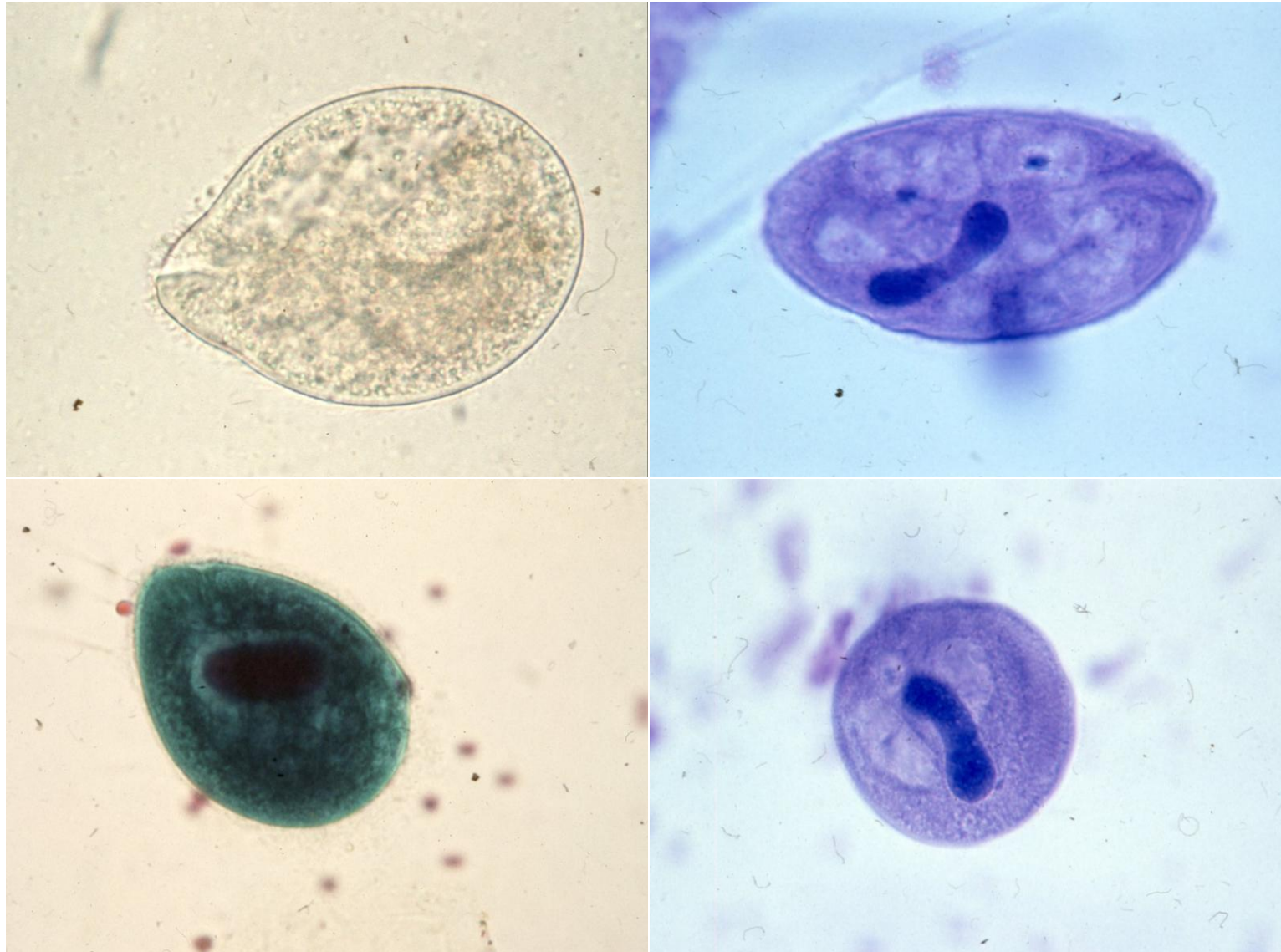


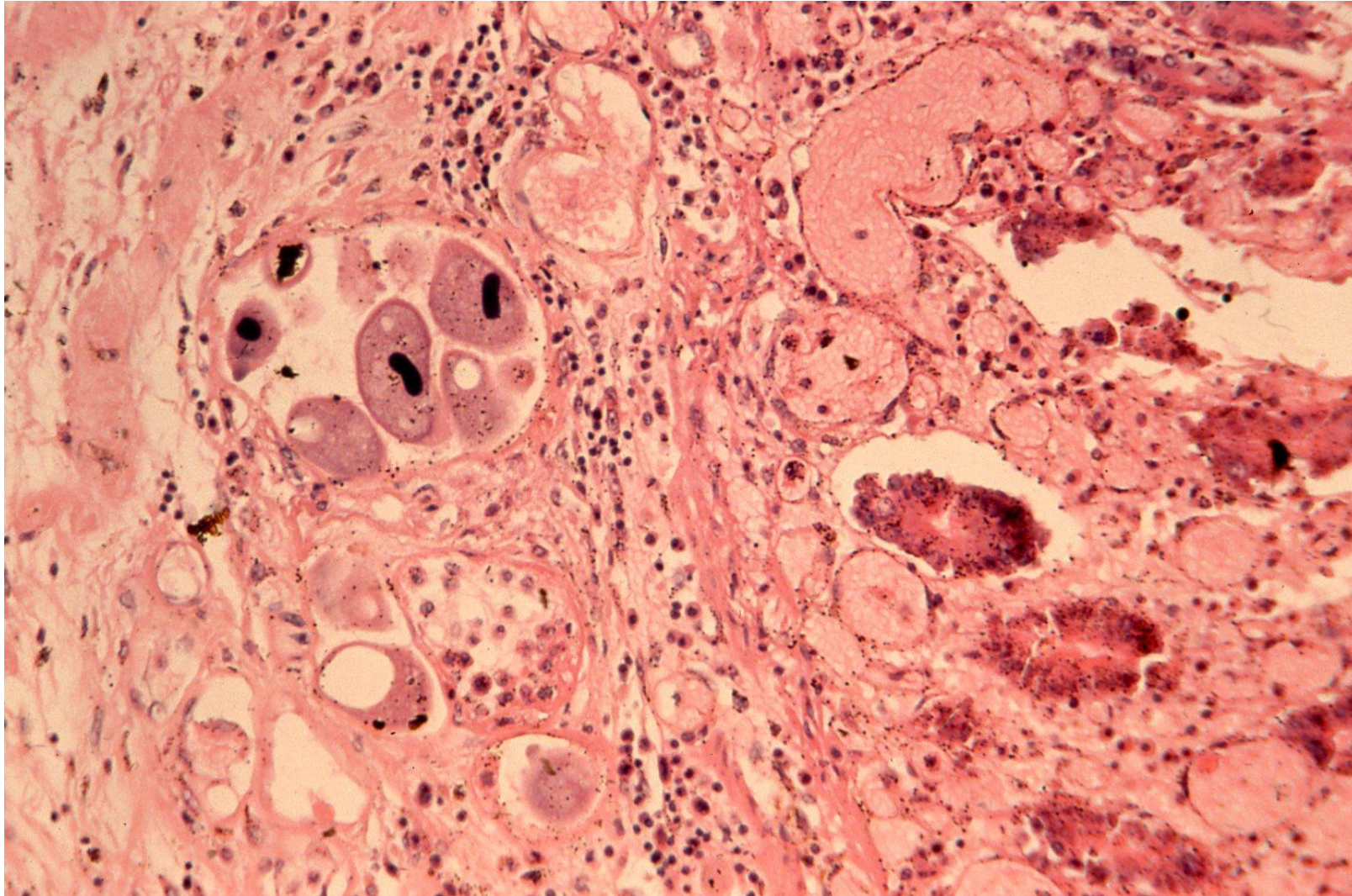
Balantidium coli infection

Balantidium coli is a zoonotic, ciliated protozoa causing balantidiasis. It is the only member of the ciliate phylum known to be pathogenic to the human. The normal host is a domestic pig. *Balantidium coli* lives in the cecum and colon of humans, pigs, rats, and other mammals. Trophozoites may invade the wall of the colon, causing dysentery-like symptoms in severe cases. Microscopically, the trophozoites possess two nuclei: The macronucleus is long and sausage-shaped, and the spherical micronucleus is nested next to it. Cilia and contractile vacuoles are visible. The large-sized trophozoites measure 50-130 μ m in length and 20-70 μ m in width. Cysts, smaller than trophozoites, are round and contain a tough, heavy cyst wall. Living trophozoites and cysts are yellowish or greenish in color. Infection occurs when the cysts are ingested through contaminated food or water.

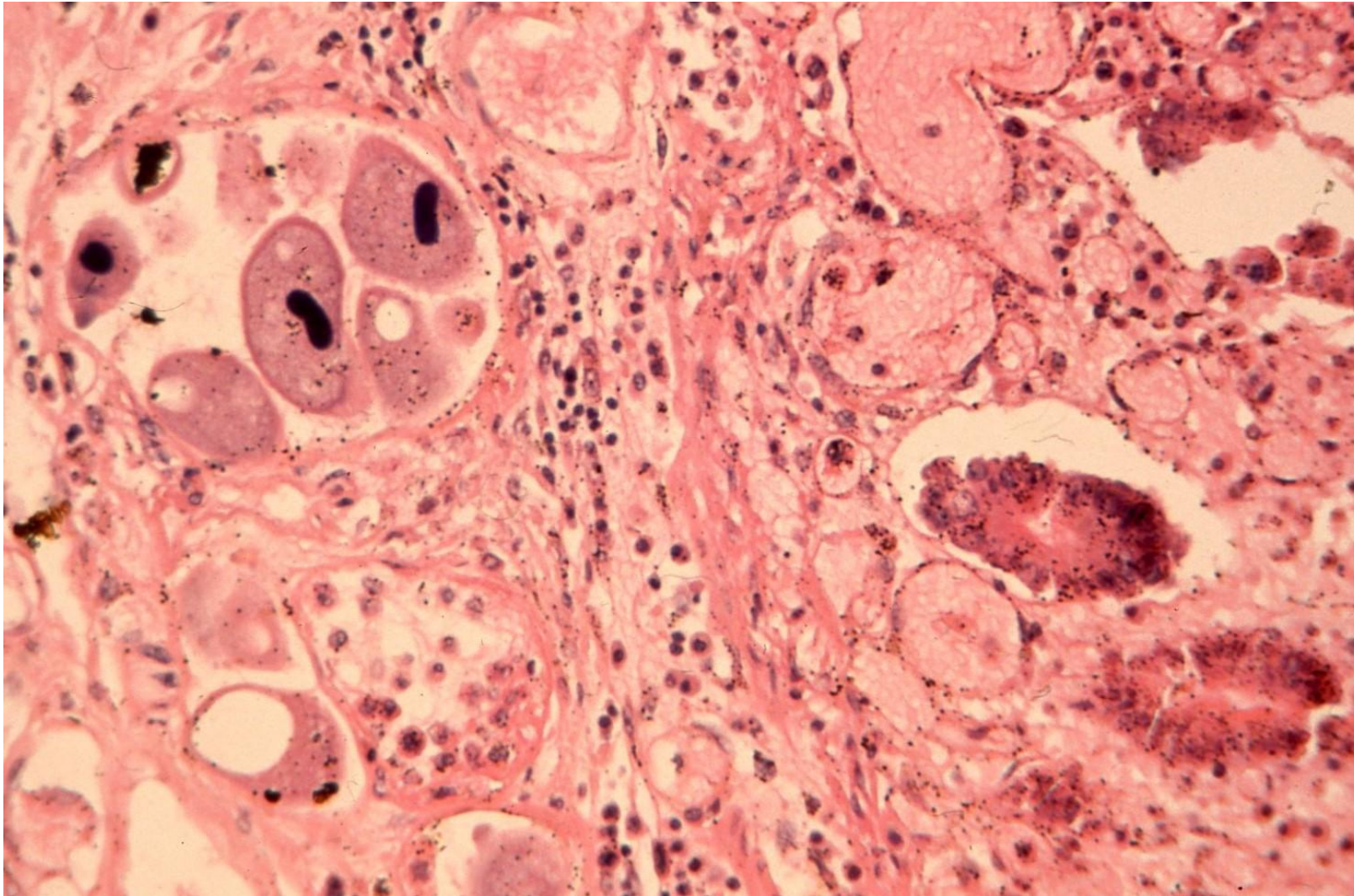
Ref.: Ref.: da Silva RKM, et al. Balantidiasis in humans: a systematic review and meta-analysis. Acta Trop 2021; 223: 106069. doi: 10.1016/j.actatropica.2021.106069



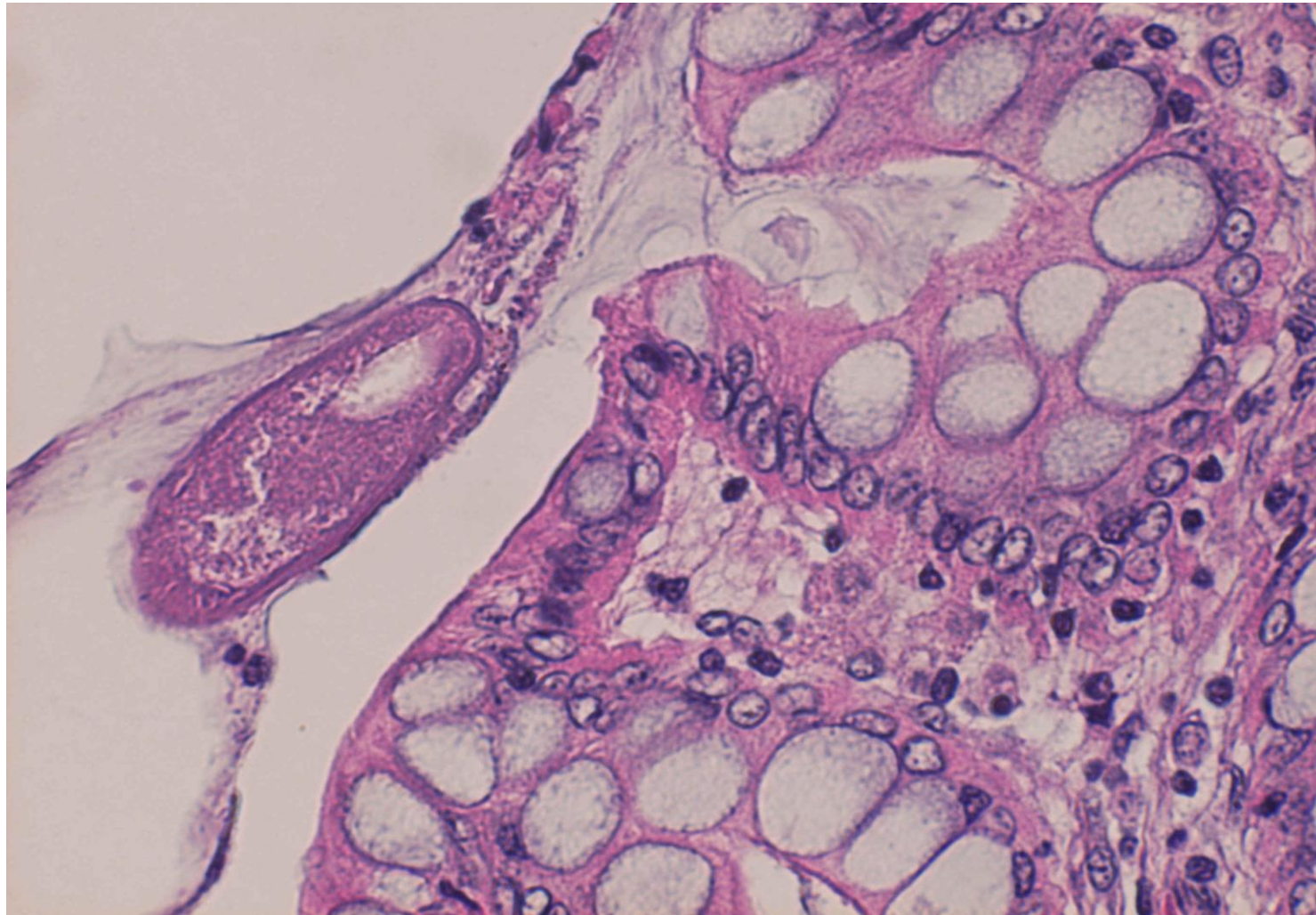
The trophozoite and cyst of cultured *Balantidium coli*. Left top: unstained, right top: Giemsa, left bottom: Gomori's trichroma, right bottom: Giemsa (cyst). Large-sized protozoa contains a characteristic macronucleus. Ciliated surface is seen in the trophozoite.



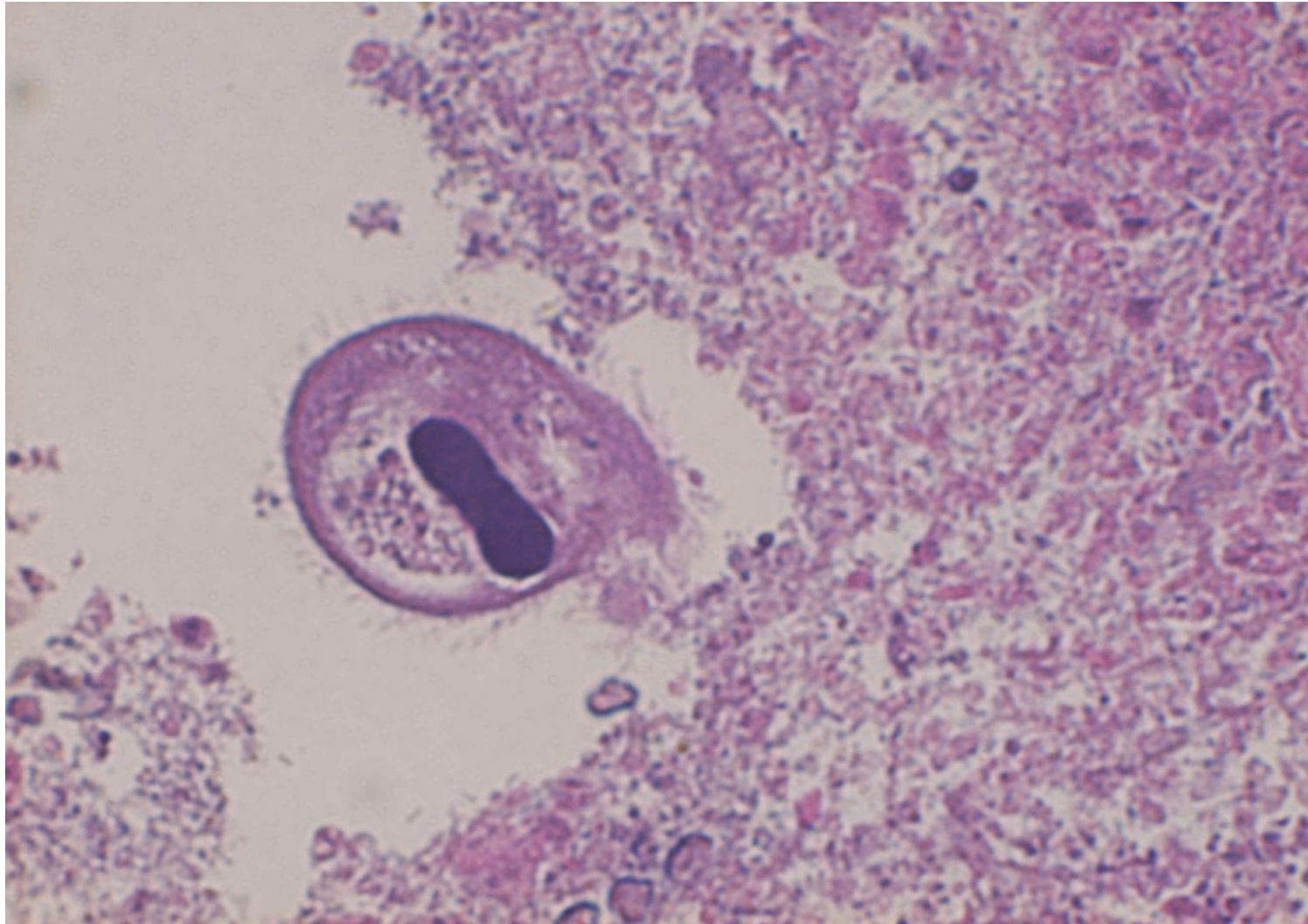
Human balantidiasis. Trophozoites invade the submucosa of the colon. H&E-1



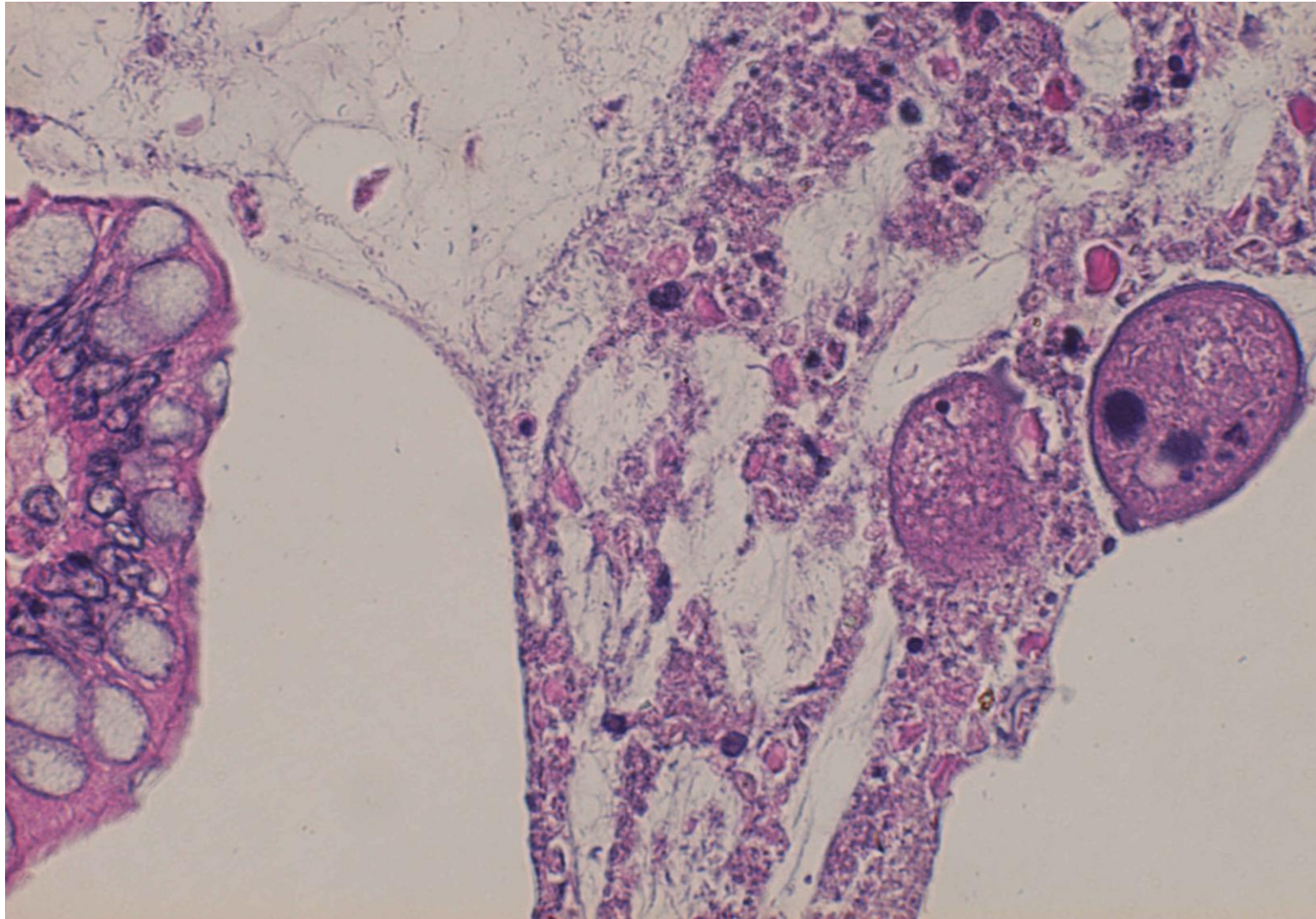
Human balantidiasis. Trophozoites invade the submucosa of the colon. H&E-2



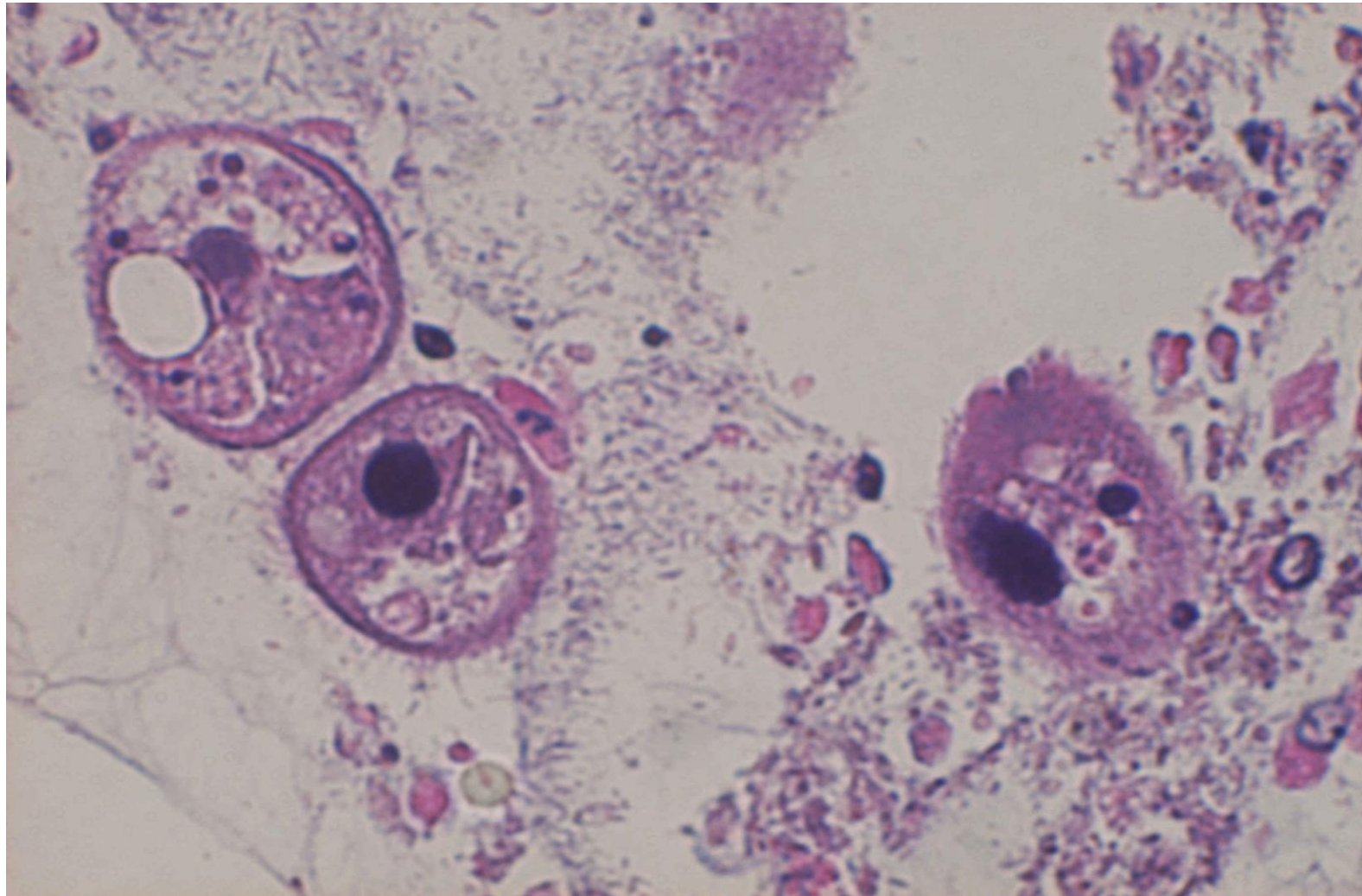
Swine balantidiasis. A trophozoite is seen on the surface of the swine colonic mucosa. H&E-a



Swine balantidiasis. A trophozoite with a peculiar macronucleus invades the ulcerated colonic wall. H&E-b



Swine balantidiasis. Trophozoites are seen in the necrotic debris on the ulcerated colon. H&E-c



Swine balantidiasis. Trophozoites with a peculiar macronucleus are seen in the necrotic debris on the ulcerated colon. H&E-d