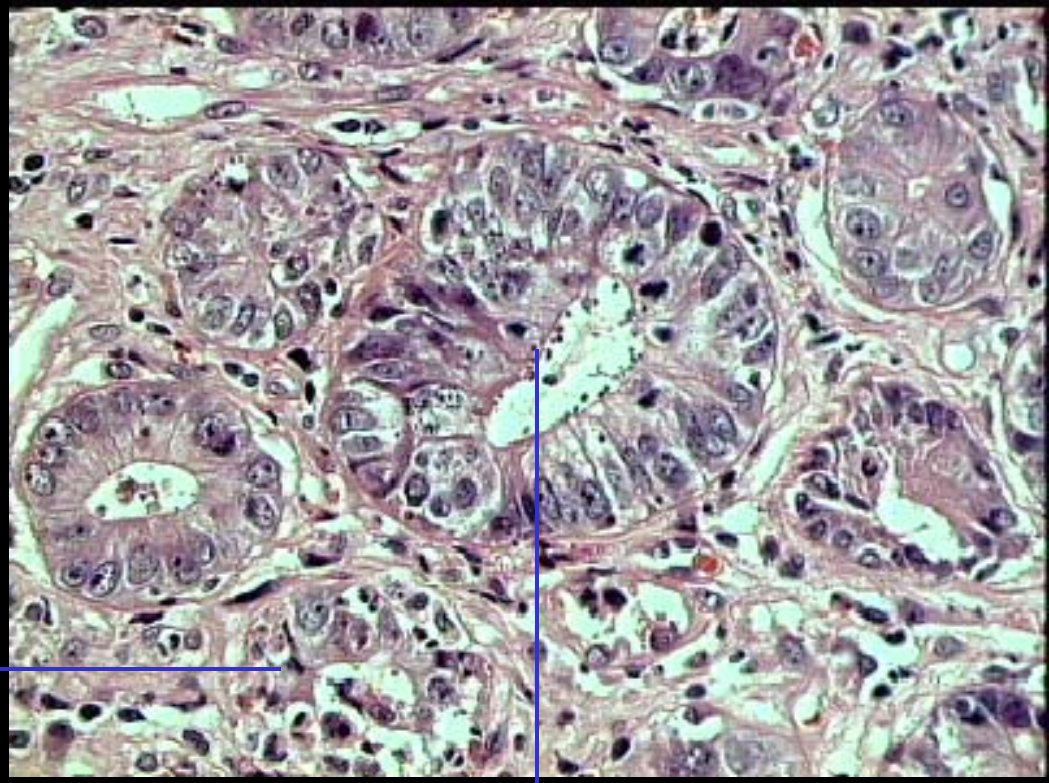
HDF Case 986949

45 yo male with severe diarrhea. Known HIV positive. Endoscopic biopsy of duodenum, the colon and ileum.

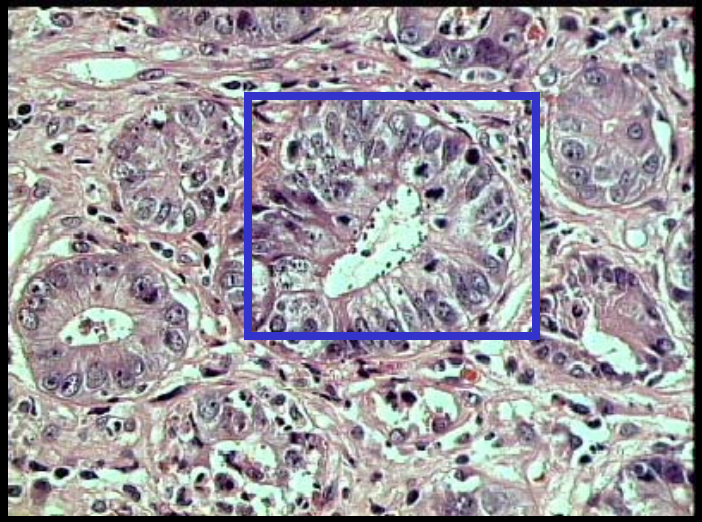


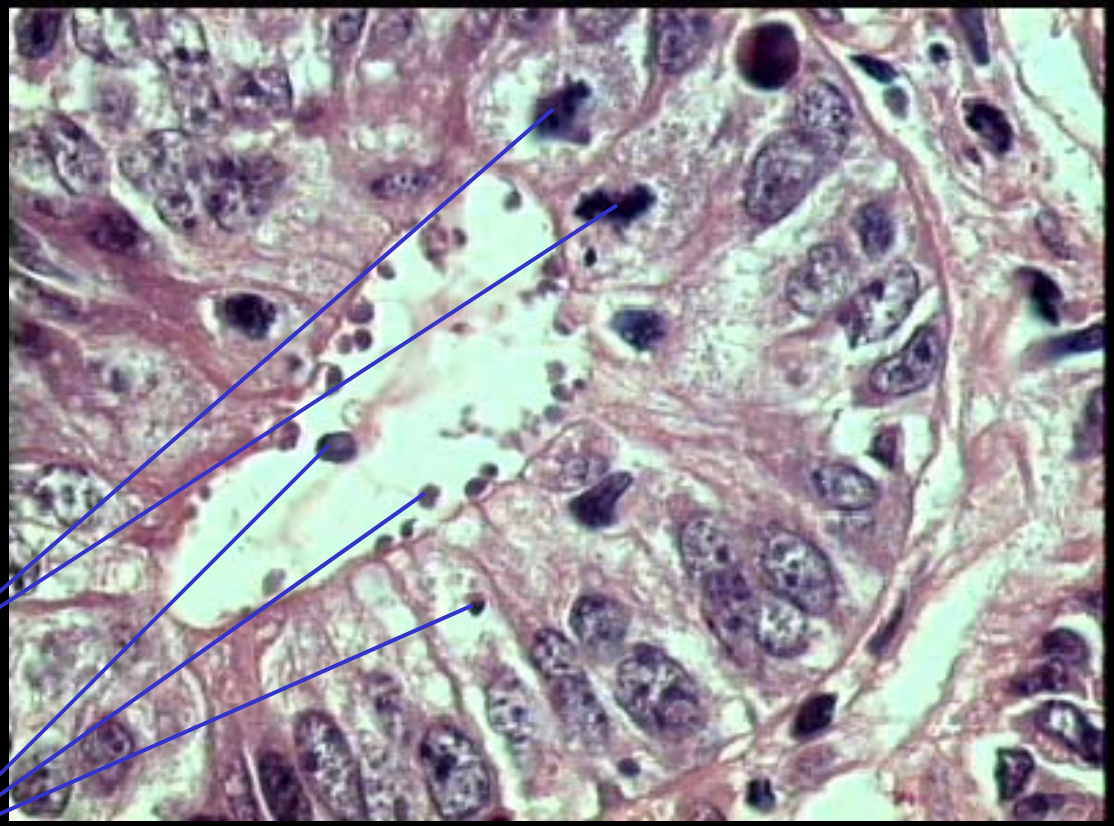


EXUDATIVE CHANGES

GRANULAR BASOPHILIC BODIES

Colonic biopsy shows a preserved glandular architecture, and inflammatory exudative changes. Glands are formed by hyposecretory columnar epithelium, with rounded granular basophilic bodies on their apical border.

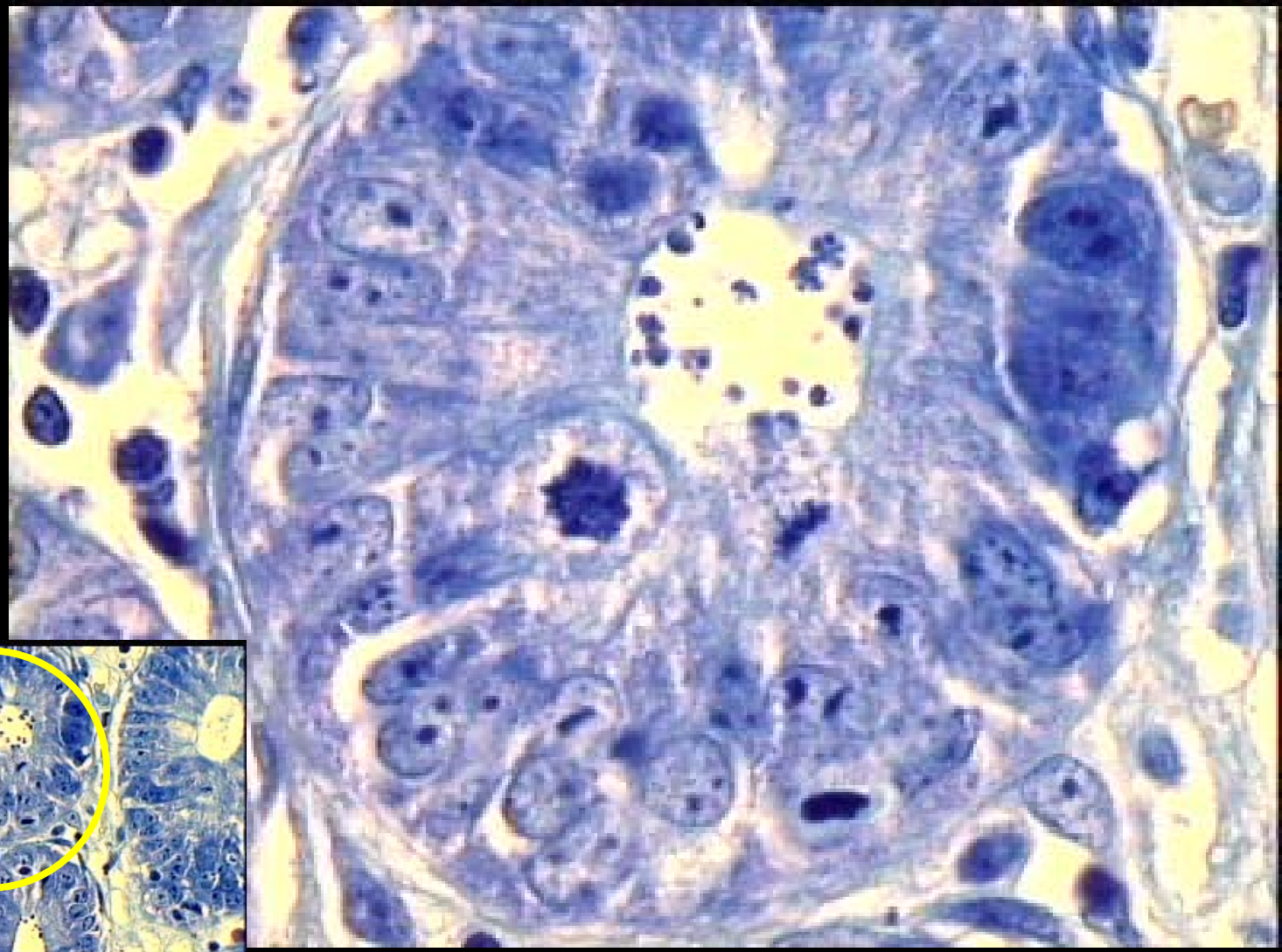


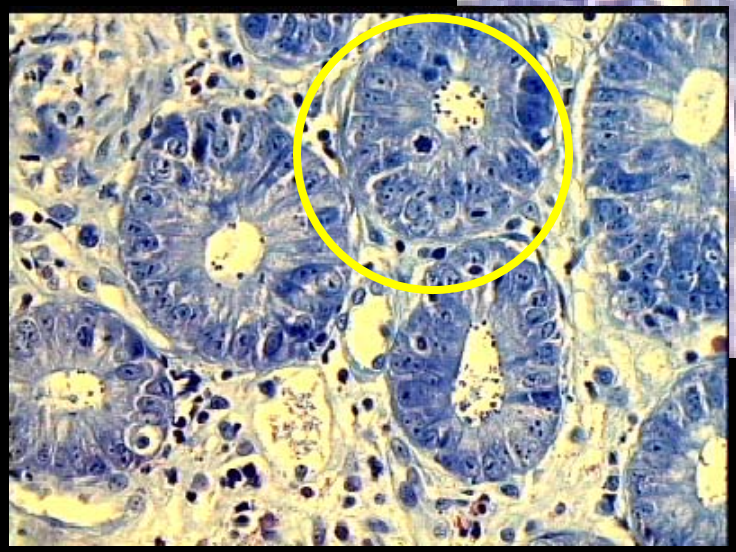


MITOTIC FIGURES

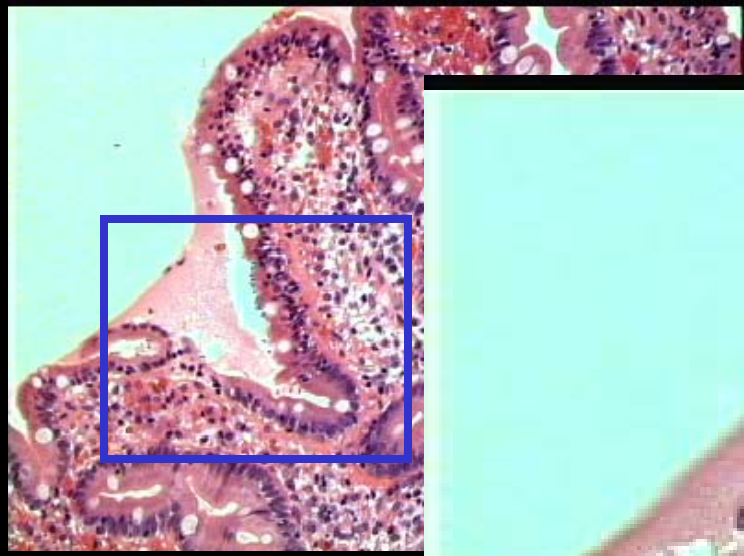
ROUNDED PARASITES

At higher magnification, the reactive hyperplastic epithelium with mitotic figures, is covered by numerous rounded parasites, some are intracytoplasmic.

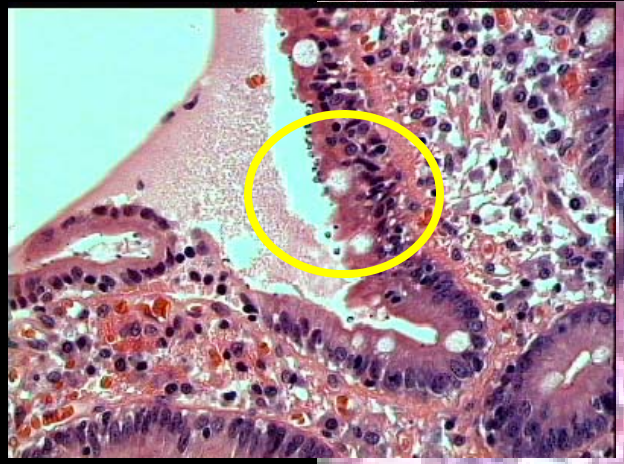


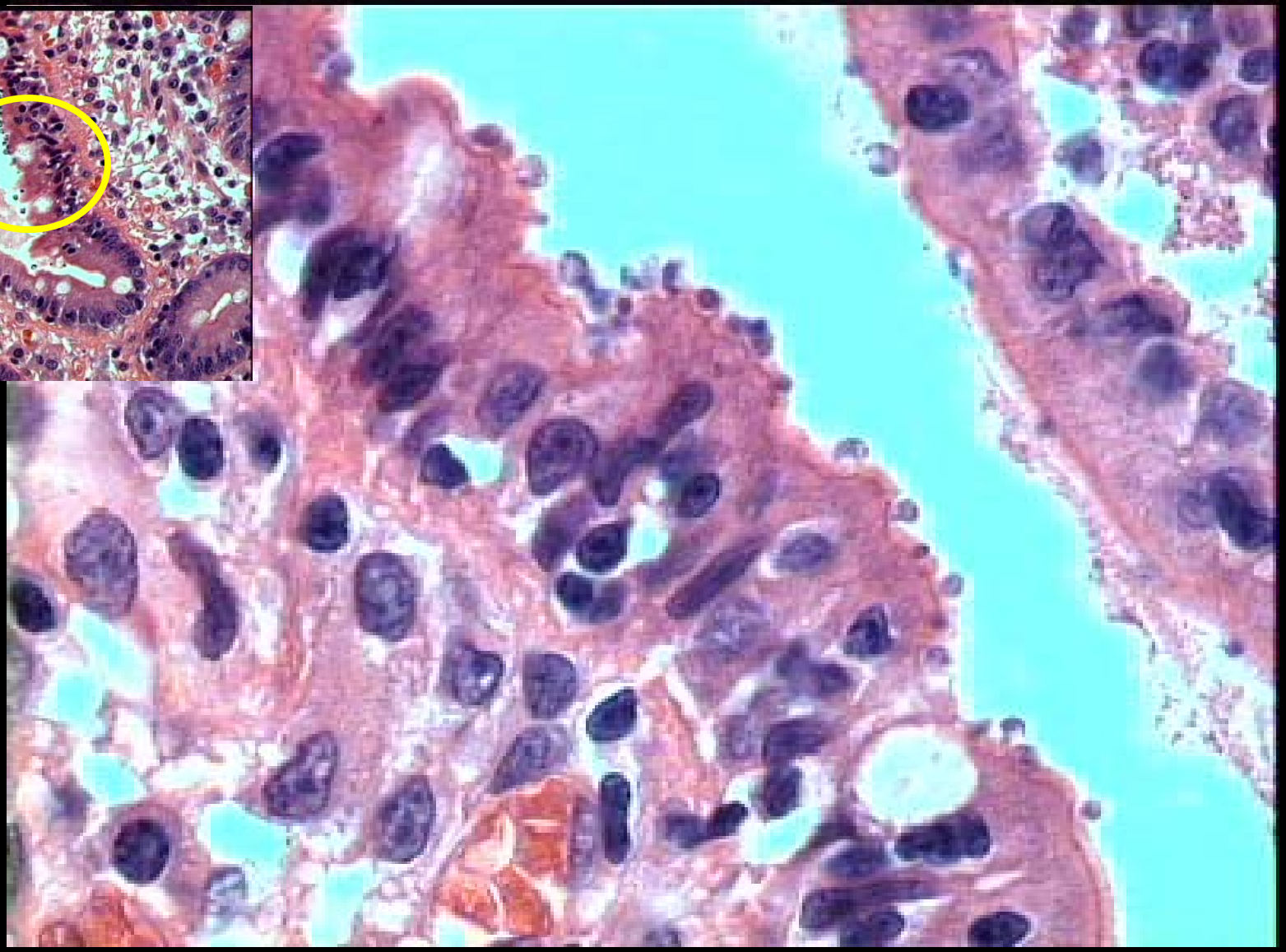


Parasites are basophilic with the Giemsa stain.



They are also found on the intestinal mucosa.





At higher magnification, they appear embedded in the brush border of enterocytes.

DIAGNOSIS:

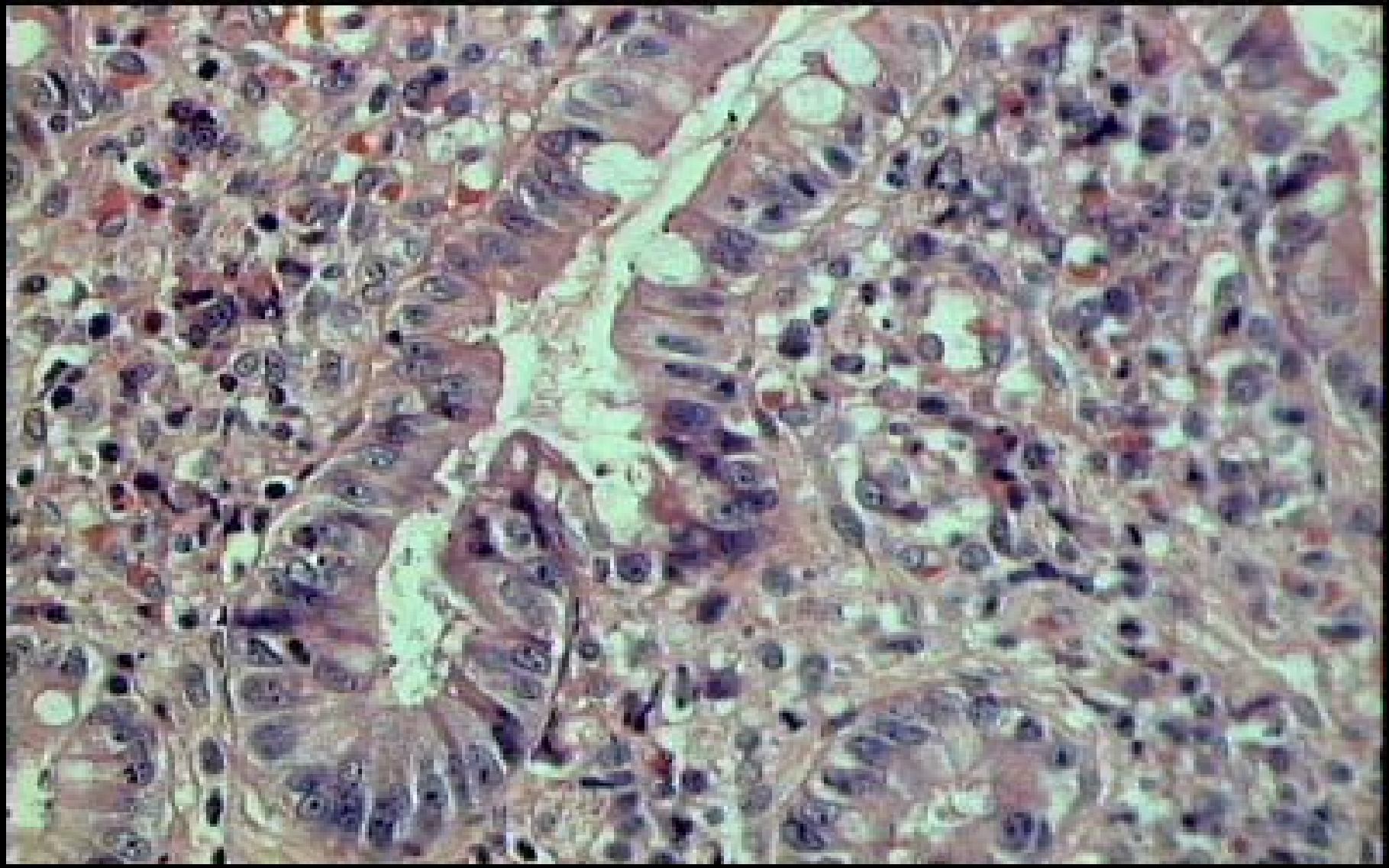
ENTEROCOLITIS DUE TO PARASITIC INFESTATION CONSISTENT WITH CRYPTOSPORIDIOSIS.

Cryptosporidium

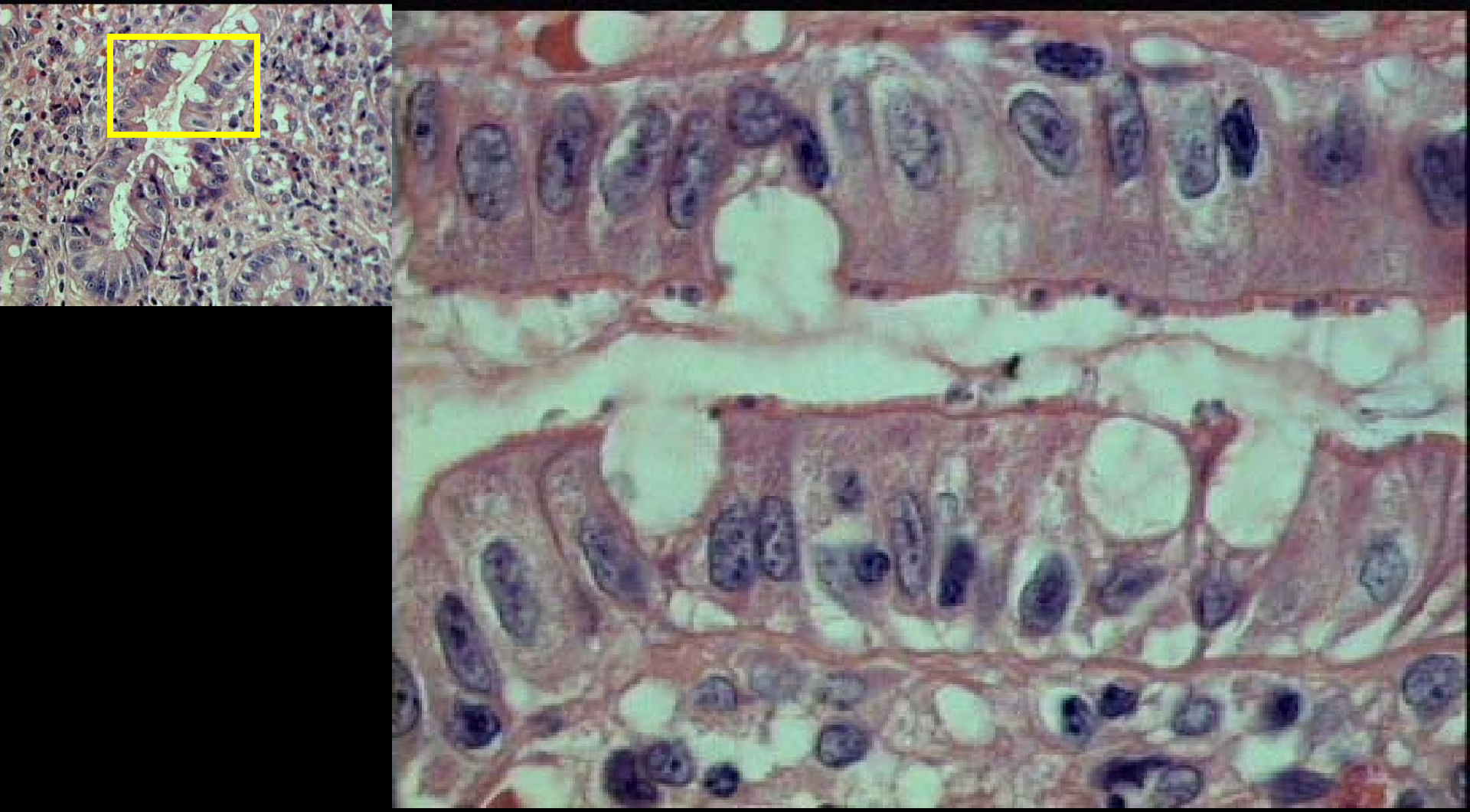
- This is a coccidial organism first described in humans in 1976. Until the advent of the AIDS epidemic in 1981, only a handful of cases had been reported, and most patients were immunocompromised. With the AIDS epidemic, it became evident that cryptosporidiosis in these patients caused a severe, unrelenting secretory diarrhea. Subsequently, better stool detection techniques became available so that tissue sampling did not constitute the primary mode of diagnosis. With that advance, it became clear that cryptosporidiosis could occur in immunocompetent individuals and was a common cause of sporadic and epidemic gastroenteritis. Among immunocompetent individuals, cryptosporidiosis presents as a self-limited diarrheal illness and many account for 3-5% of all childhood admissions to hospitals for "infectious gastroenteritis."

Histologically,

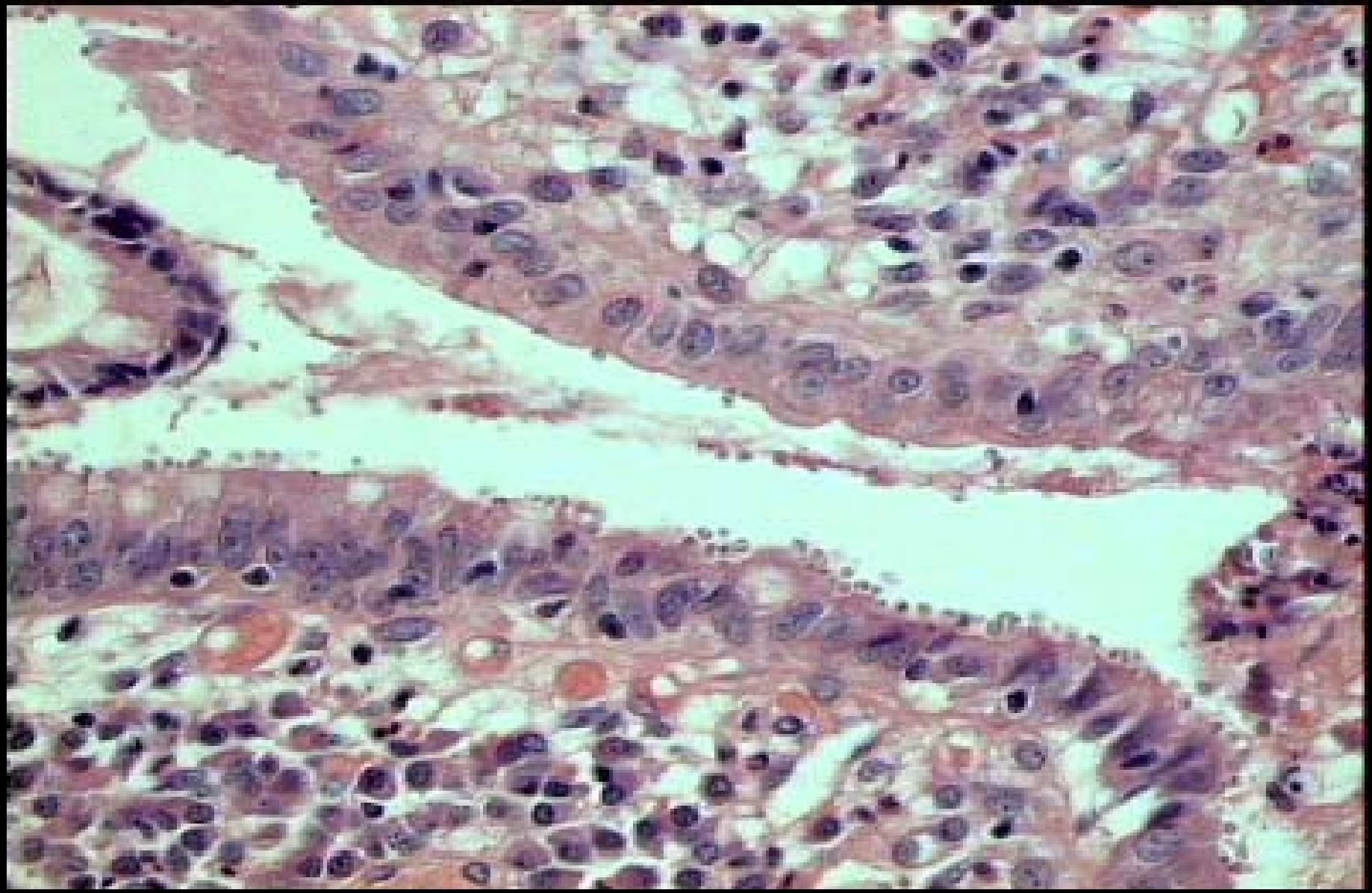
- the organism may be patchily distributed and thus may be present in random sections, even though there is evidence of substantial infection elsewhere. Cryptosporidium has a characteristic appearance with medium or high power objectives, namely, pinpoint blue dots primarily concentrated at the villous tips or on the upper sides of the villi. This is in contrast to their location in the rectal mucosa, where they tend to cluster in the rectal crypts.
- The mucosal changes associated with cryptosporidiosis are focally distributed and variable in severity. Even in patients with AIDS who have massive secretory diarrhea, there may only be mild mucosal injury, although some patients do have more severe lesions. Sometimes there is an intense neutrophilic infiltration of the surface epithelium.



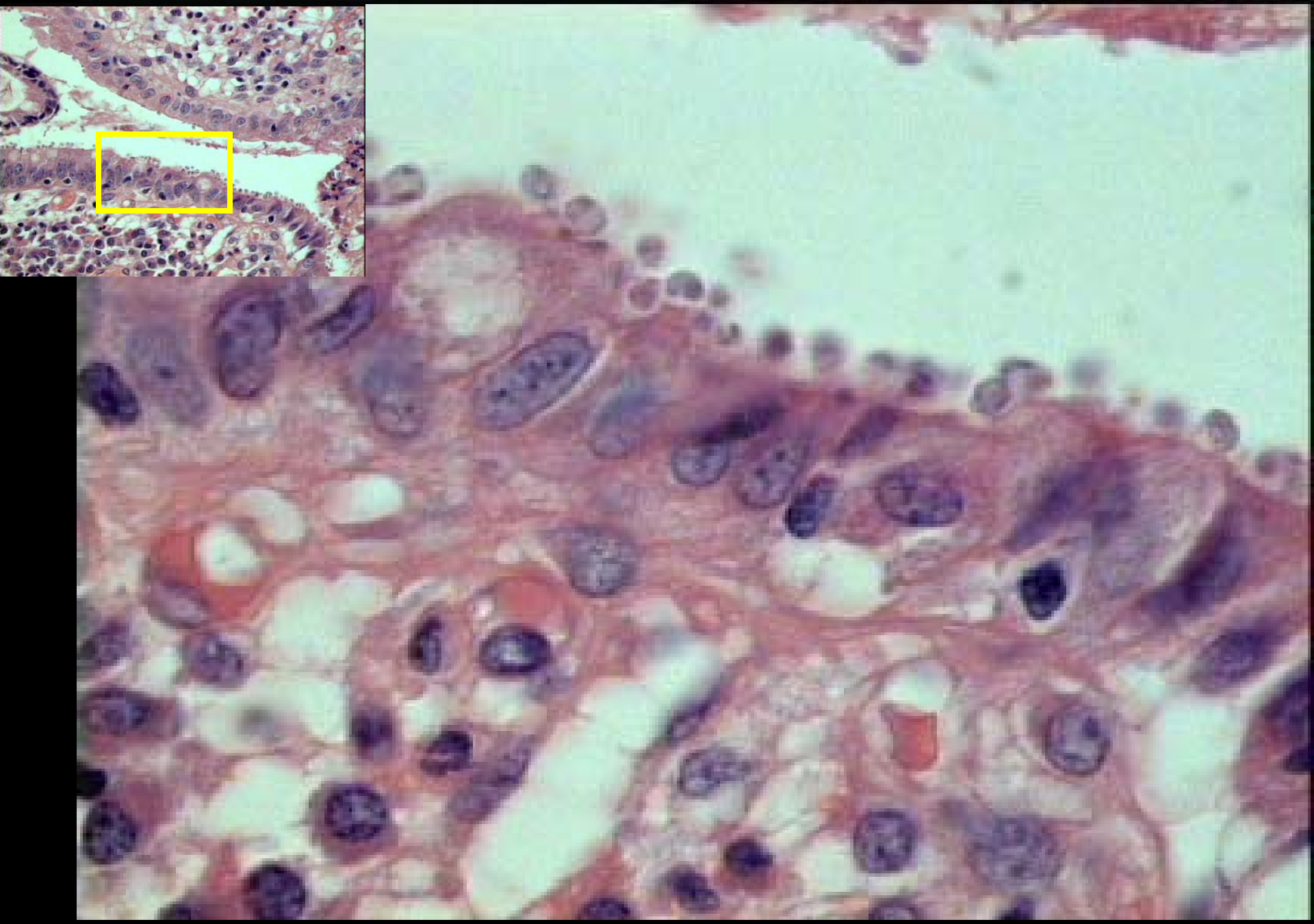
Medium magnification, glands are separated by an increase of the inflammatory infiltrate of the lamina propria.



Higher magnification discloses rounded basophilic structures embedded in the brush border of the enterocytes.



The density of these structures vary from an area to another.



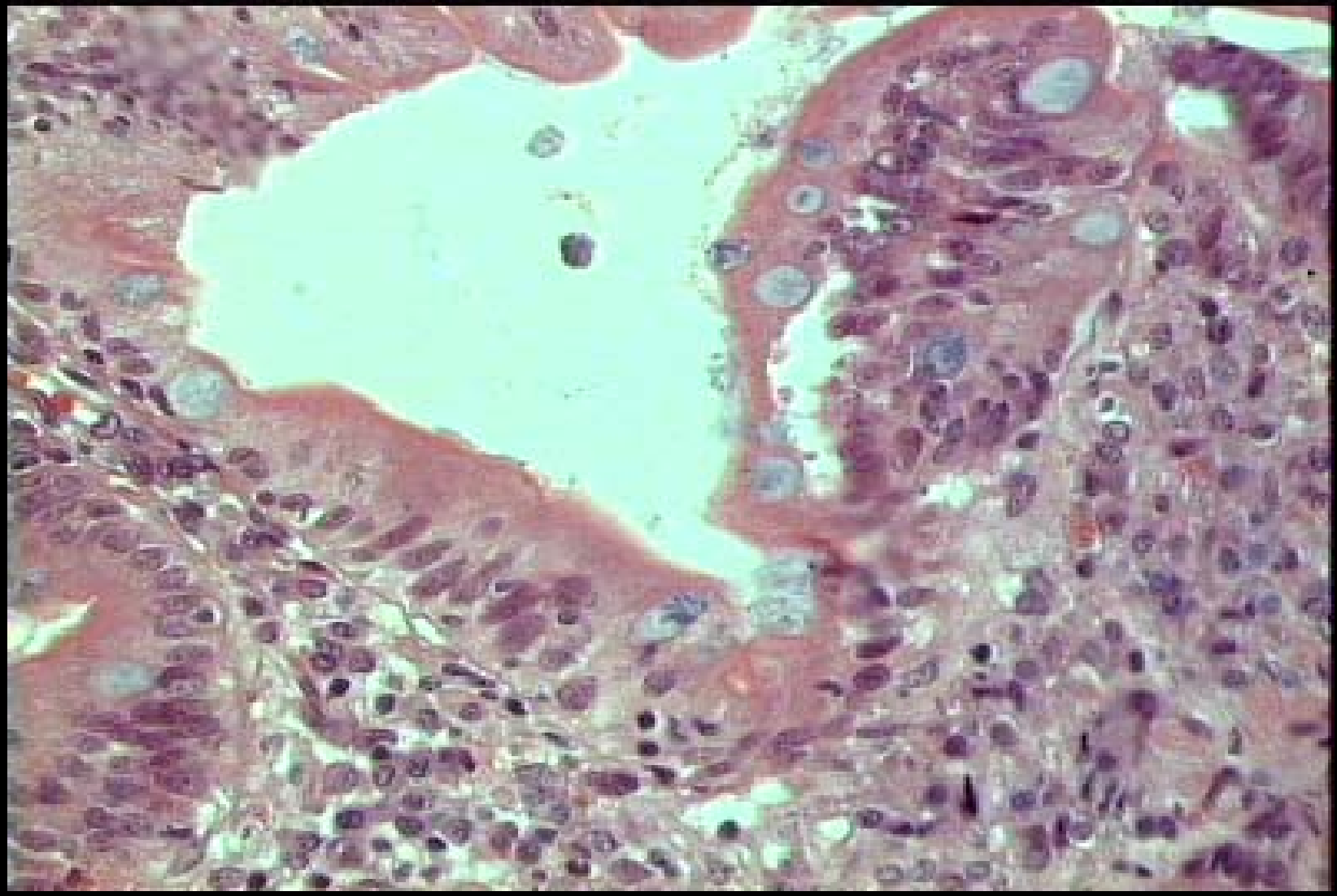
MAIN MENU

QUIT

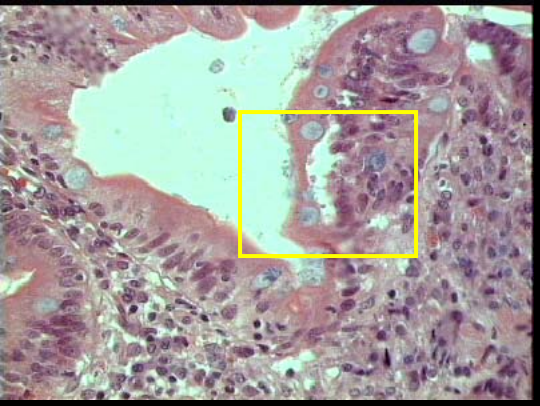
DIAGNOSIS:

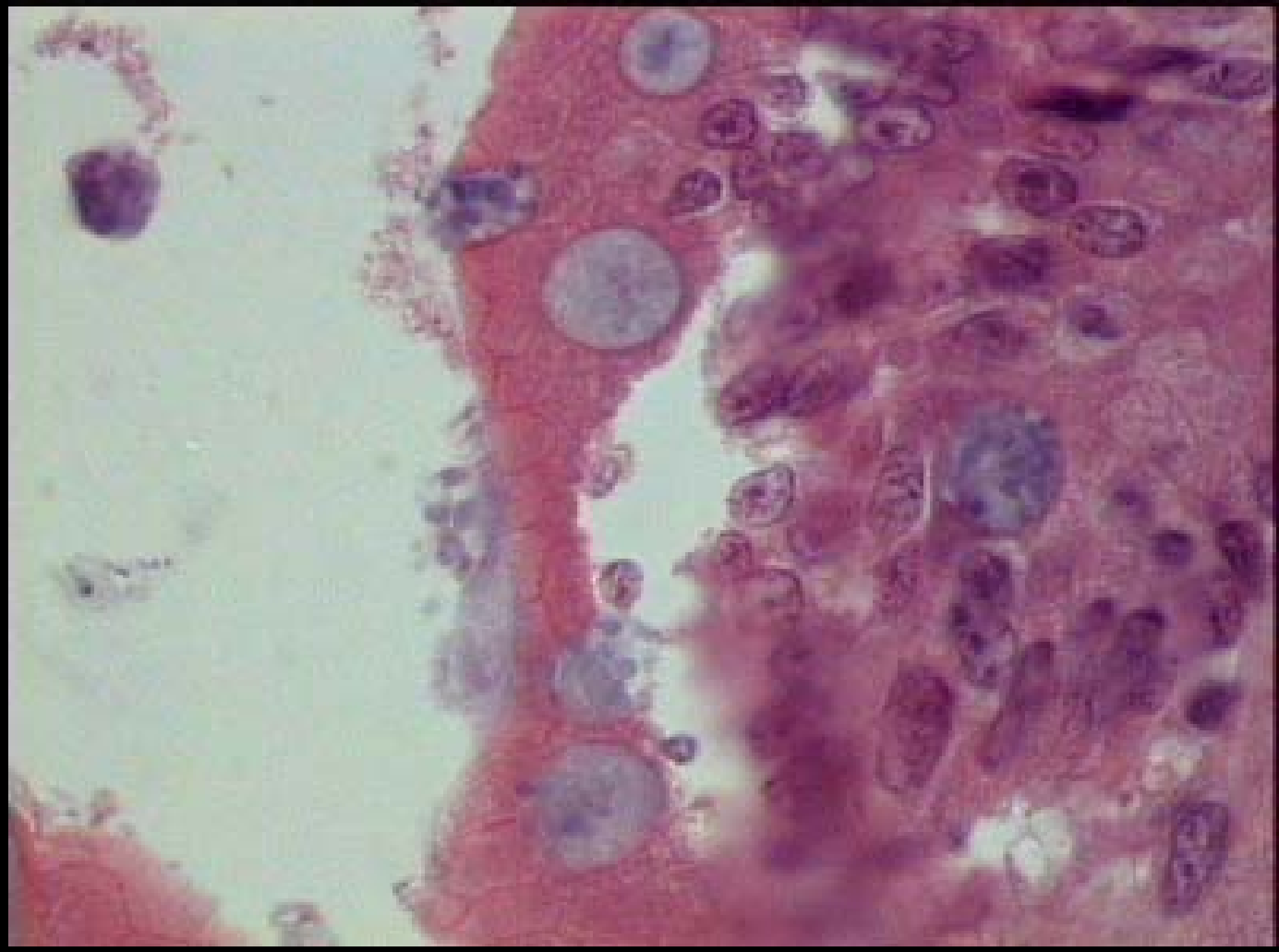
ENTEROCOLITIS DUE TO PARASITIC INFESTATION CONSISTENT WITH CRYPTOSPORIDIOSIS.

DIFFERENTIAL HISTOLOGICAL DIAGNOSIS



Some biopsies show basophilic rounded structures on the mucosal surface suggestive of cryptospora.





Higher magnification on the previous area.

MAIN MENU

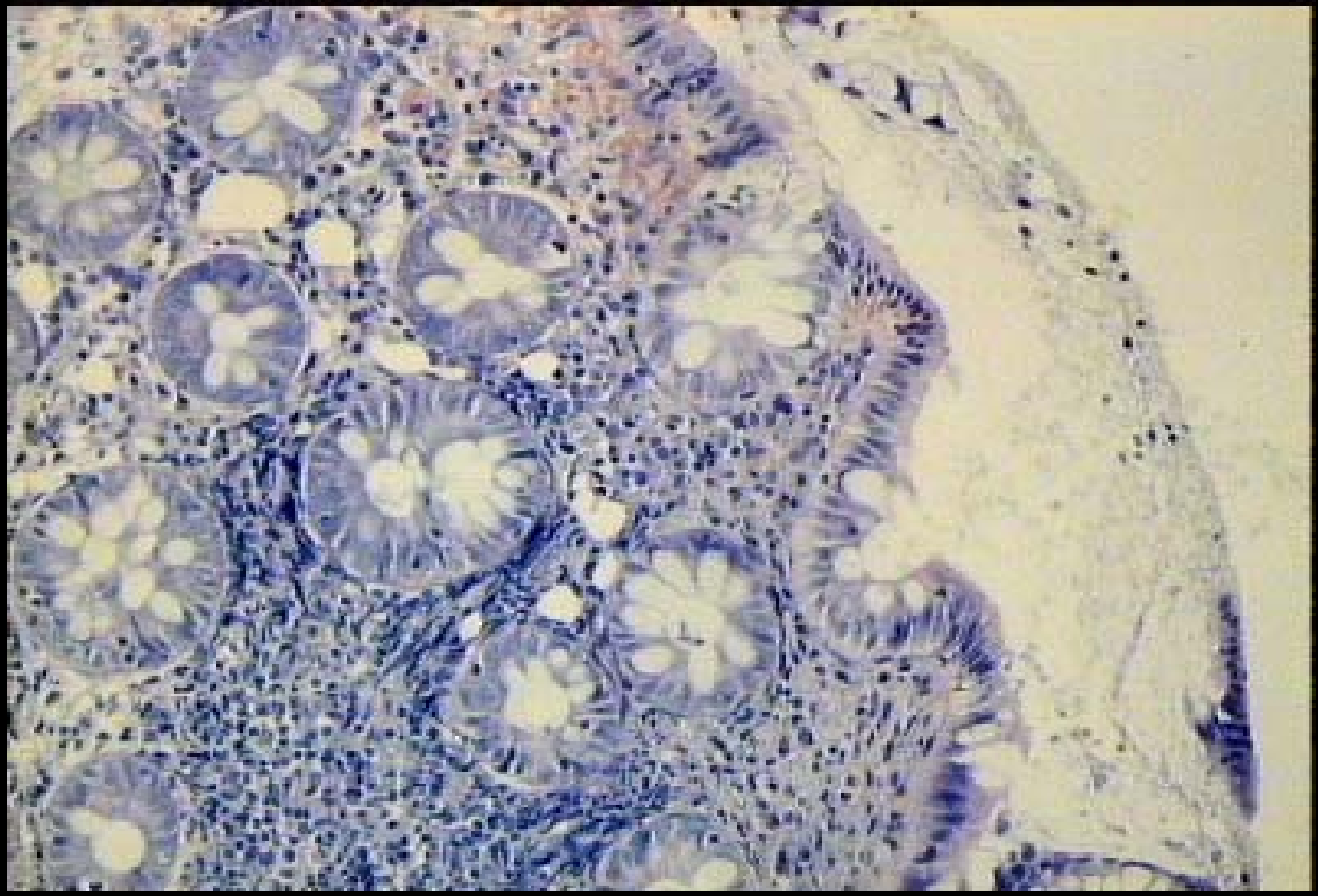
QUIT

Giemsa stain is negative for microorganism, confirming the mucinous nature of the material observed on the HE.

Another colonic biopsy showing heavy basophilic granular material on the surface of the mucosa.

MAIN MENU

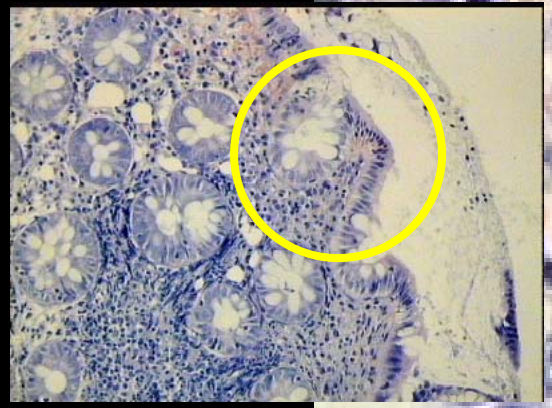
QUIT



Giemsa stain

MAIN MENU

QUIT



Giemsa stain is negative for cryptospora, some nuclear debris are noted. The basophilic granular material on HE is probably due the fixative.