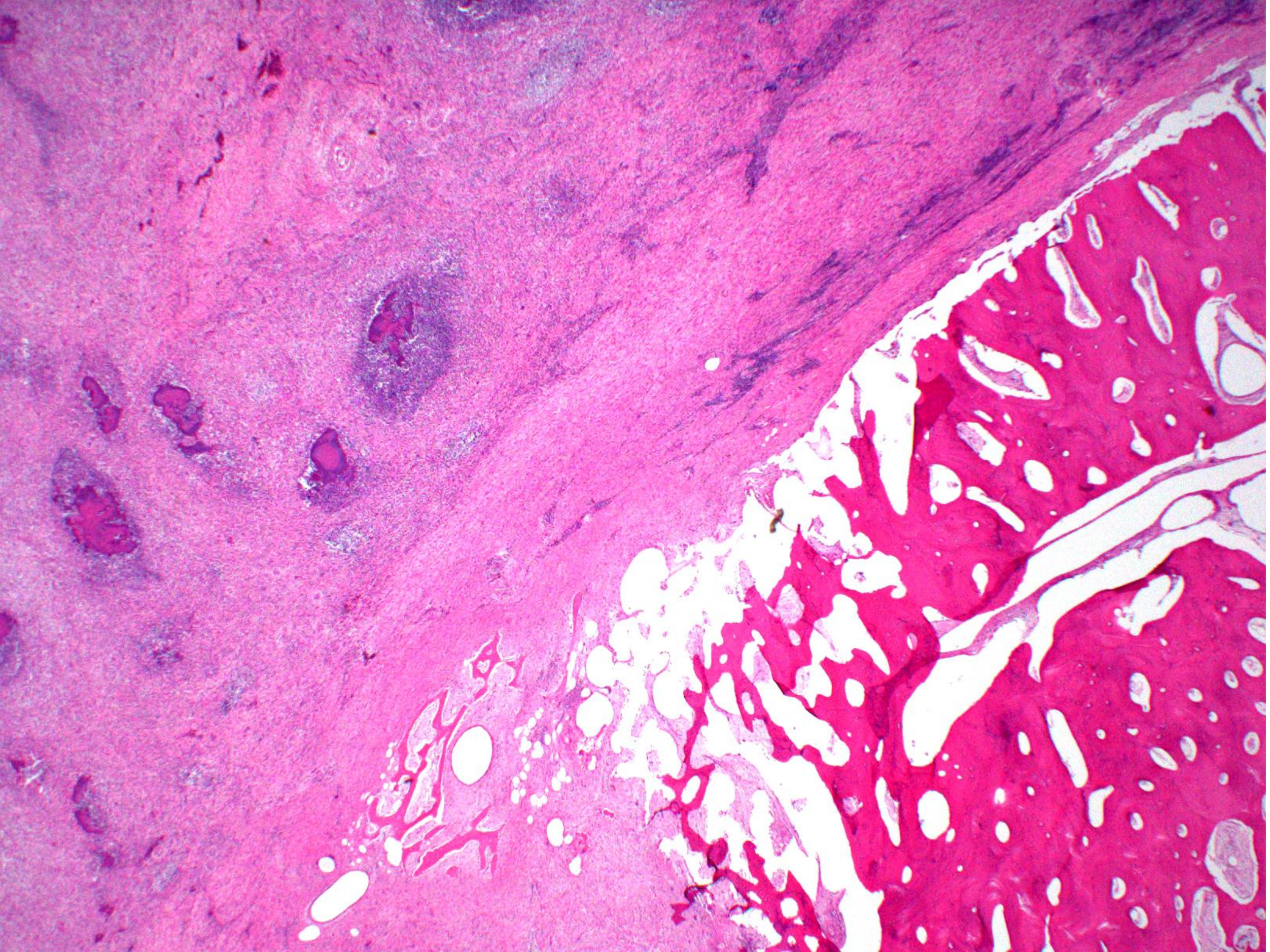
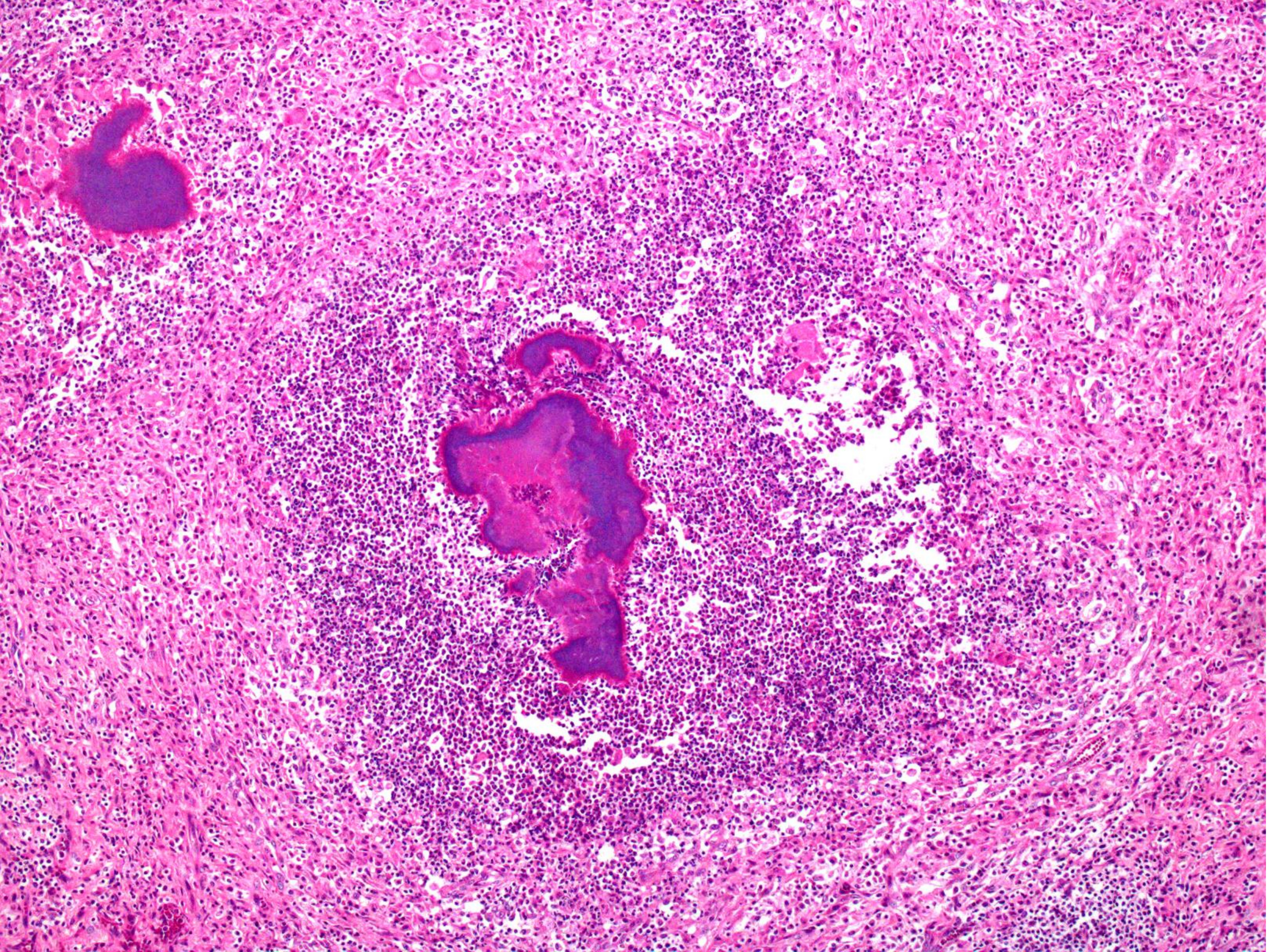
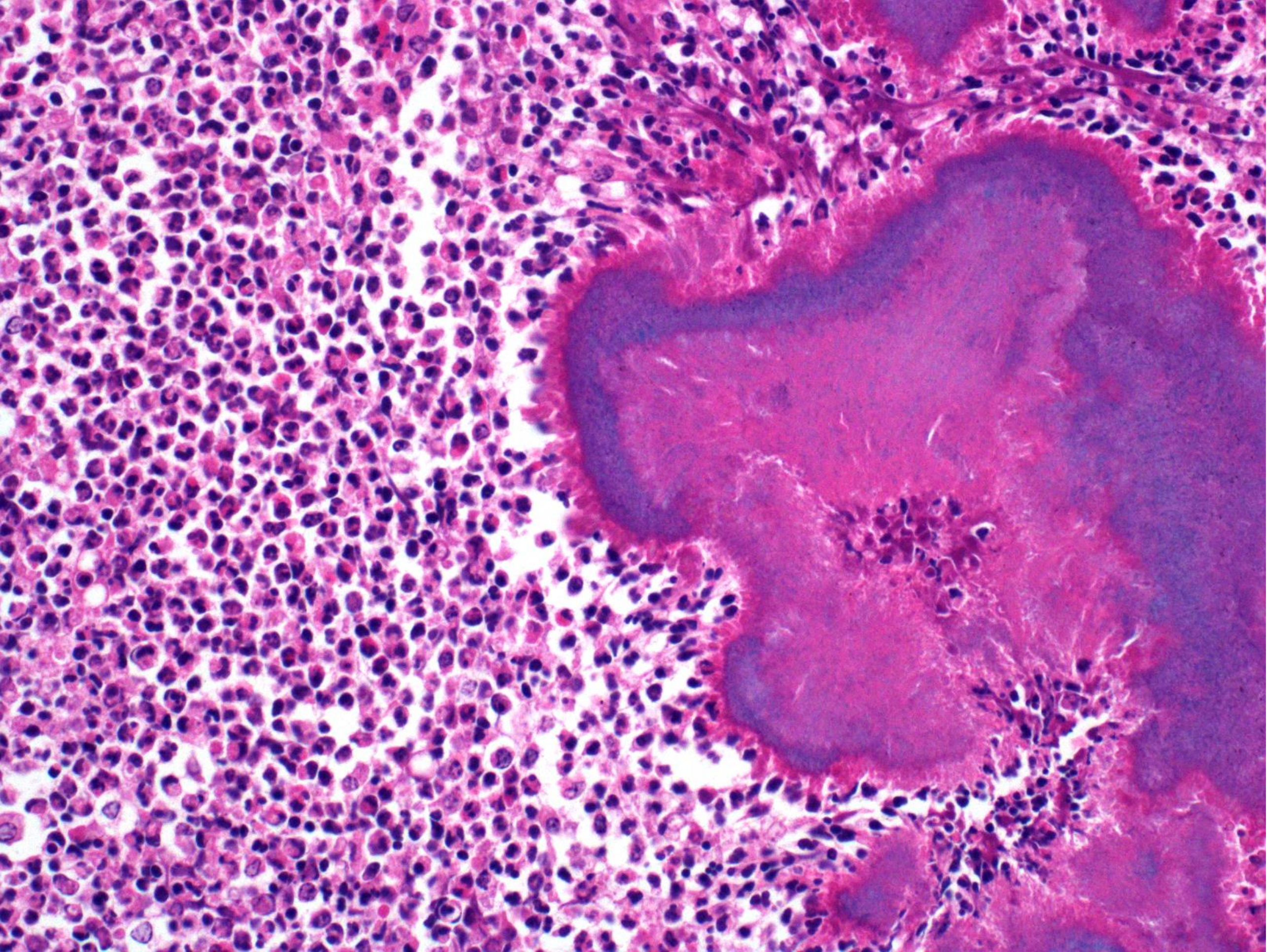
Case 1

Cattle

Contributor: Vasyl Shpyrka





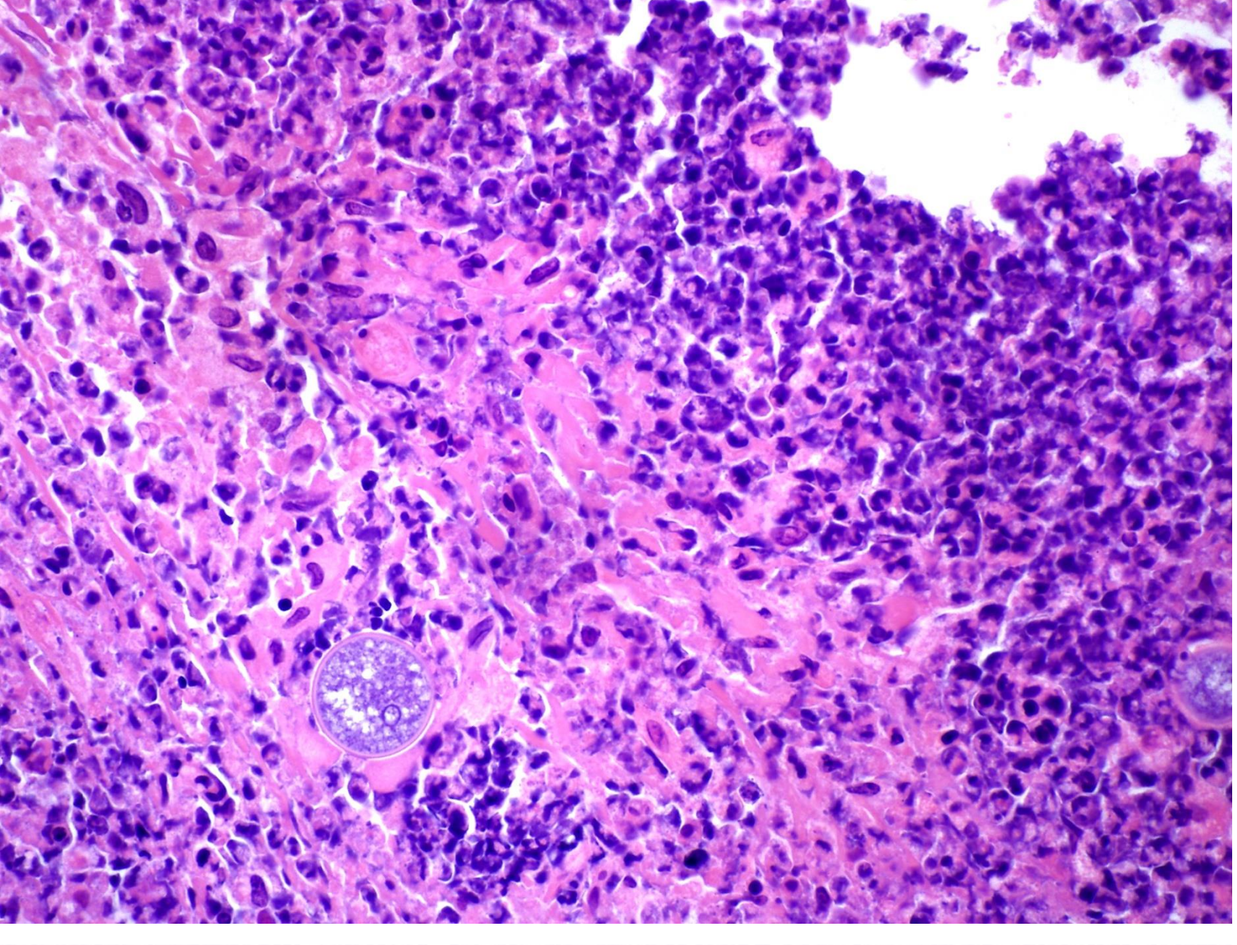


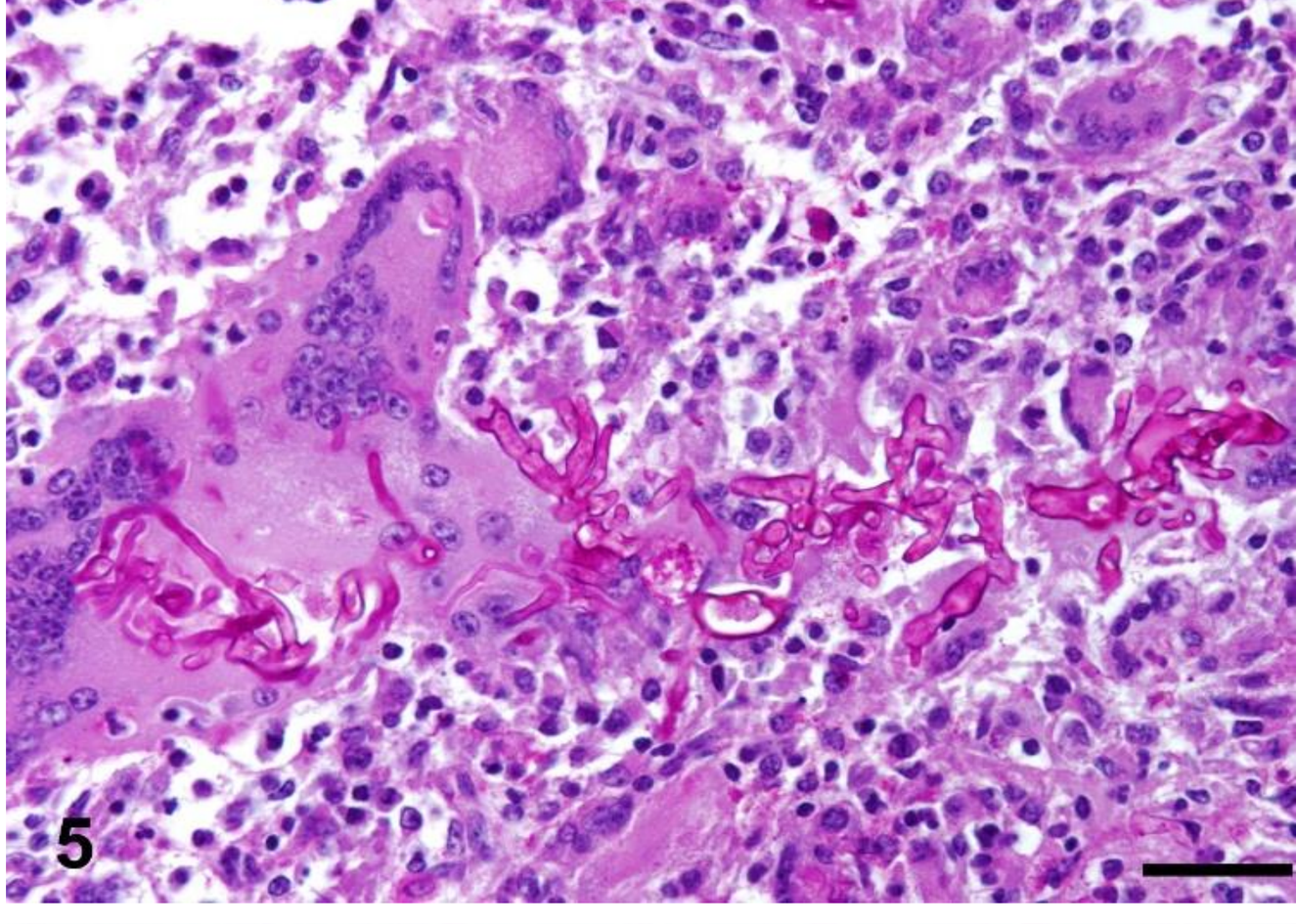
Disease and/or morphologic diagnosis:

Lumpy jaw

Etiology:

Truperella pyogenes; Actinomyces bovis

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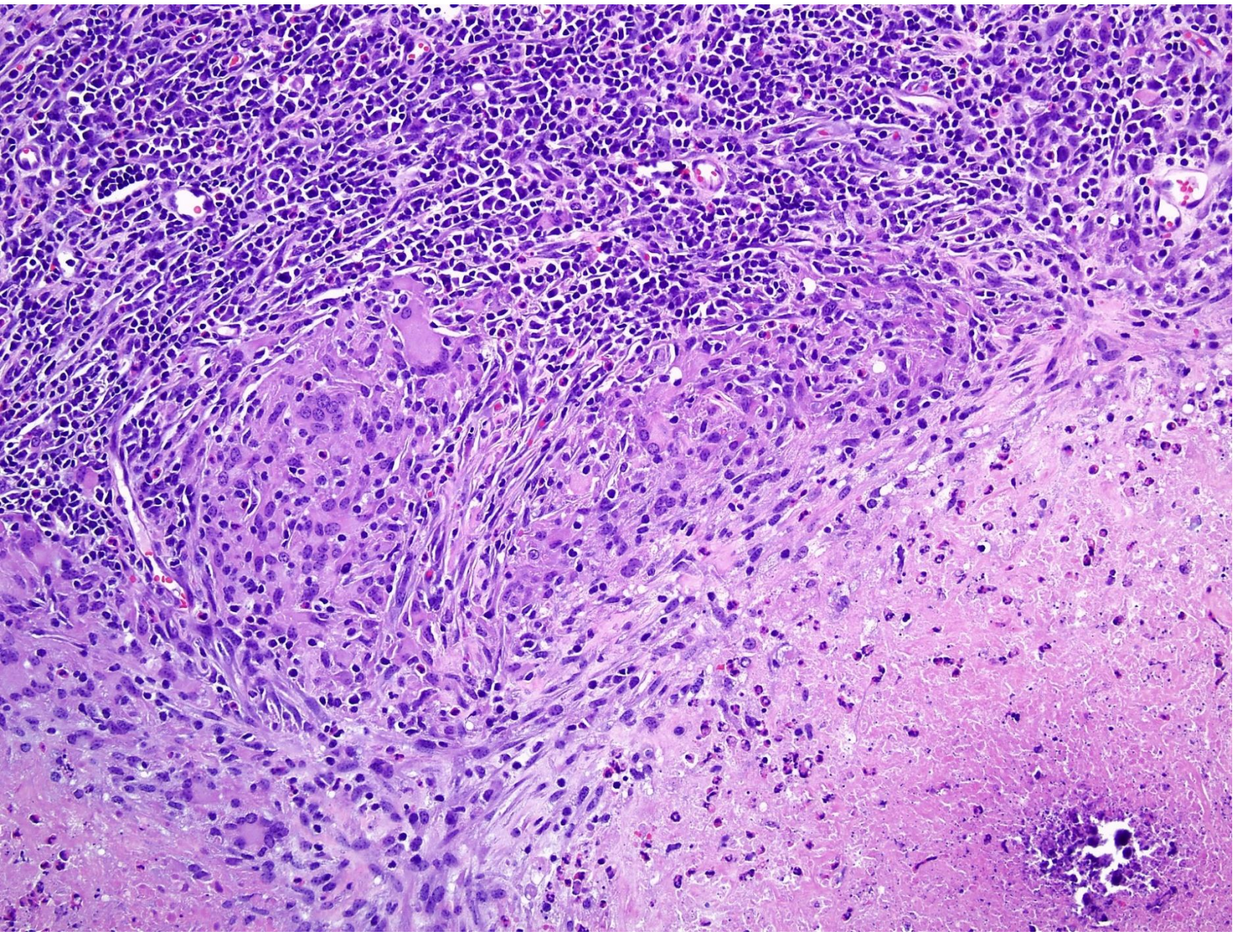
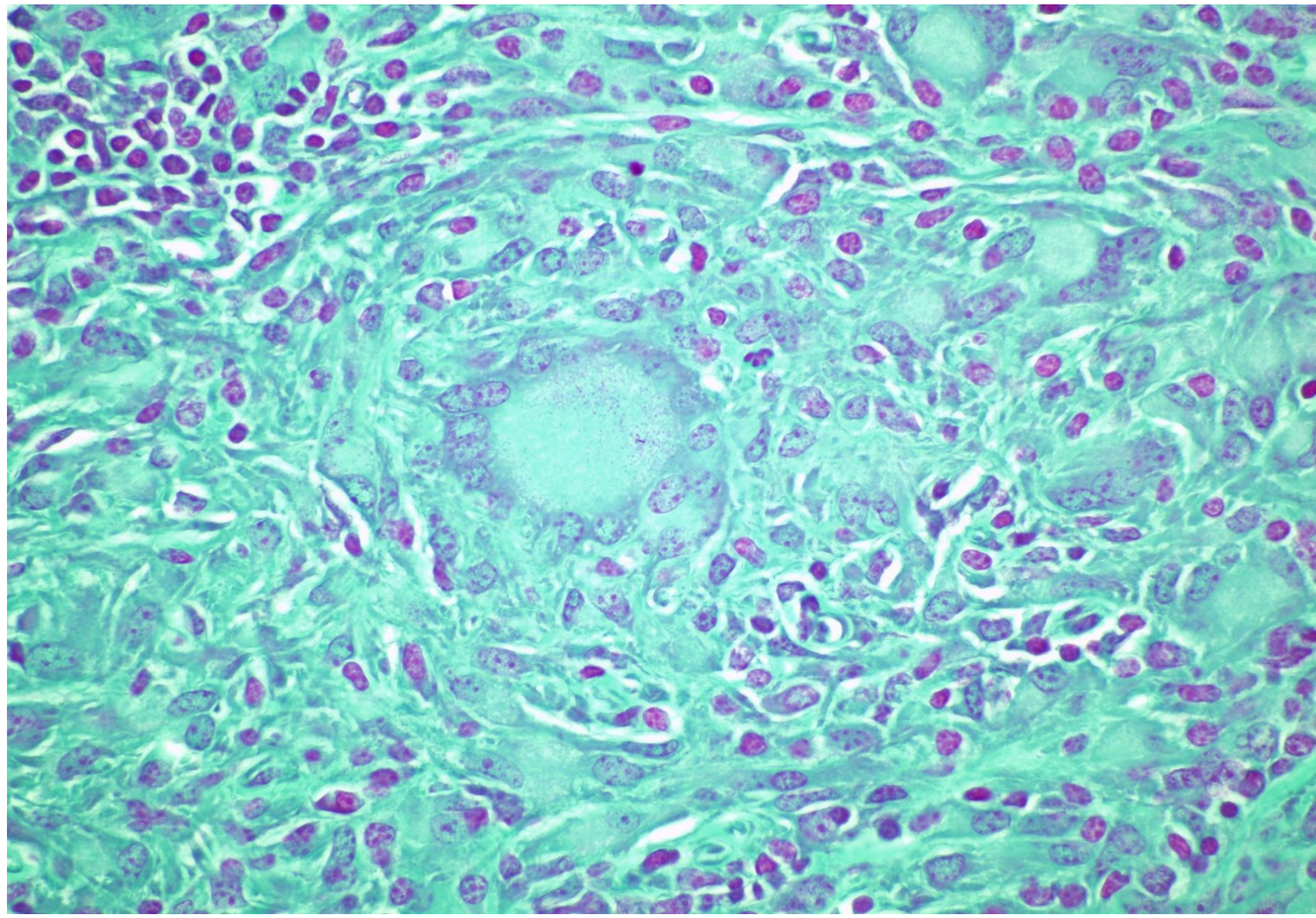




Case 19

Asian elephant

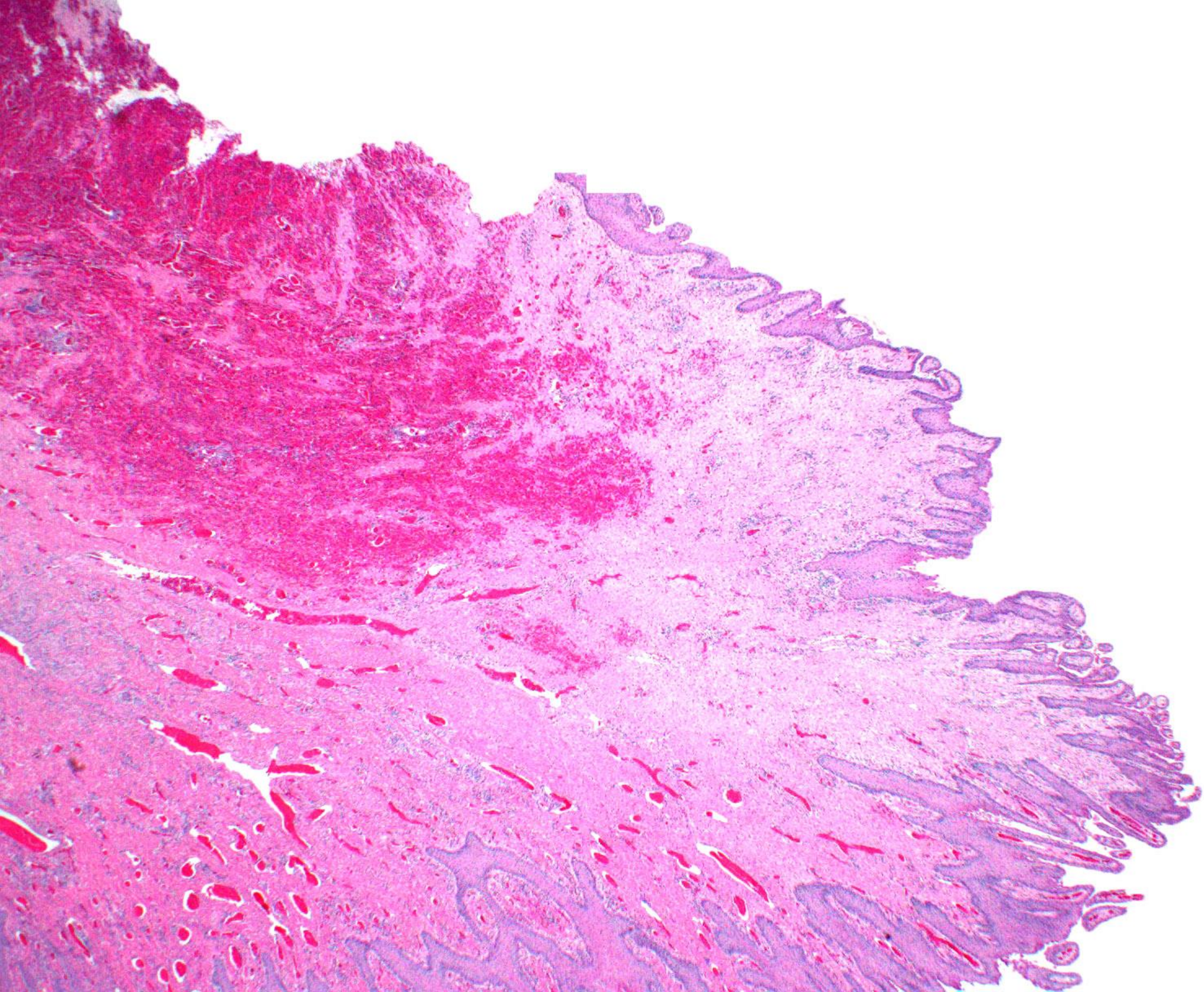
Contributor: William O’Neill

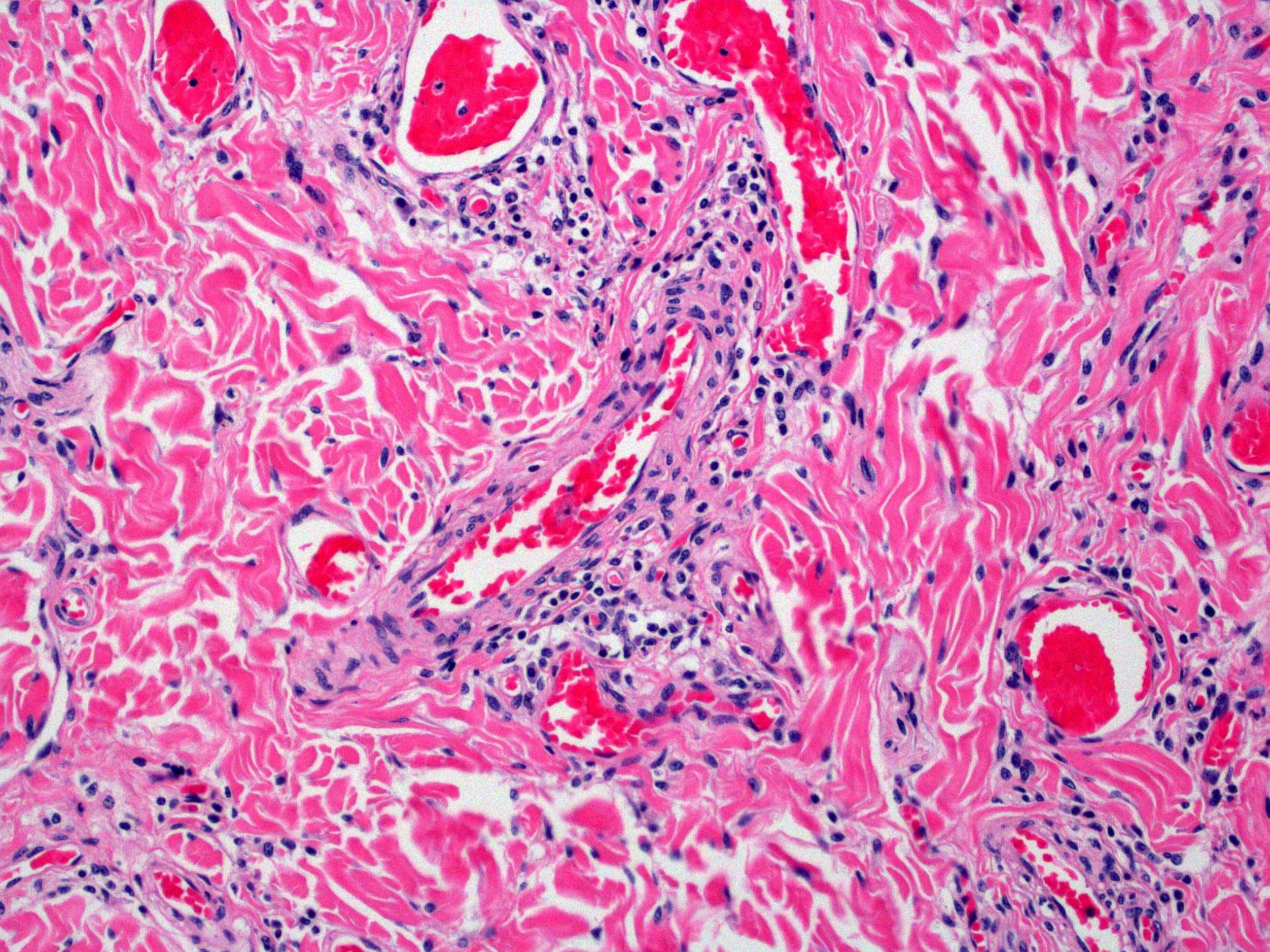
Disease and/or morphologic diagnosis:

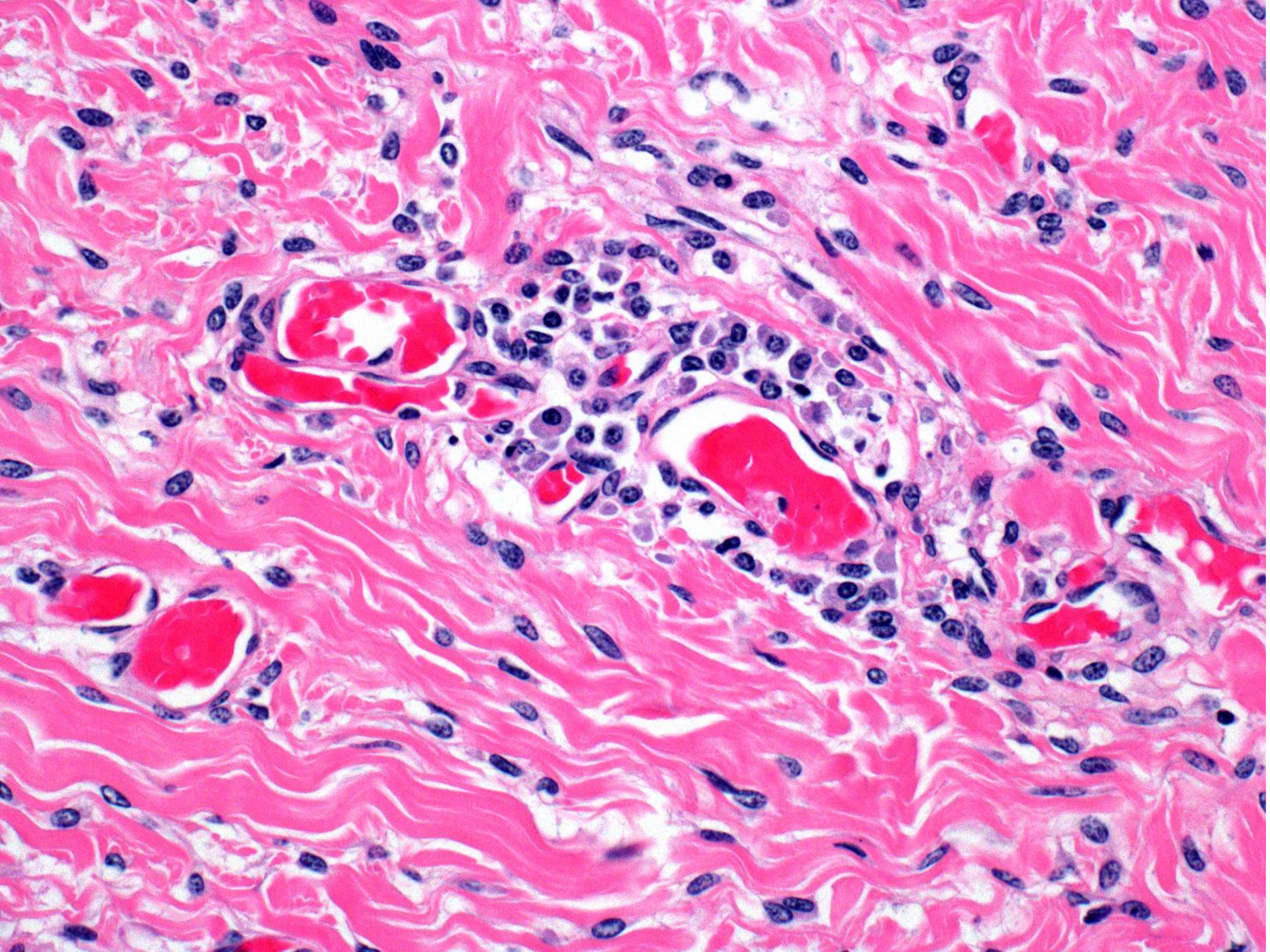
Herpesviral stomatitis and vasculitis

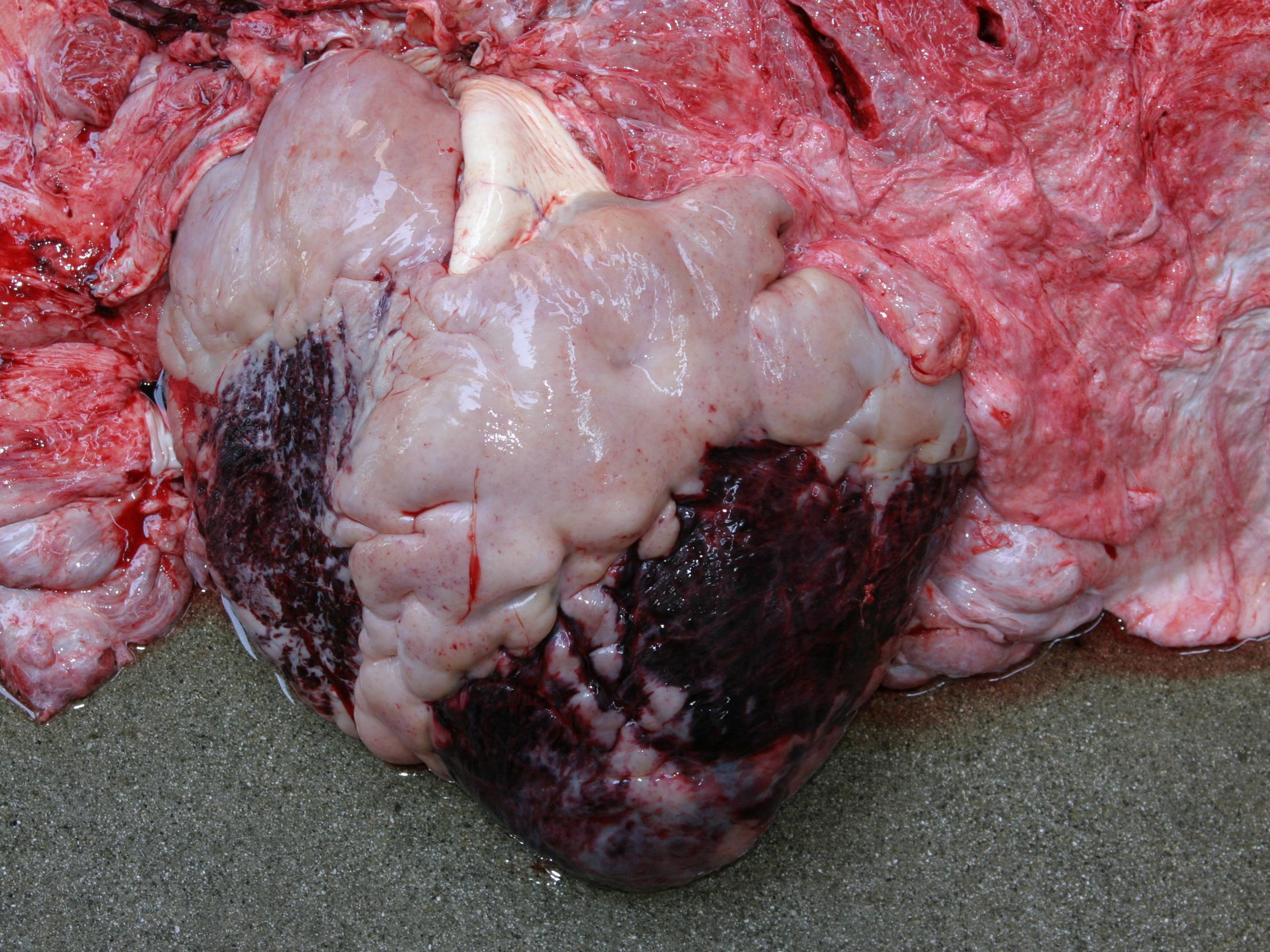
Etiology:

Elephant endotheliotropic herpes virus









ILAR Journal, 2015, Vol. 56, No. 3, 283–296

doi: 10.1093/ilar/ilv041
Article

Review of Elephant Endotheliotropic Herpesviruses and Acute Hemorrhagic Disease

Simon Y. Long, Erin M. Latimer, and Gary S. Hayward

Simon Y. Long, MS, VMD, is a pathology postdoctoral fellow in the Department of Molecular and Comparative Pathobiology and a graduate student under Dr. Gary S. Hayward in the graduate program in Cellular and Molecular Medicine at Johns Hopkins School of Medicine in Baltimore, Maryland. Erin M. Latimer, MS, is a research specialist and manager of the National Elephant Herpesvirus Laboratory at the Smithsonian's National Zoological Park in

Case 31

Neonatal Red Angus-Simmental bull calf

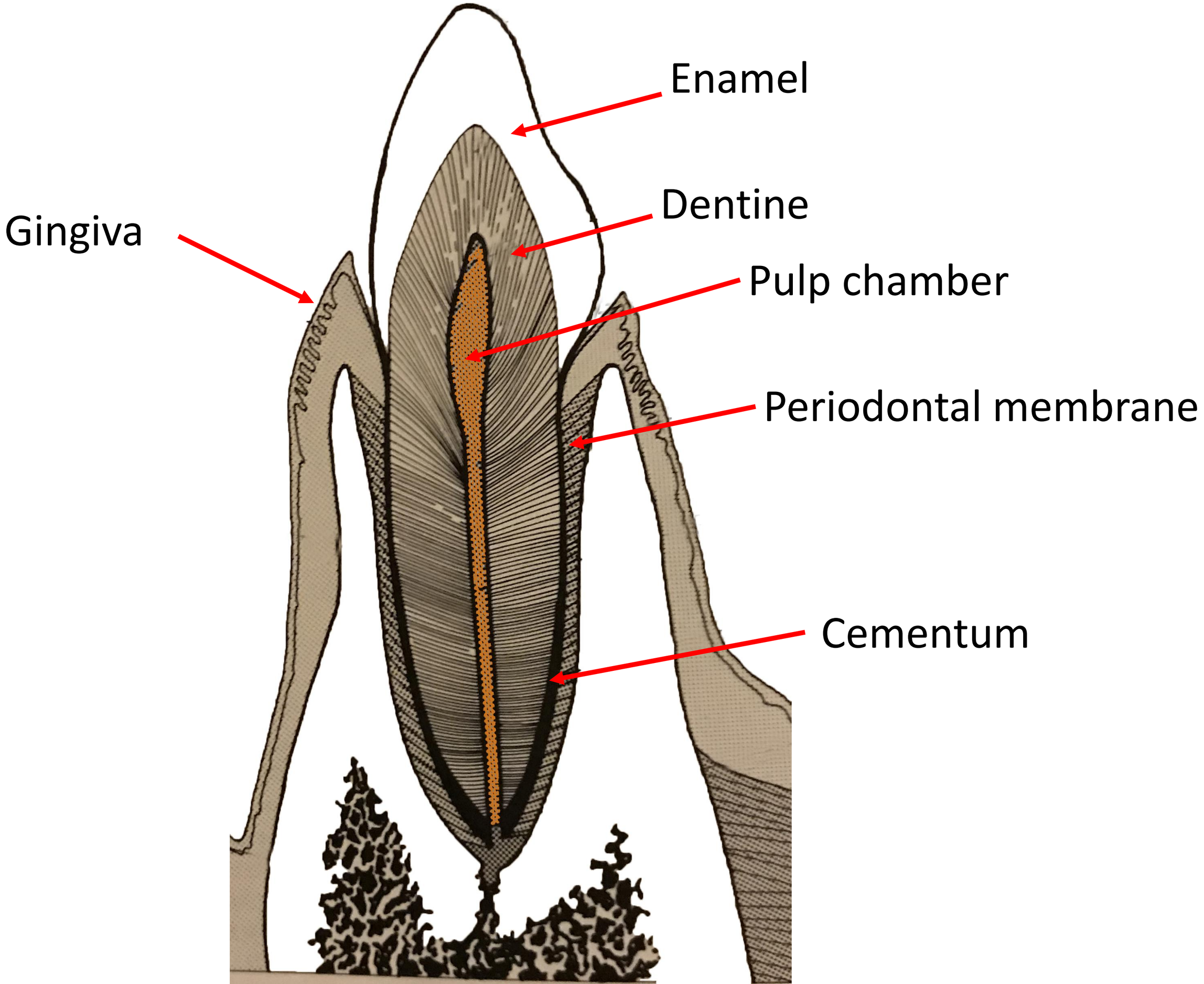
Contributor: Donal O’Toole

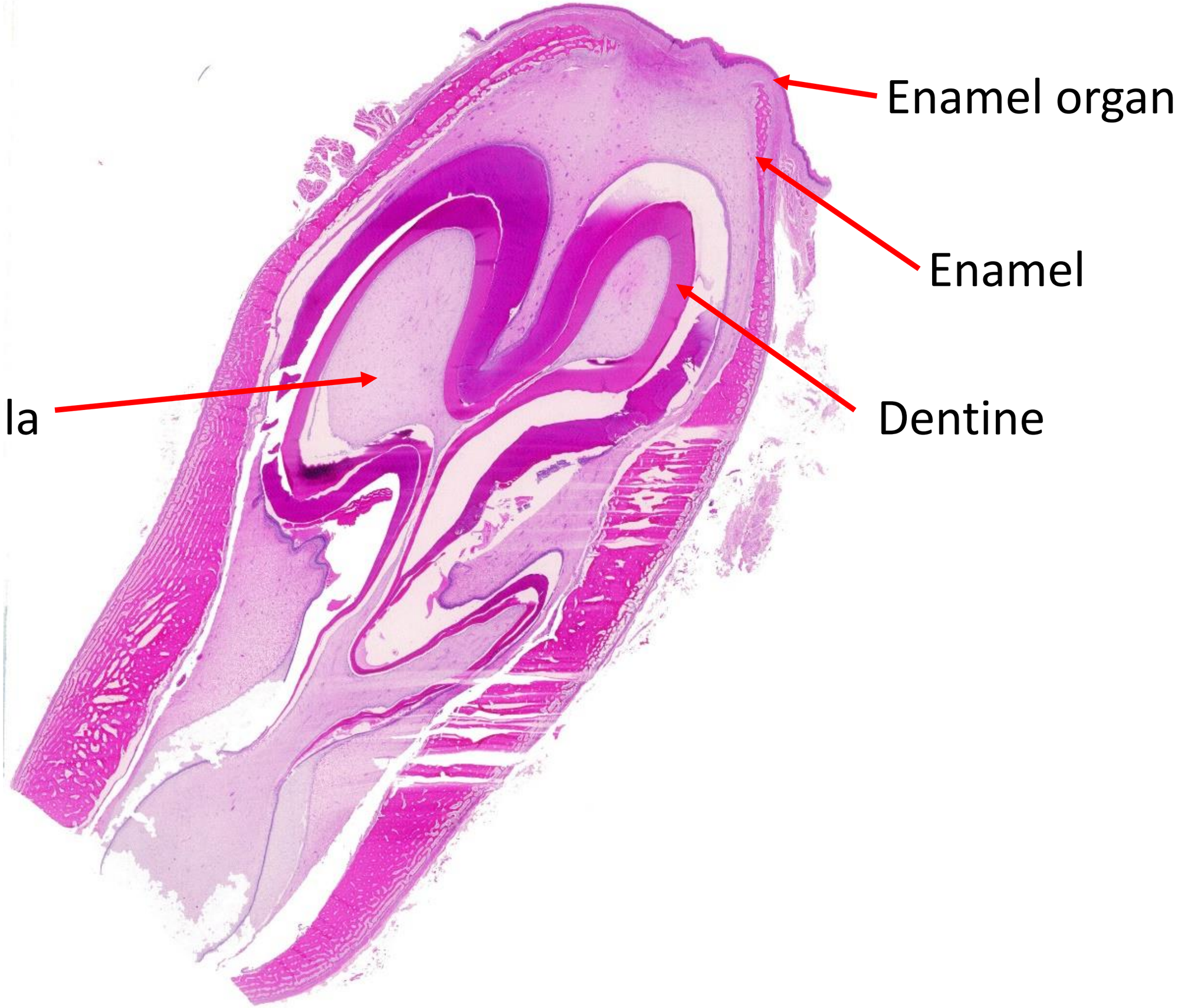
Disease/morphologic diagnosis:

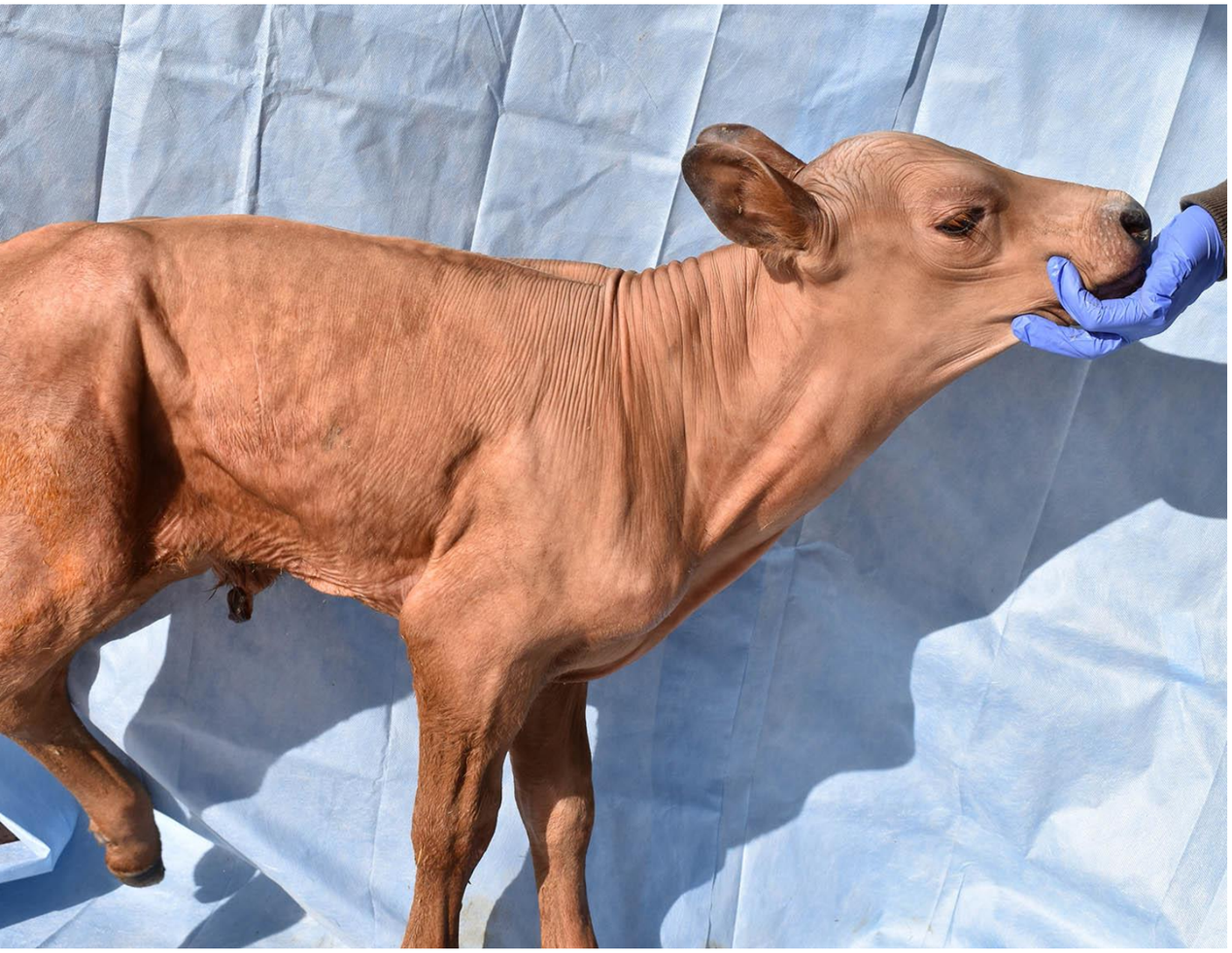
Congenital hypotrichosis and anodontia defect (HAD)

Etiology:

Novel mutation in *EDA* gene on X chromosome


Enamel
Dentine
Gingiva
Pulp chamber
Periodontal membrane
Cementum


Enamel organ
Enamel
Dentine
Dental papilla



Case 2

Dog

Contributor: Laura White

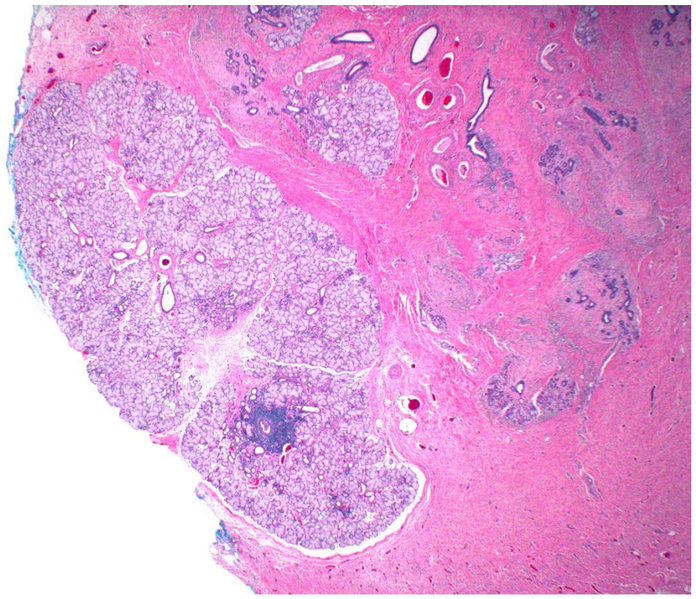
Disease and/or morphologic diagnosis:

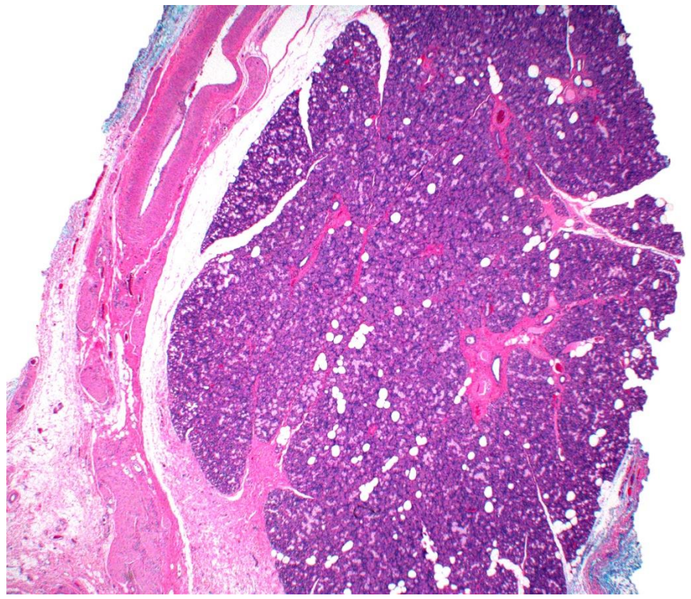
Morphologic diagnosis: Submandibular salivary gland; marked extensive chronic lobular atrophy and loss with fibrosis, duct epithelial hyperplasia and squamous metaplasia

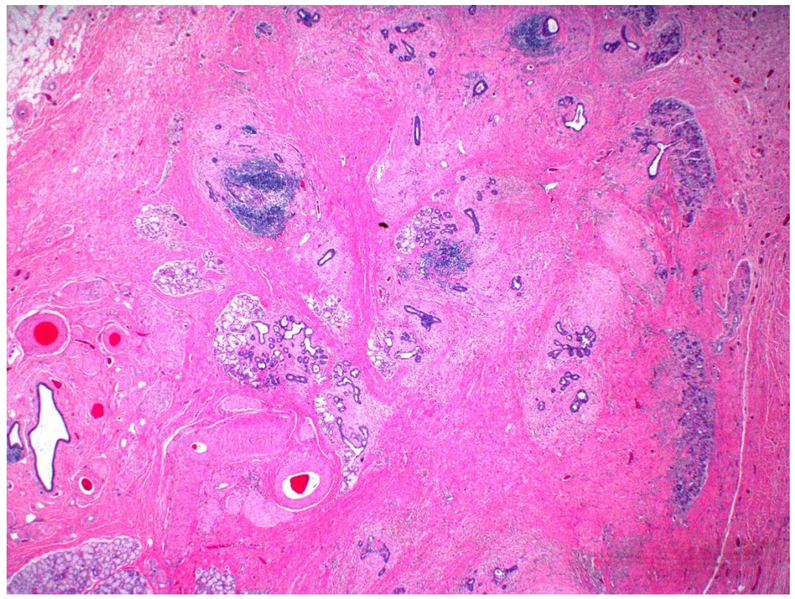
Condition: Necrotizing sialometaplasia

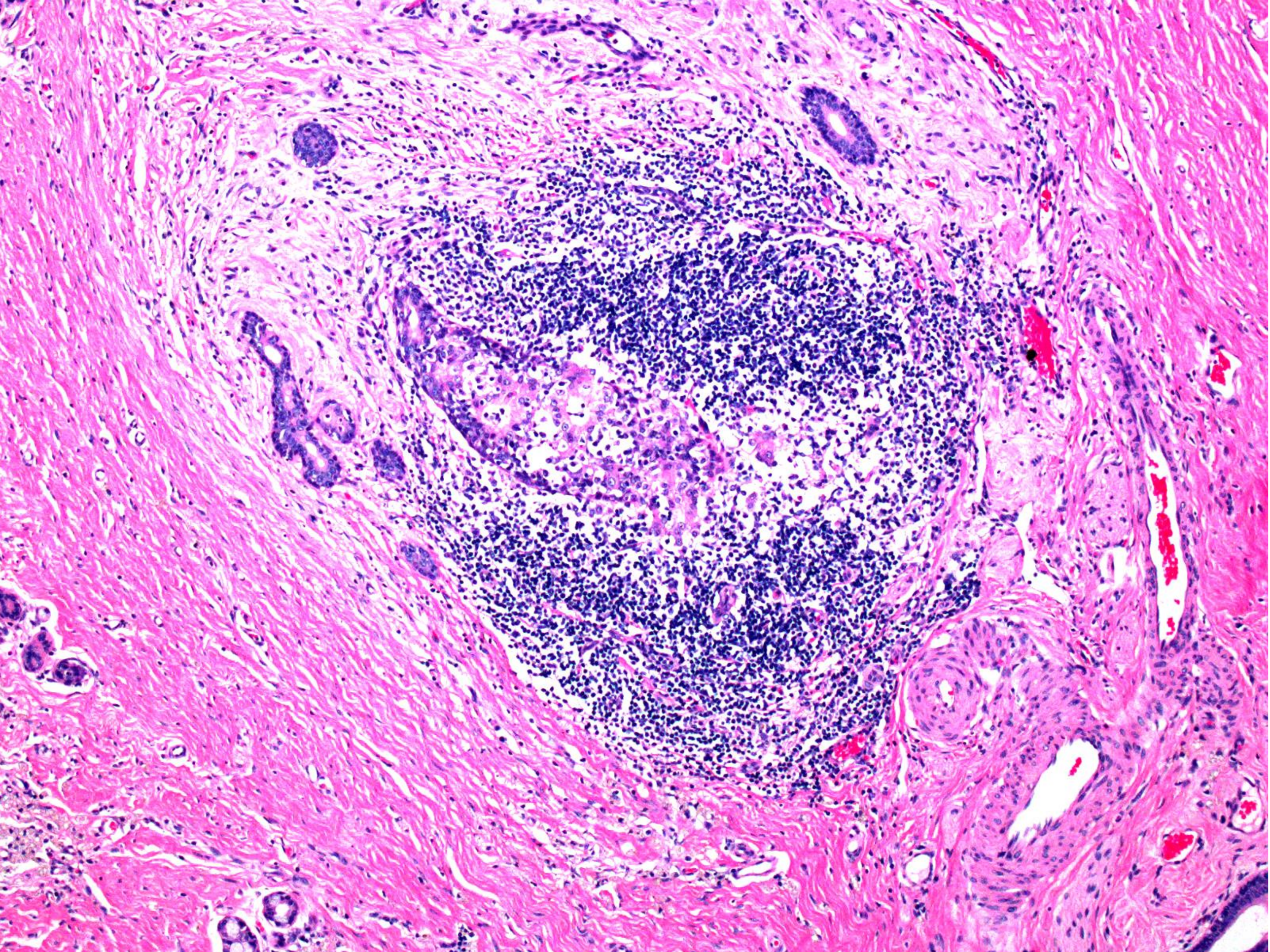
Etiology:

Salivary gland infarction









J Toxicol Pathol 2015; 28: 177–180

Case Report

Spontaneous necrotizing sialometaplasia of the submandibular salivary gland in a Beagle dog

Sydney Mukaratirwa[1*], Claudio Petterino[1], and Alys Bradley[1]

J Vet Diagn Invest 22:975–977 (2010)

Necrotizing sialometaplasia of the parotid gland in a dog

Ha-Young Kim, Gye-Hyeong Woo, You-Chan Bae,[1] Yeon-Hee Park, Yi-Seok Joo

Abstract. Necrotizing sialometaplasia (NS) is a self-limiting, benign, ischemic, inflammatory disease that is most often described in the submandibular glands of dogs, with clinical and histologic features that resemble malignancy. Unilateral swelling of the parotid salivary gland in a 7-year-old Cocker Spaniel dog was diagnosed as NS. The dog also had otitis externa on the same side as the parotid gland lesions. The main histologic features were included lobular necrosis of salivary tissue; fibrinoid necrosis of some arteries; marked squamous metaplasia of duct and/or acinar epithelium, with intercellular bridge formation; preservation of salivary lobular morphology; and variable inflammation and fibrosis. Etiologic factors for NS in both humans and animals remain obscure.

Key words: Dogs; histopathology; necrotizing sialometaplasia; parotid gland.

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Key words: Dogs; histopathology; necrotizing sialometaplasia; parotid gland.

Case 3

Dog

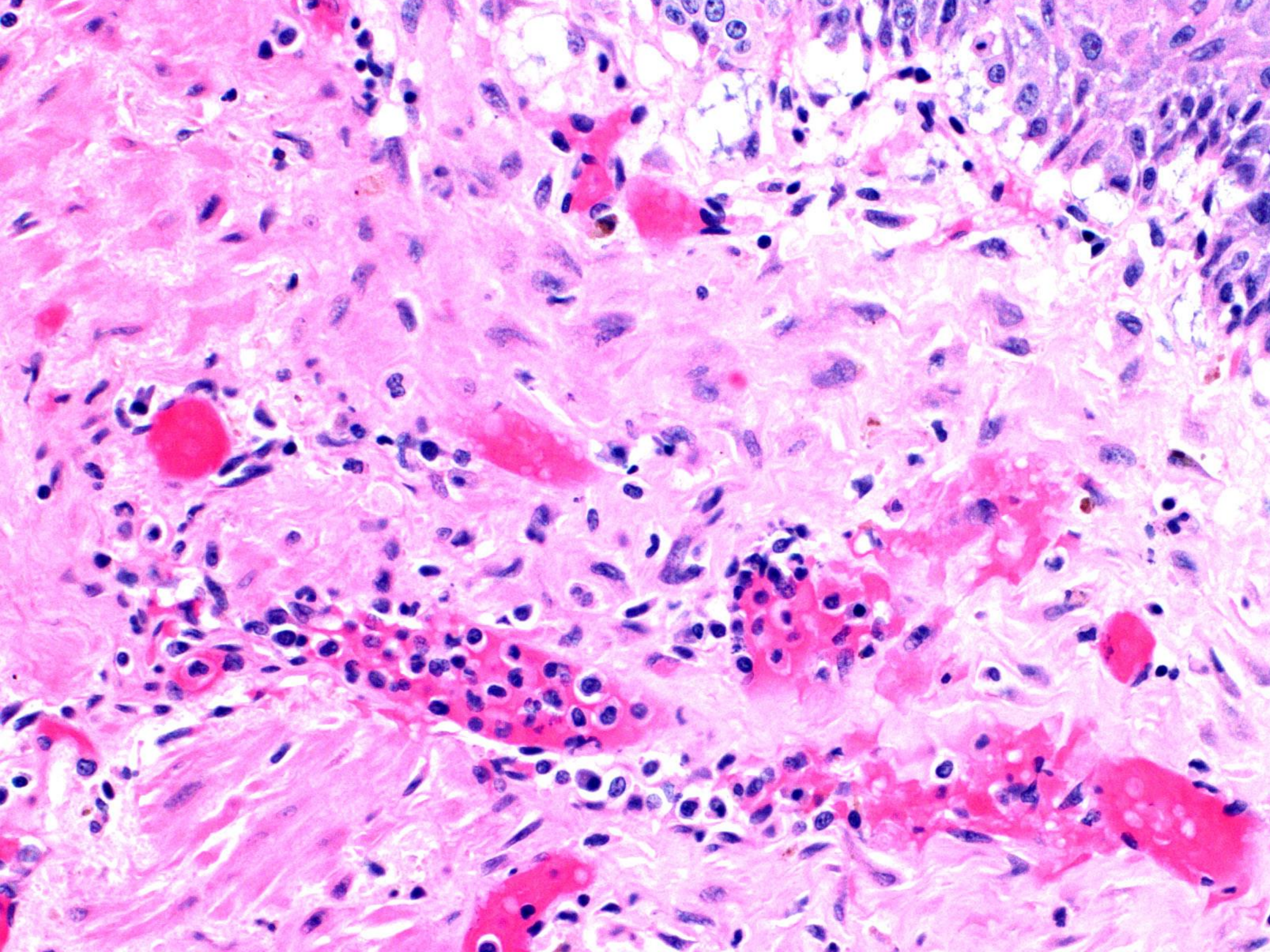
Contributor: Erin Zachar

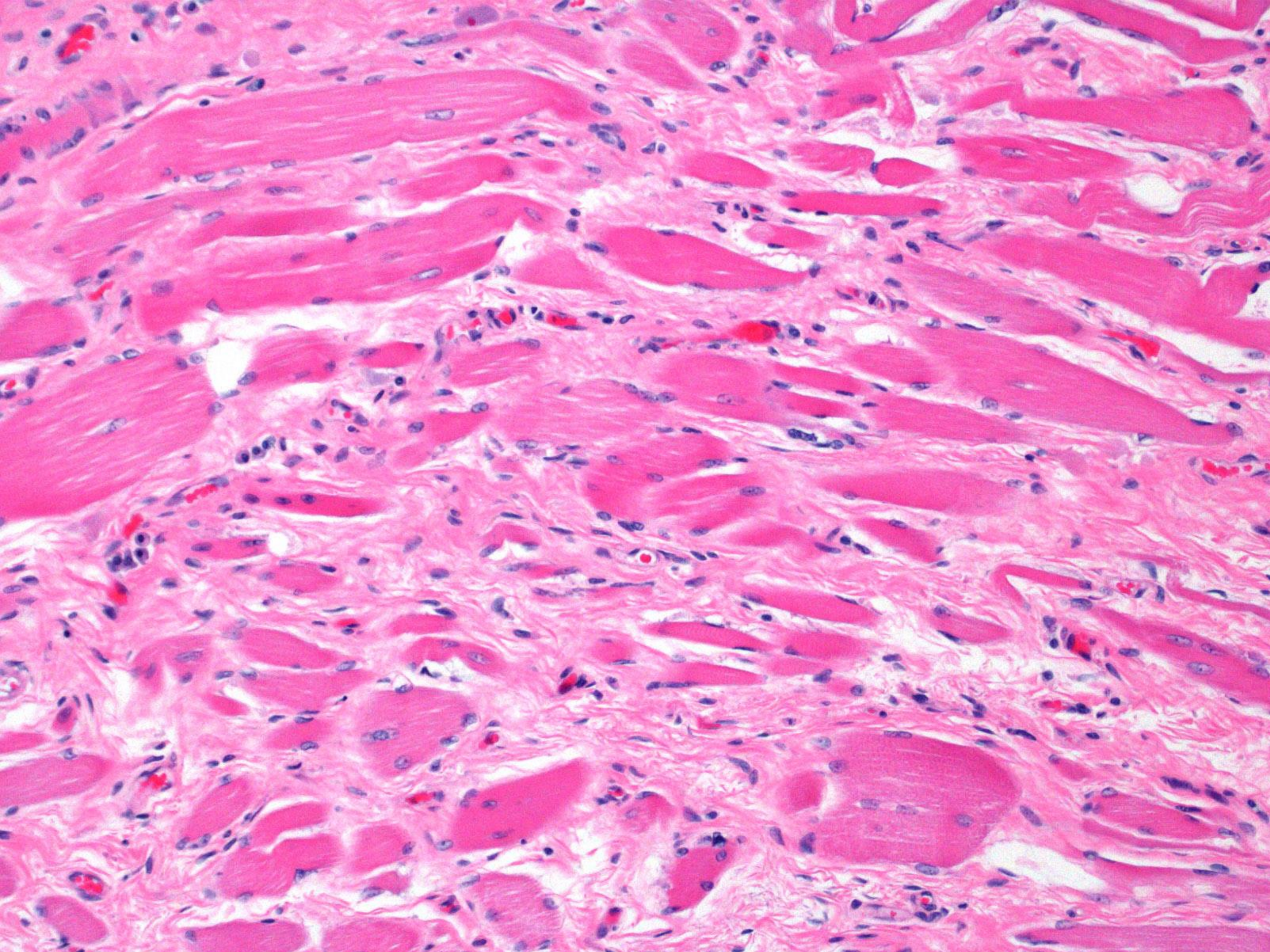
Morphologic diagnosis:

Diffuse, chronic, severe esophageal dilation (megaesophagus), with multifocal epithelial erosions and multifocal skeletal muscle degeneration, atrophy and necrosis

Etiology:

Congenital (suspected)





vet learn .com

3 CE Credits CE

Compendium

Megaesophagus

Sacha Mace, BA, DVM, DACVIM (Small Animal Internal Medicine)
Veterinary Specialty Center of the Hudson Valley

G. Diane Shelton, DVM, PhD, DACVIM (Internal Medicine)
University of California, San Diego

Susan Eddlestone, DVM, DACVIM (Small Animal Internal Medicine)*
Louisiana State University

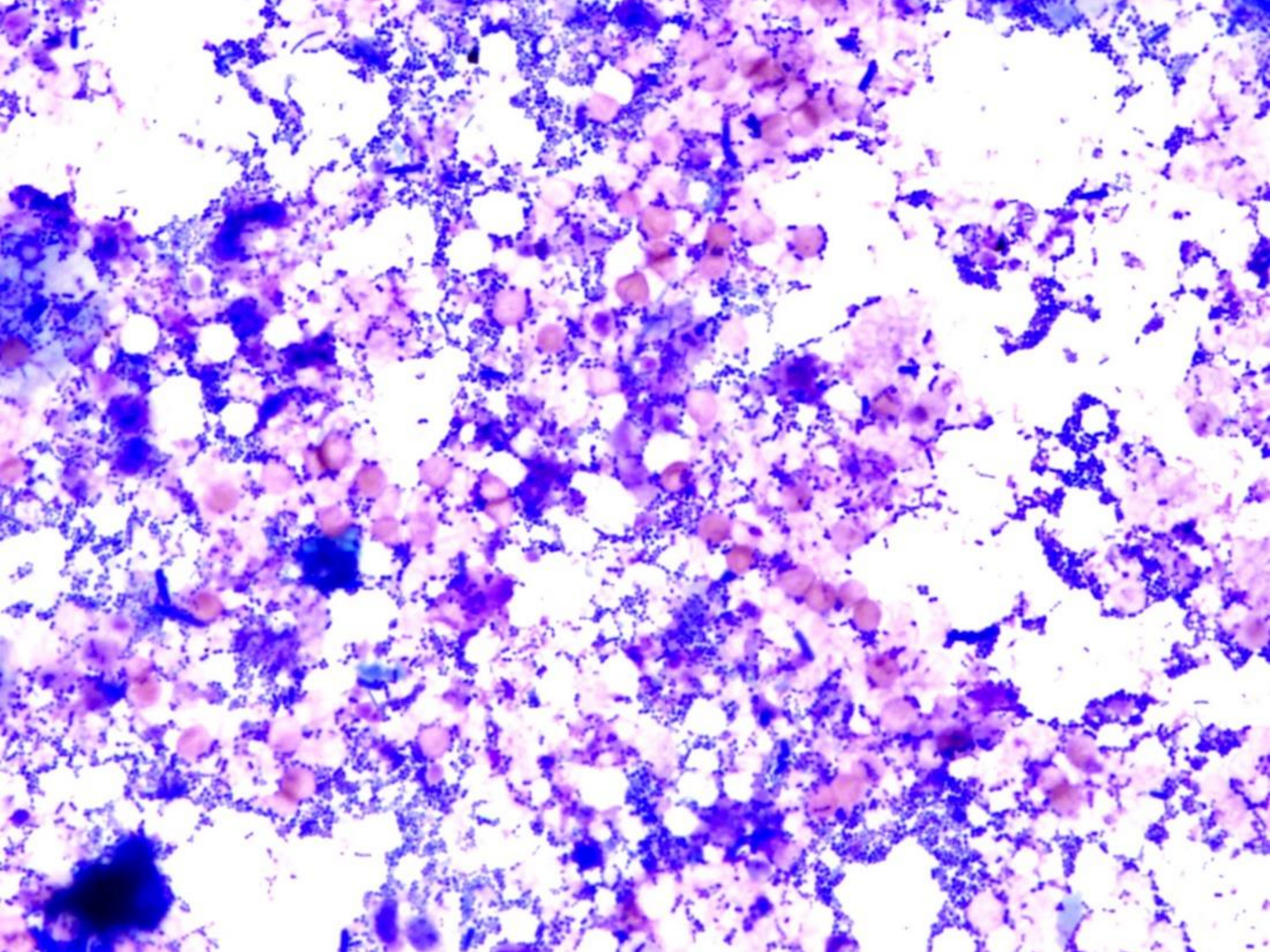
Abstract: *Megaesophagus is a disorder of the esophagus characterized by diffuse dilation and decreased peristalsis. It is classified into congenital and acquired forms. Gastrointestinal, endocrine, immune-mediated, neuromuscular, paraneoplastic, and toxic disorders*

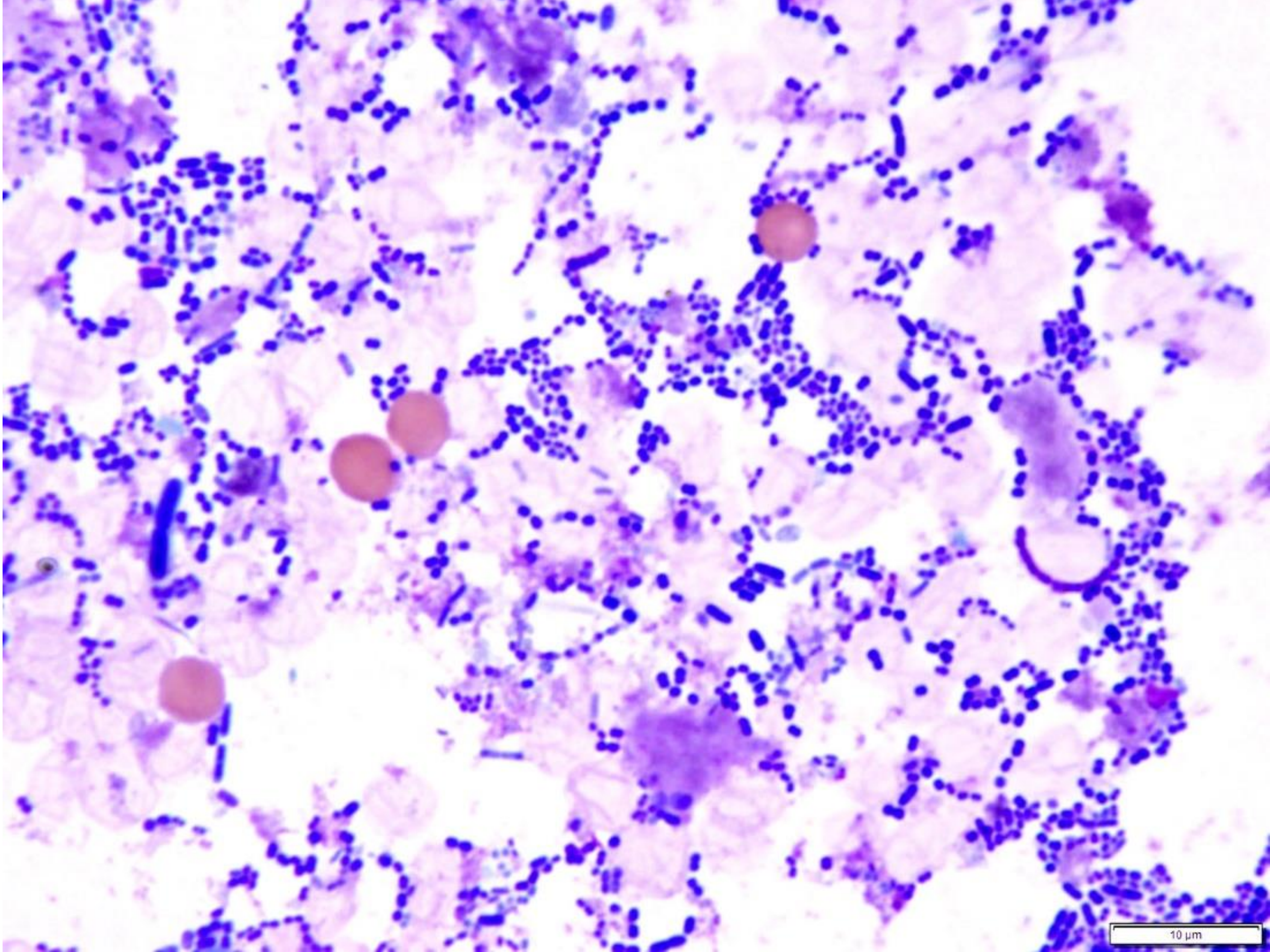
Vetlearn.com; February 2012; Compendium: Continuing Education for Veterinarians

Case 4

Horse

Contributor: Donal O’Toole




10 µm

Disease:

Choke

Etiology/pathogenesis:

Loose 1st upper left maxillary molar → pain → partly masticated senior feed → impacted feed bolus in distal esophagus → abrupt onset choke → aspiration pneumonia → welcoming arms of an uncaring God.

Domestic Animals–Original Article

Megaesophagus in Friesian Horses Associated With Muscular Hypertrophy of the Caudal Esophagus

Veterinary Pathology
2014, Vol. 51(5) 979-985

DOI: 10.1177/0300985813511126
vet.sagepub.com

M. Komine[1], I. M. Langohr[1,2], and M. Kiupel[1]

Case 5

Reindeer

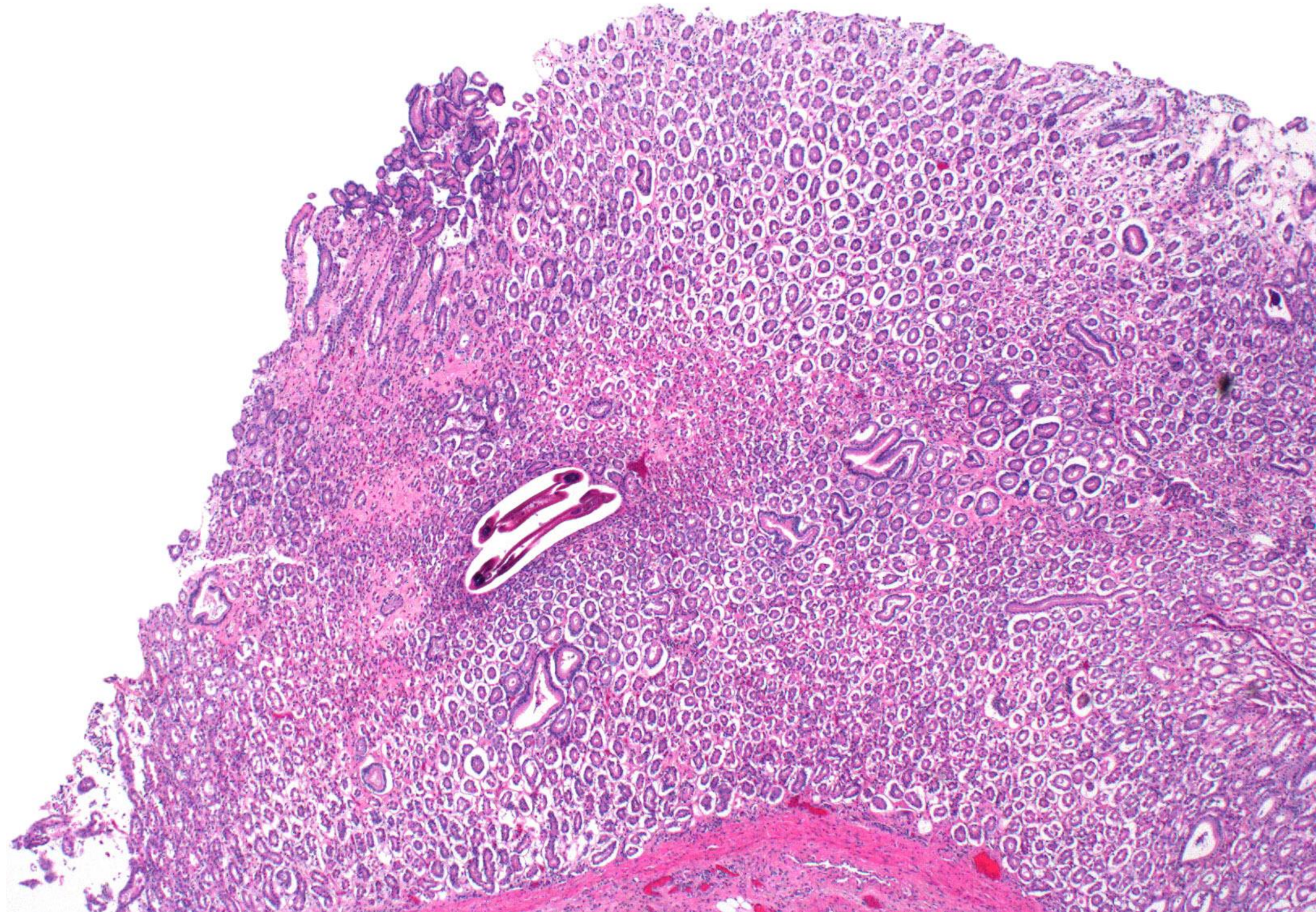
Contributor: Maria Spinato

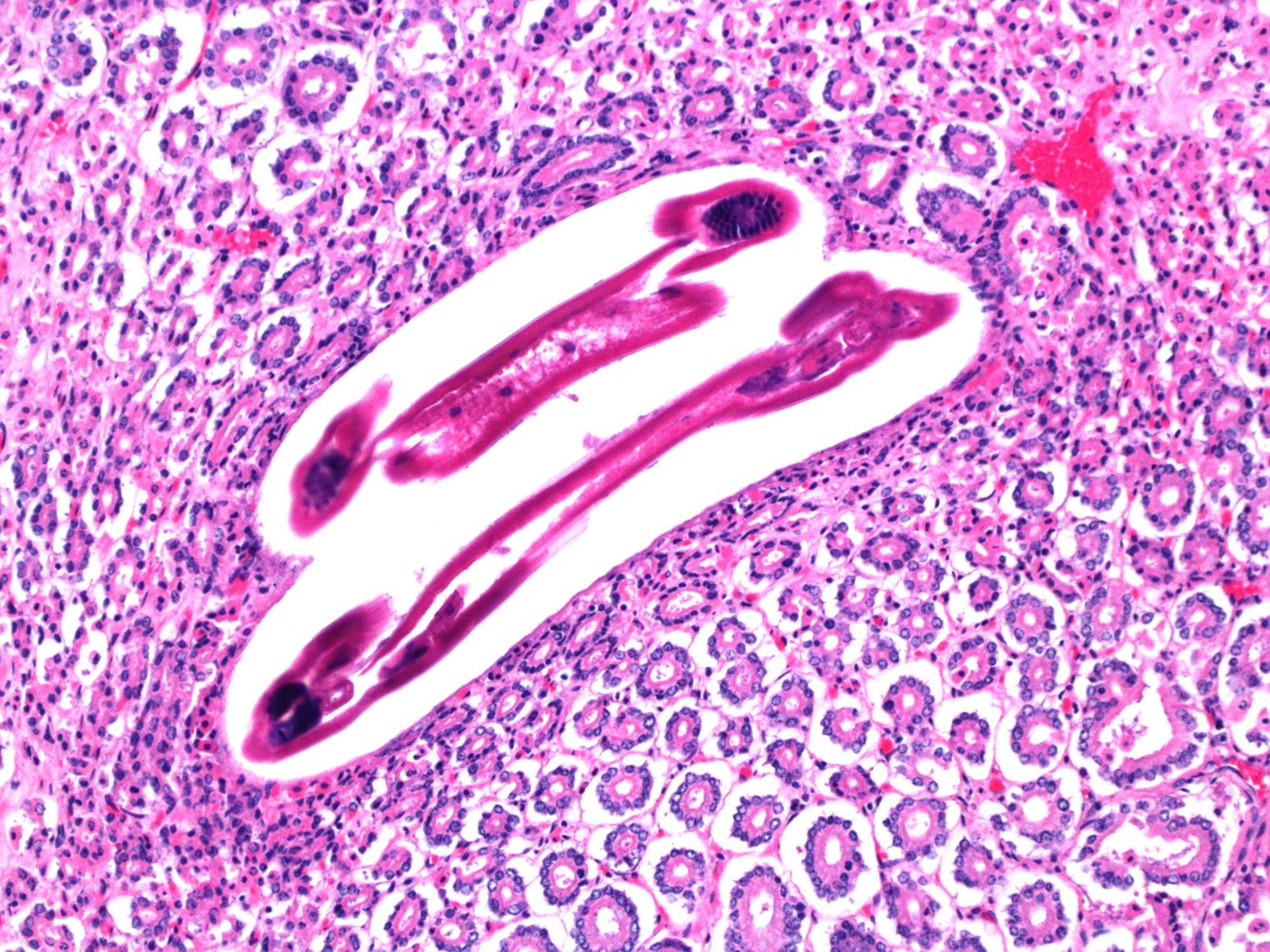
Disease and/or morphologic diagnosis:

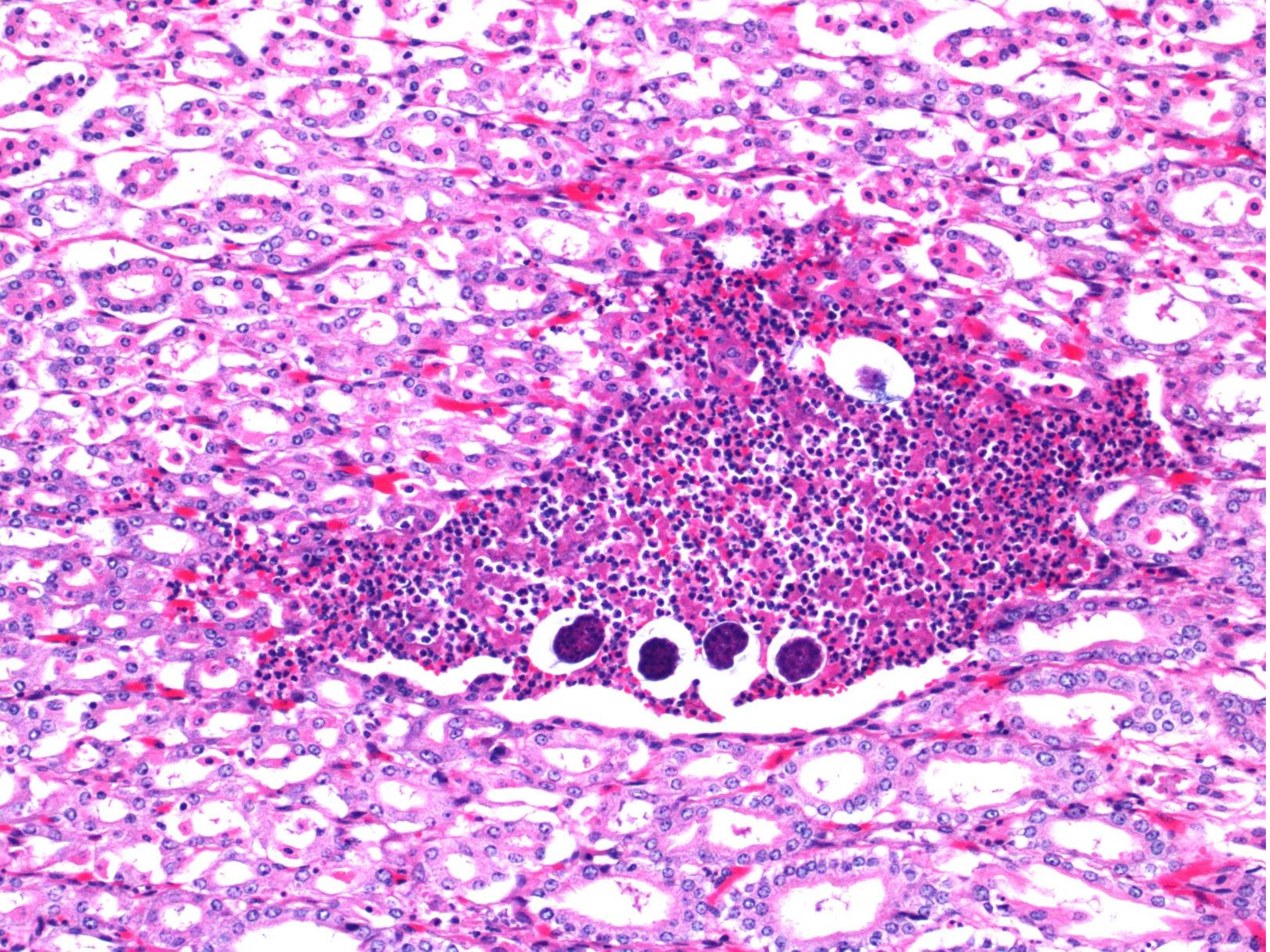
Moderate subacute abomasitis with glandular hypertrophy, mucous metaplasia, parietal cell atrophy and intralesional nematodes

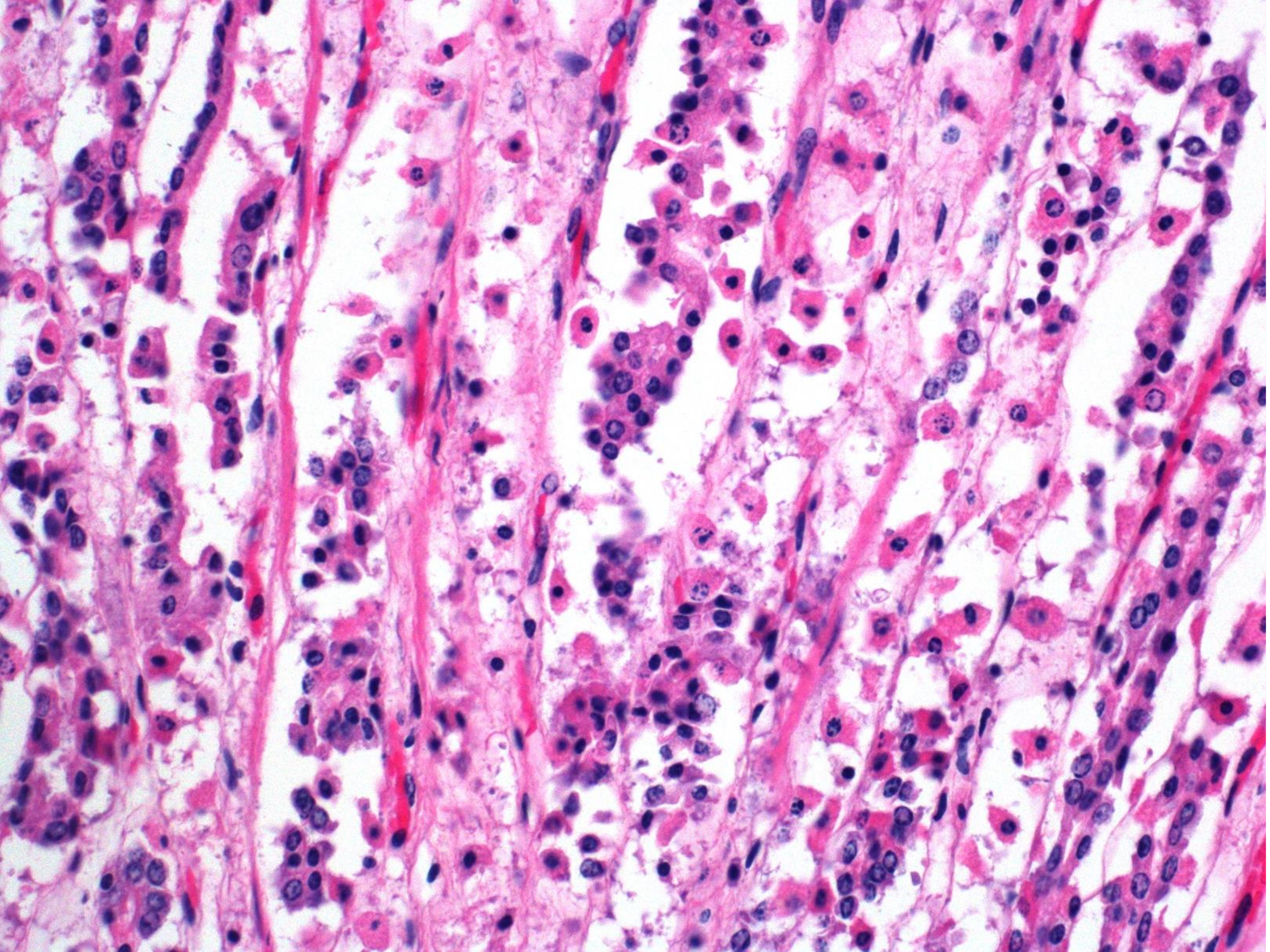
Etiology:

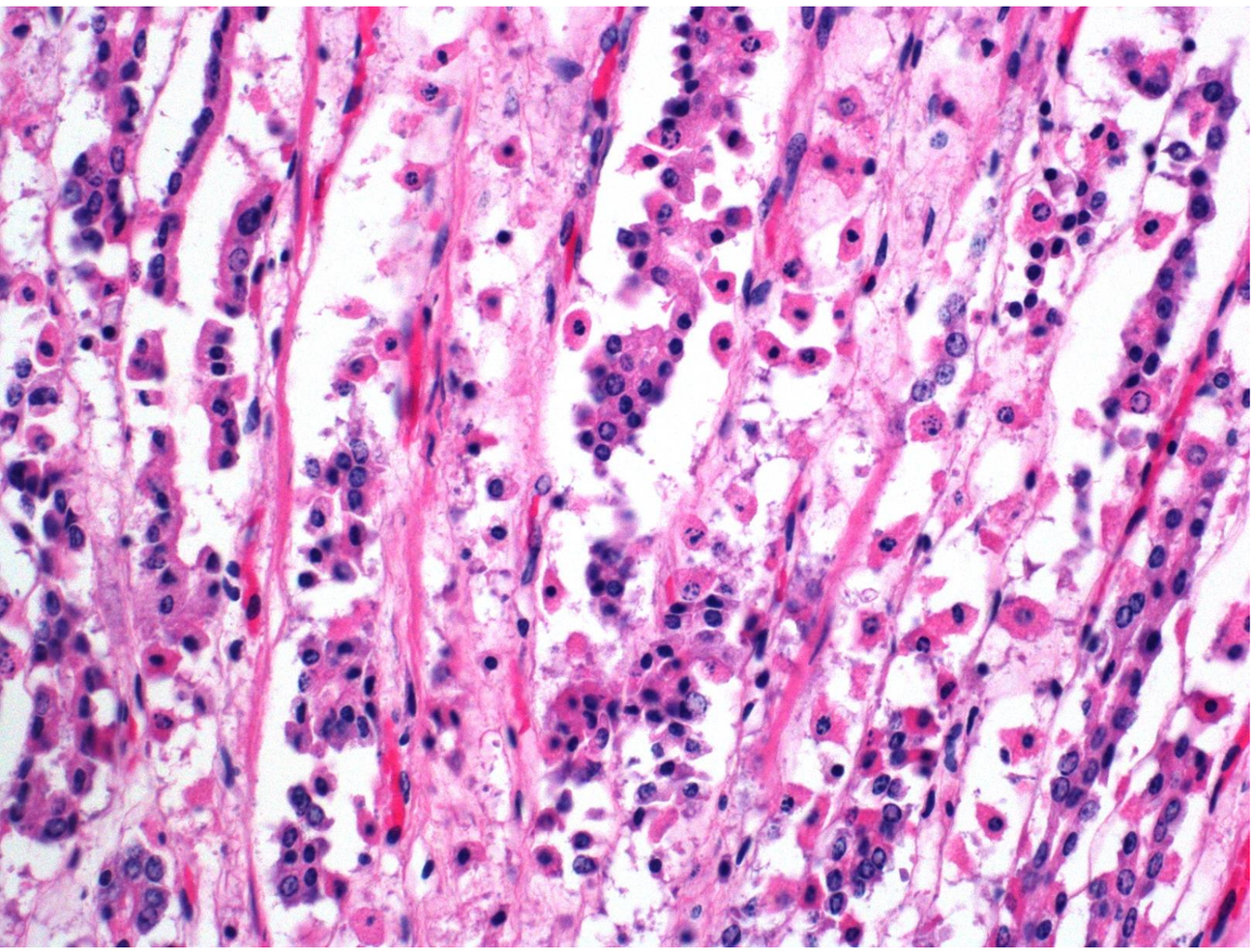
Ostertagia sp



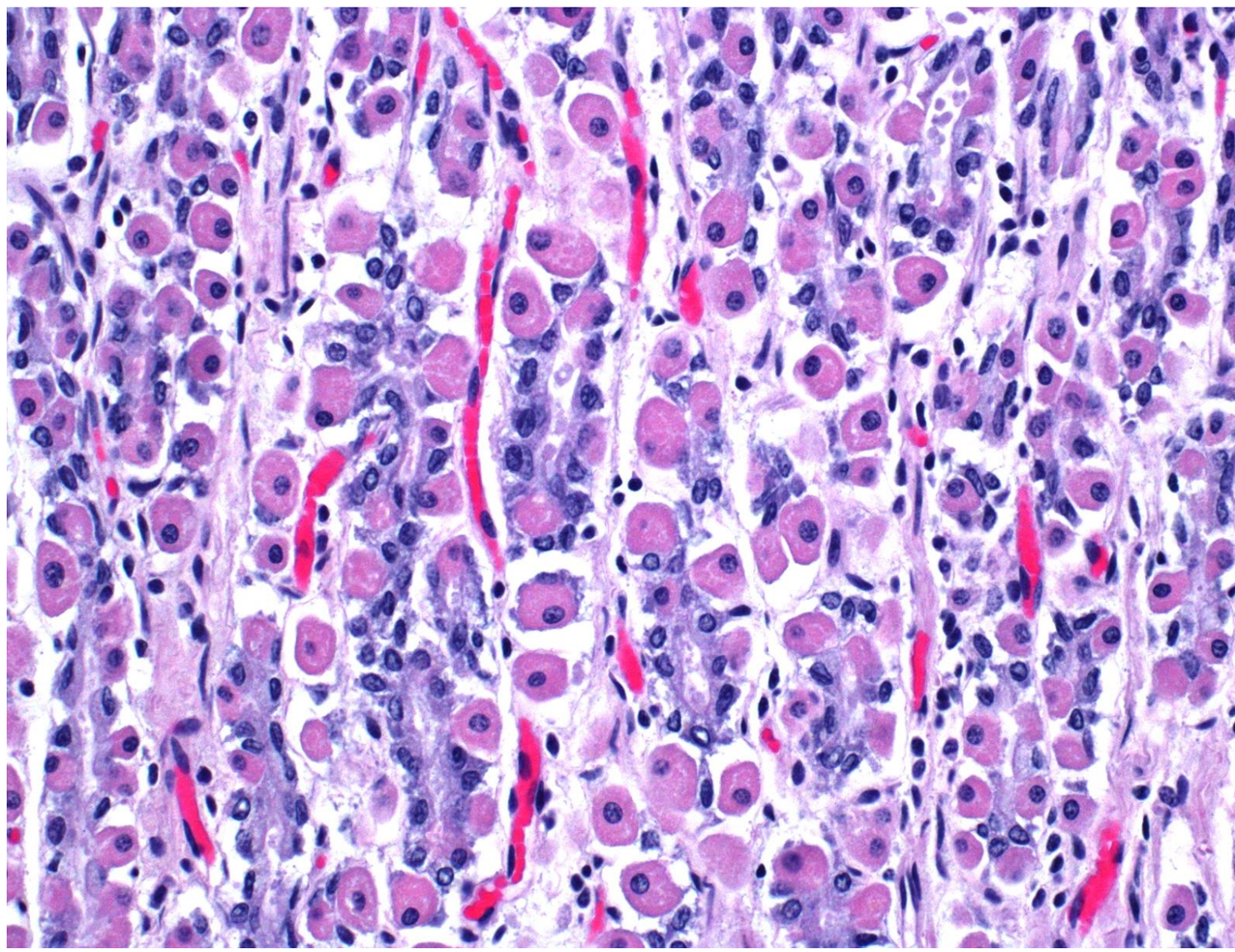








Maria’s



Normal control

Veterinary Parasitology, 46 (1993) 143–158
Elsevier Science Publishers B.V., Amsterdam

Pathophysiology of infection with *Ostertagia ostertagi* in cattle

M.T. Fox

Department of Veterinary Pathology, The Royal Veterinary College, University of London, London NW1 0TU, UK

Case 6

Bearded dragon

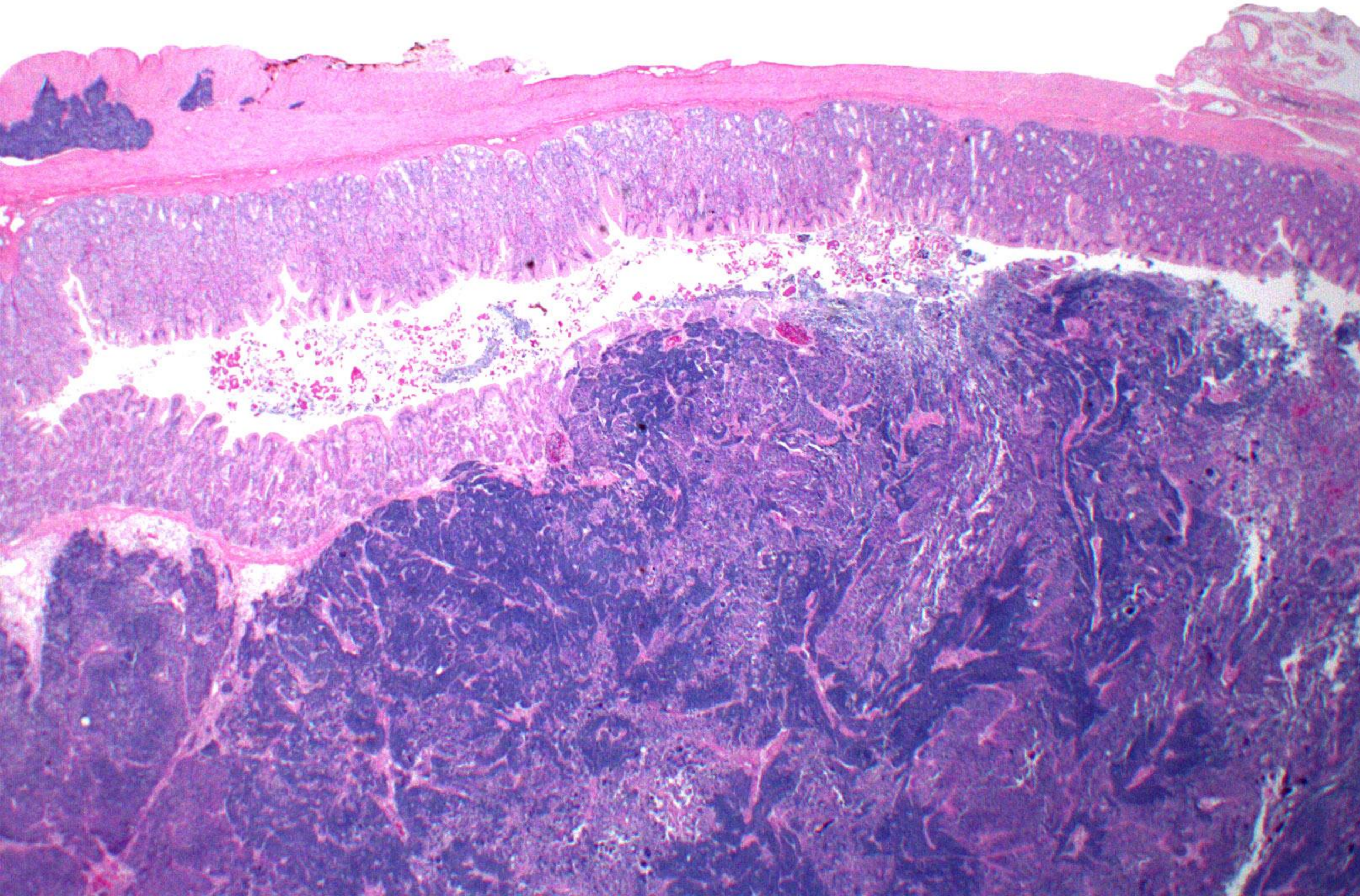
Contributor: Erin Zachar

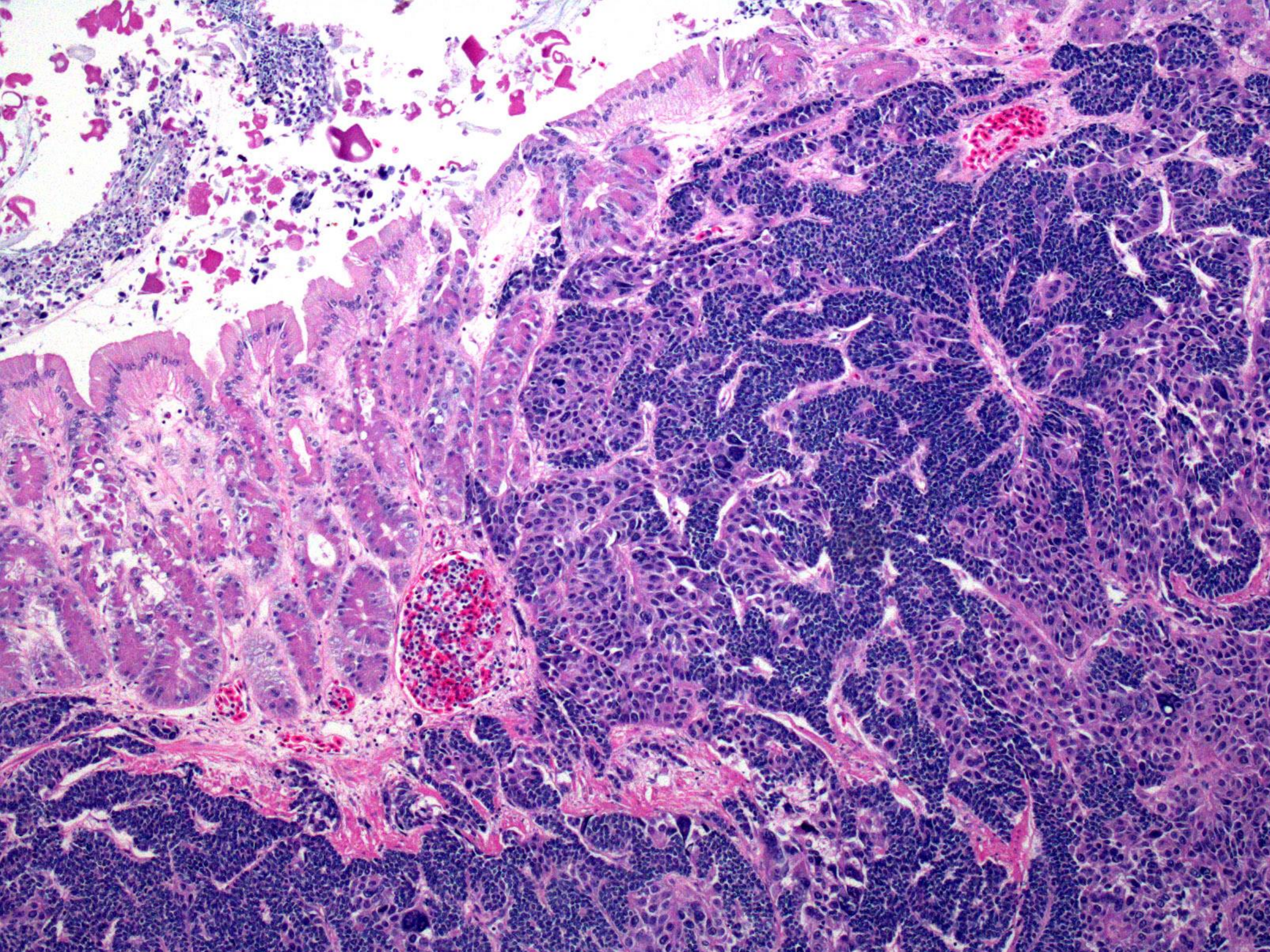
Disease and/or morphologic diagnosis:

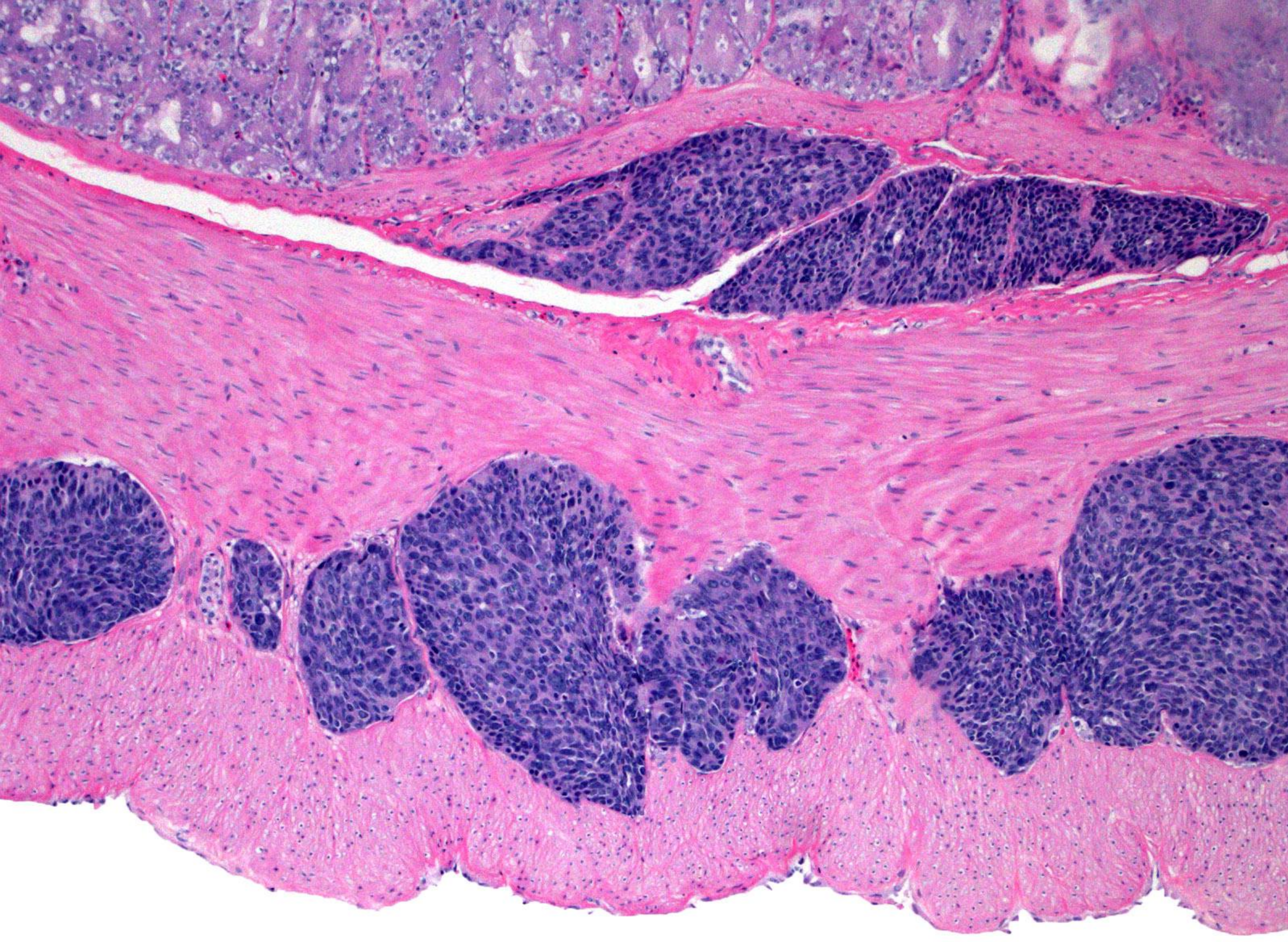
Metastatic carcinoma (suspect gastric neuroendocrine carcinoma)

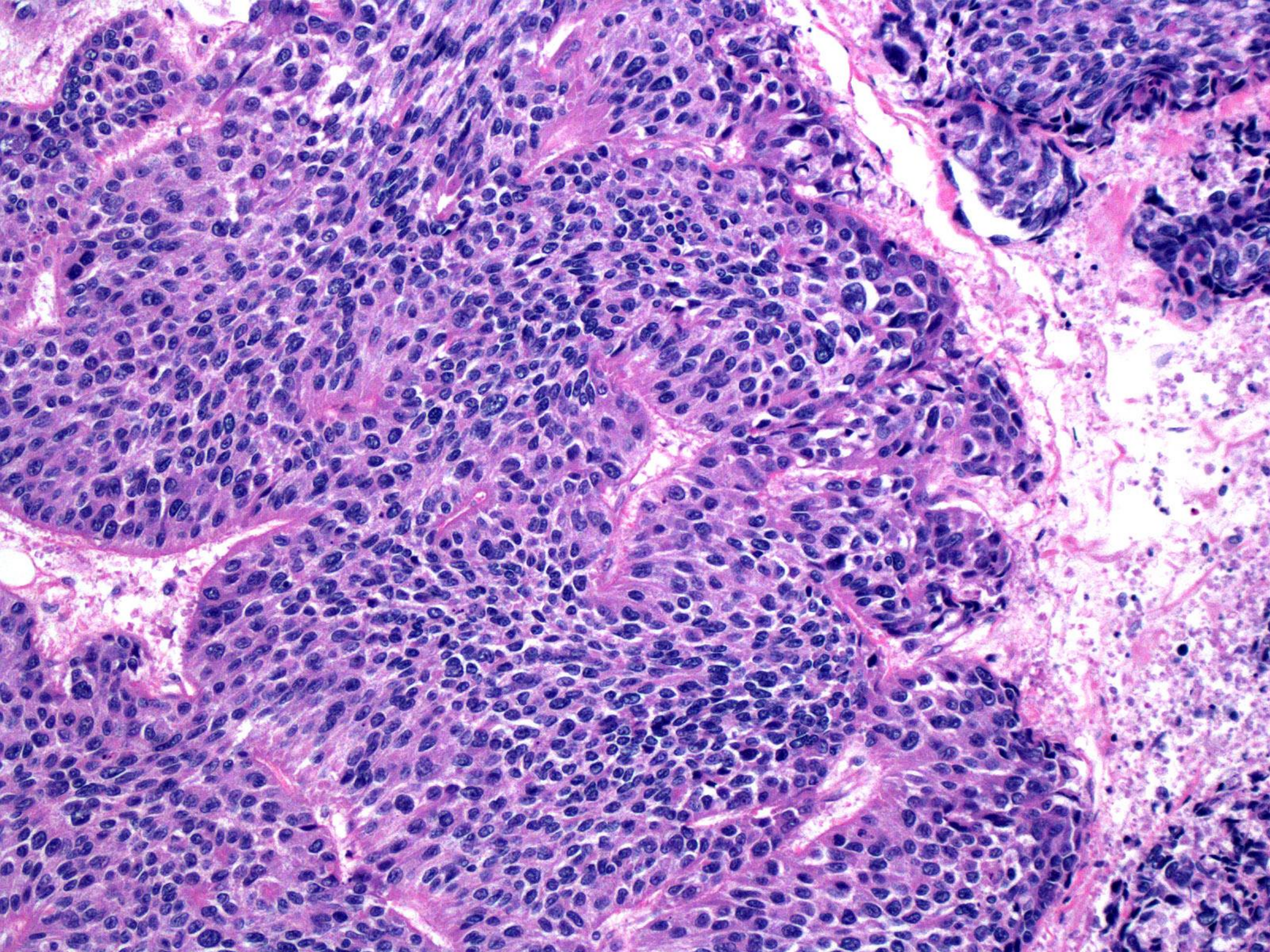
Etiology:

NA









J Vet Diagn Invest 22:316–320 (2010)

A gastric neuroendocrine carcinoma expressing somatostatin in a bearded dragon (*Pogona vitticeps*)

Jeremiah A. Lyons, Shelley J. Newman,[1] Cheryl B. Greenacre, John Dunlap

Abstract. A metastatic gastric neuroendocrine carcinoma in a 2.5-year-old inland bearded dragon (*Pogona vitticeps*) with a chronic history of anorexia, weight loss, depression, and acute melena is described. Histologic examination of the gastric mass revealed a densely cellular tumor arranged in nests and occasional rosettes of hyperchromatic cells with oval to spindle-shaped nuclei and minimal cytoplasm; the tumor was supported by a

Confirmation?

Case 7

Mink

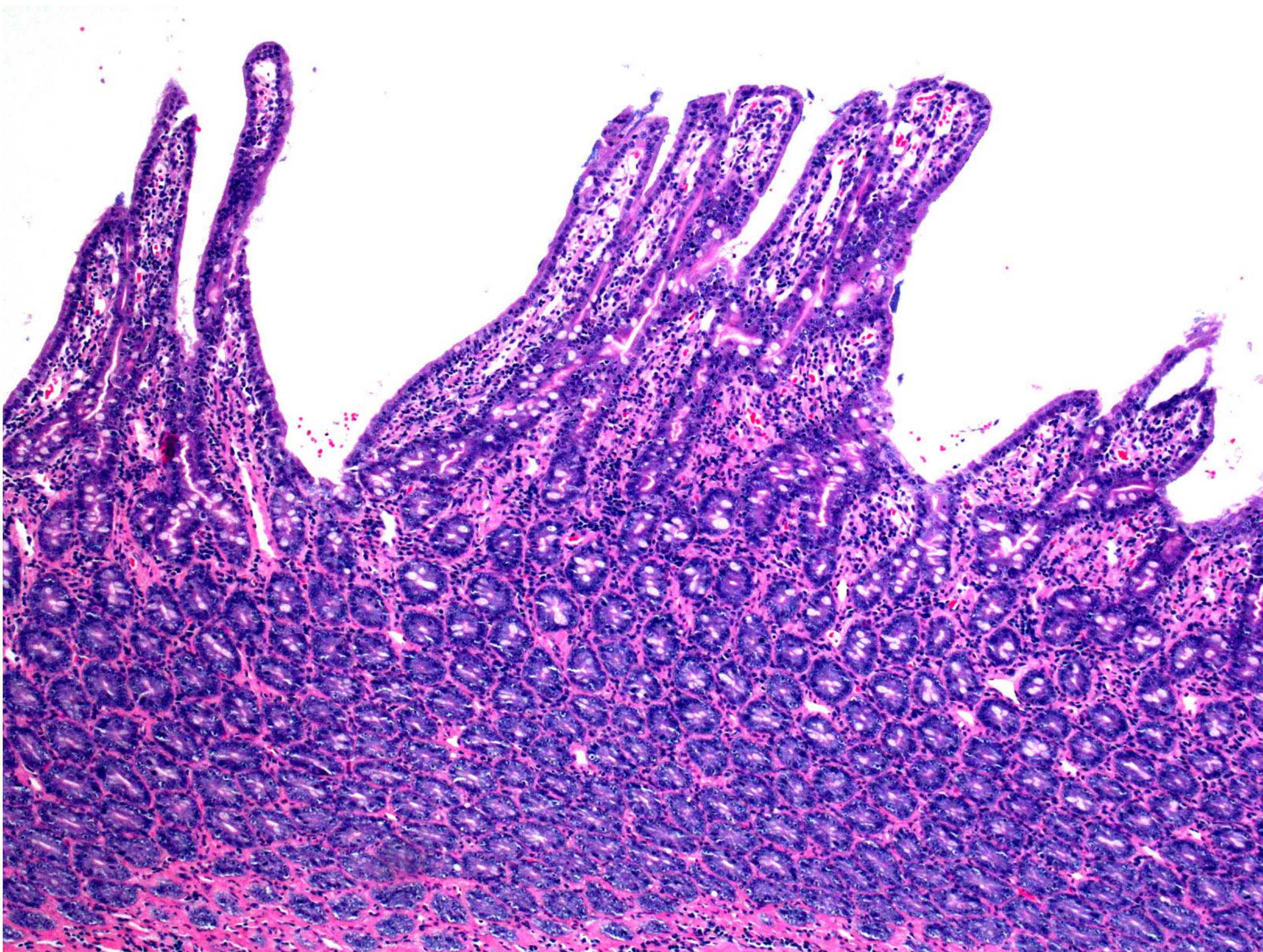
Contributor: Dale Miskimins

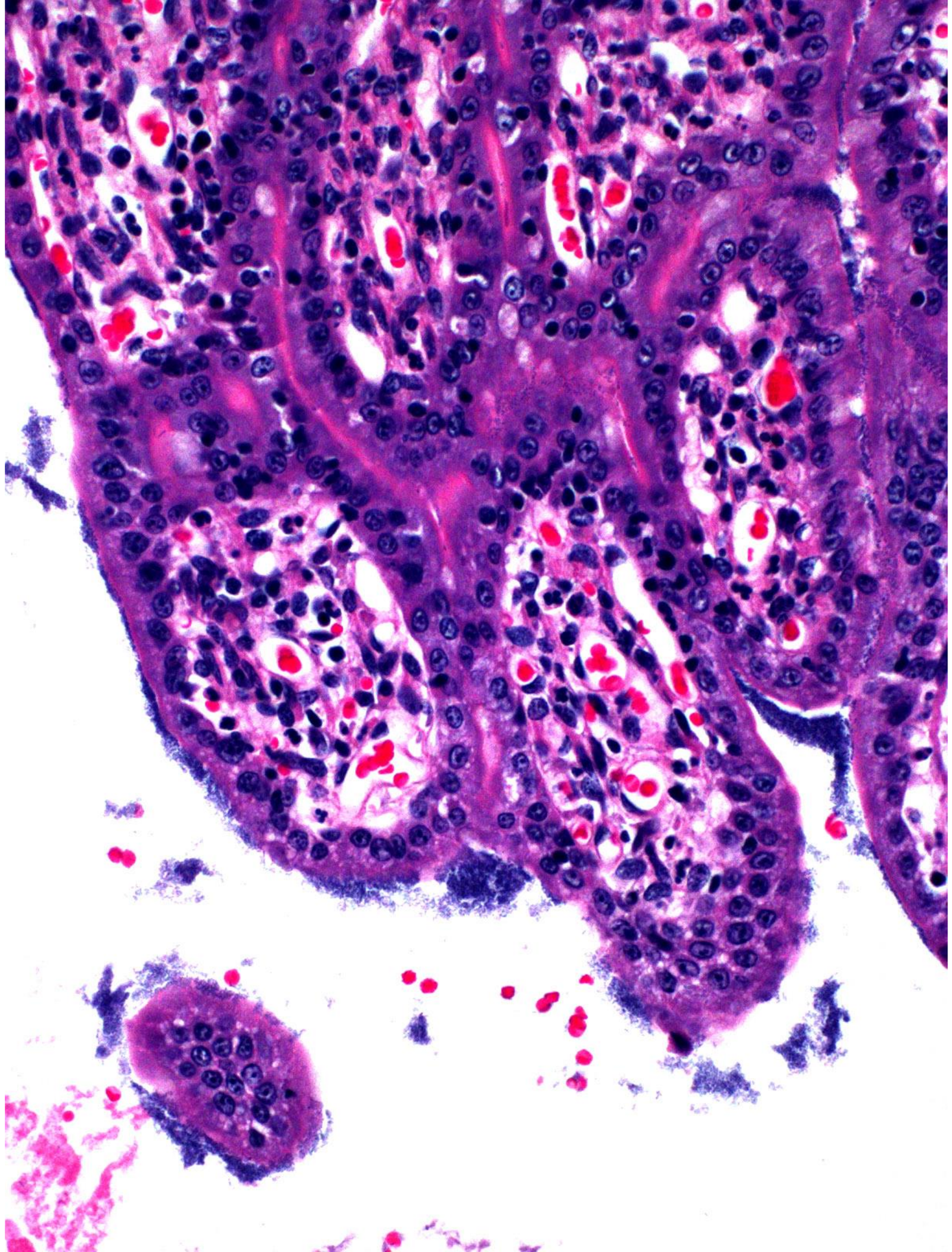
Disease and/or morphologic diagnosis:

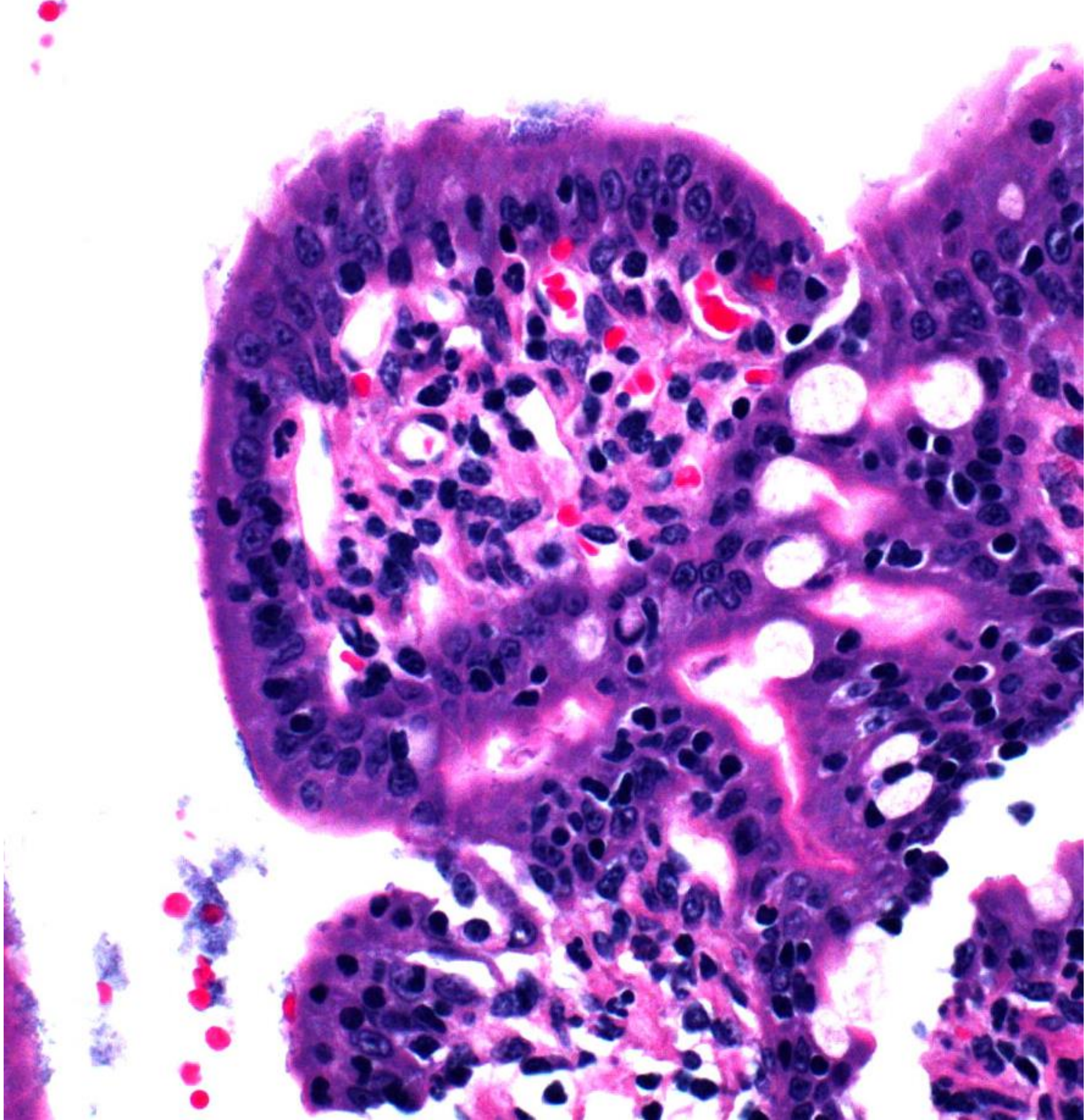
Enterotoxigenic colibacillosis

Etiology:

Enterotoxigenic *E. coli* (heat stable toxin)



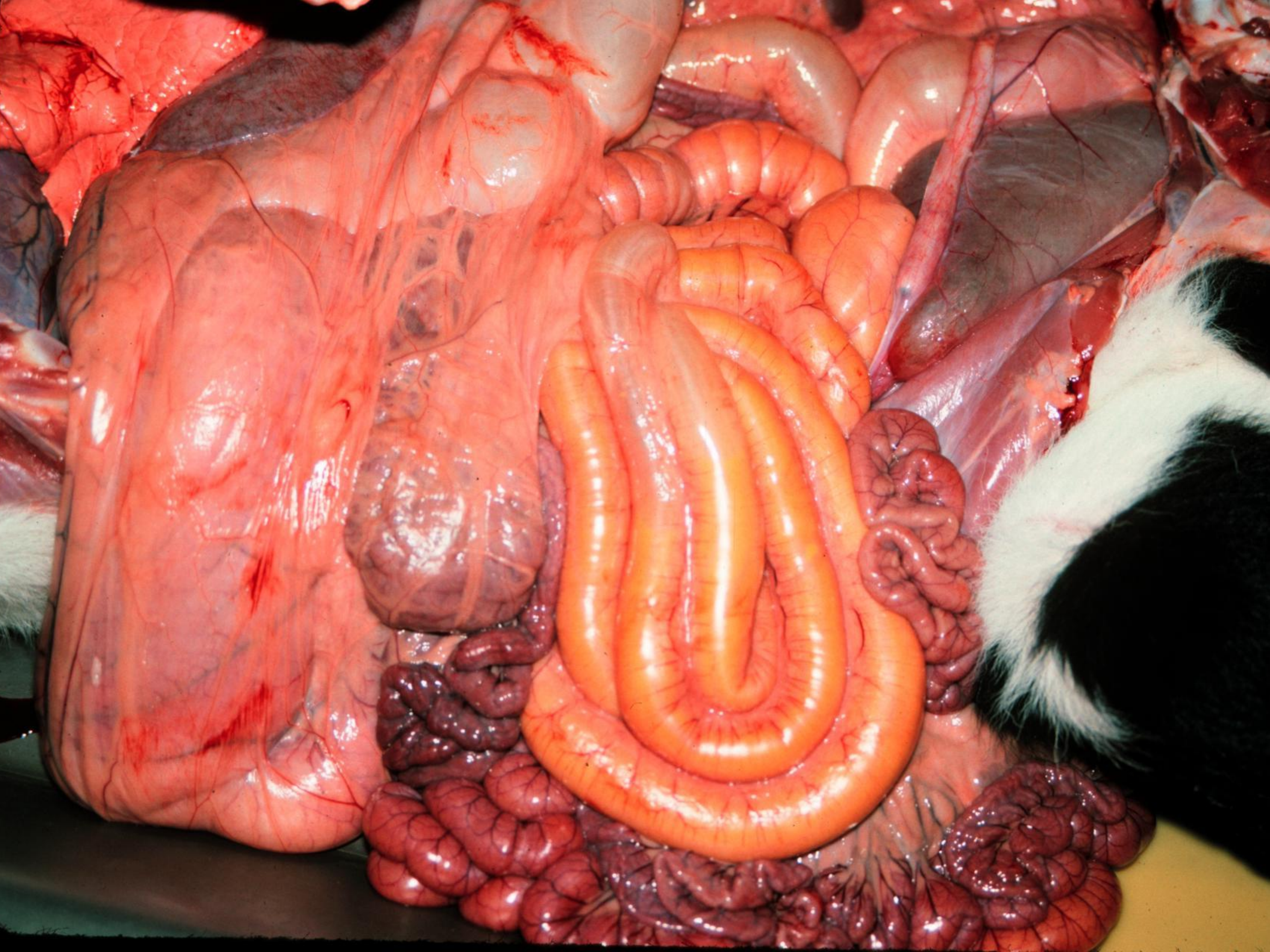




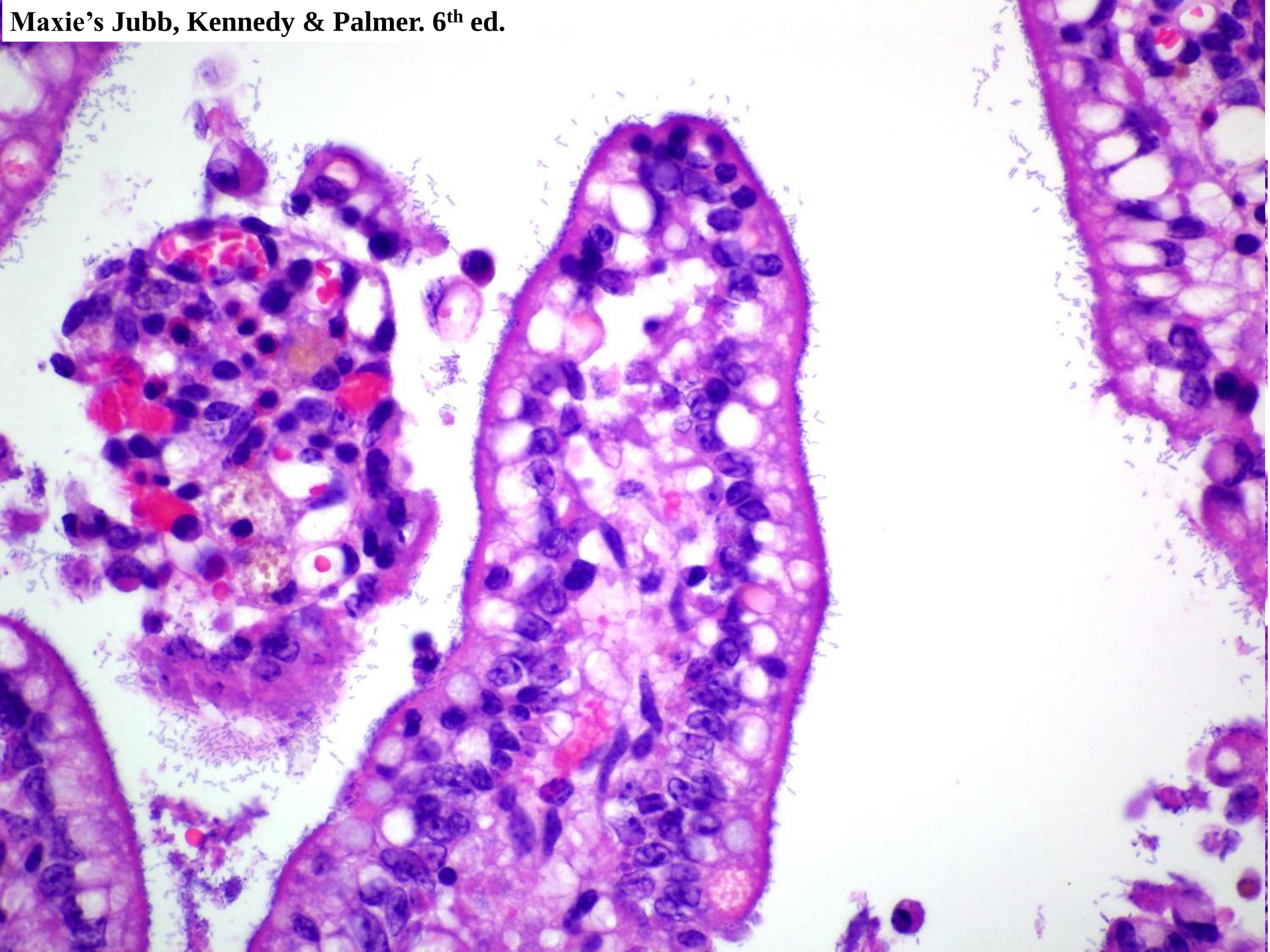
Collibacillosis made easy

(and perhaps too simple?)

	Strains	Species	Virulence	Toxins	Diarrhea	Lesions
Enterotoxigenic (ETEC)	K99; F5	Neonatal pigs, lambs, calves postweaning pigs	*Colonization *Toxin	Heat stable toxin (Sta)	Secretory	Morphaologically normal epithelial cells



Maxie's Jubb, Kennedy & Palmer. 6th ed.



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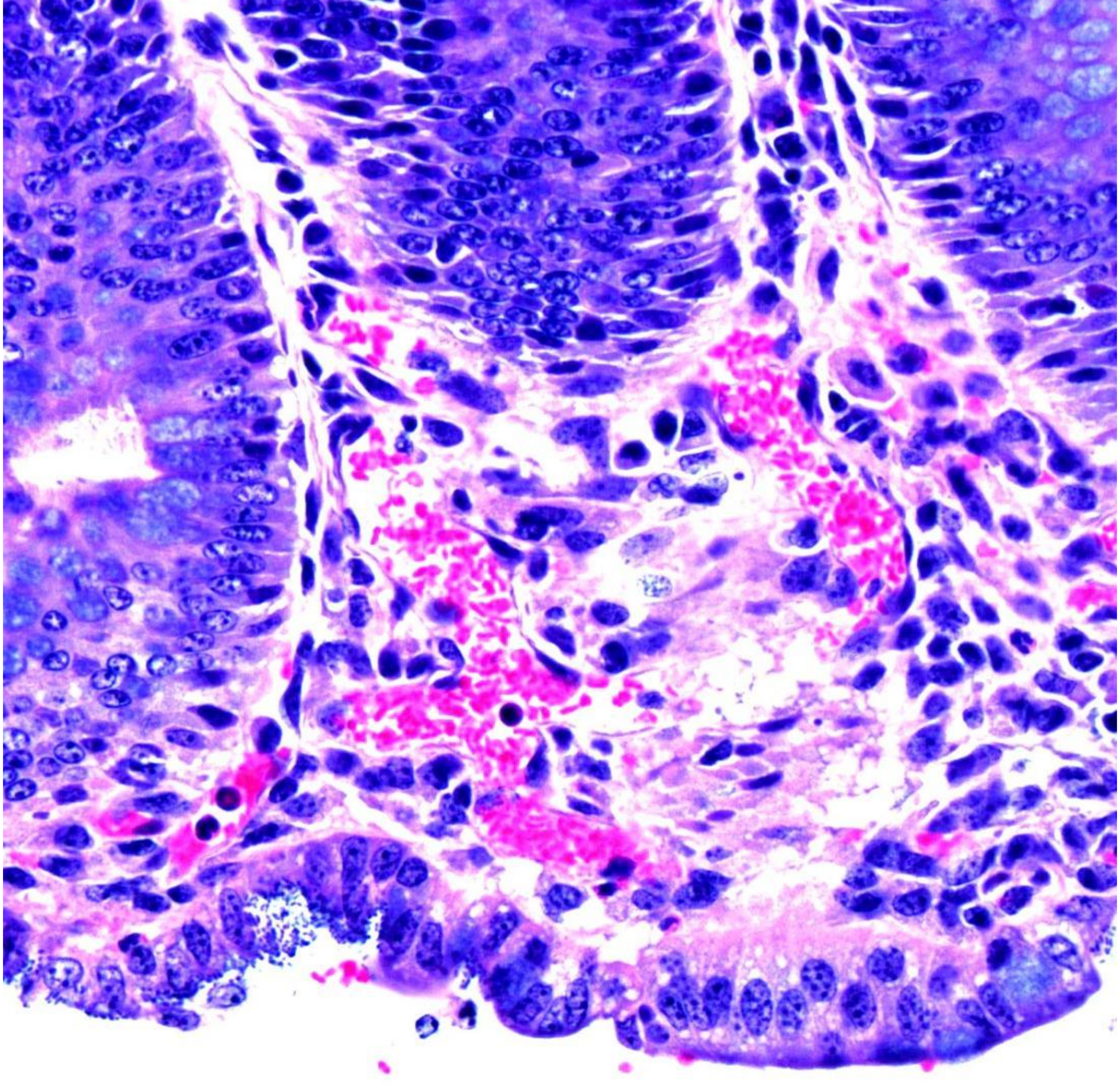
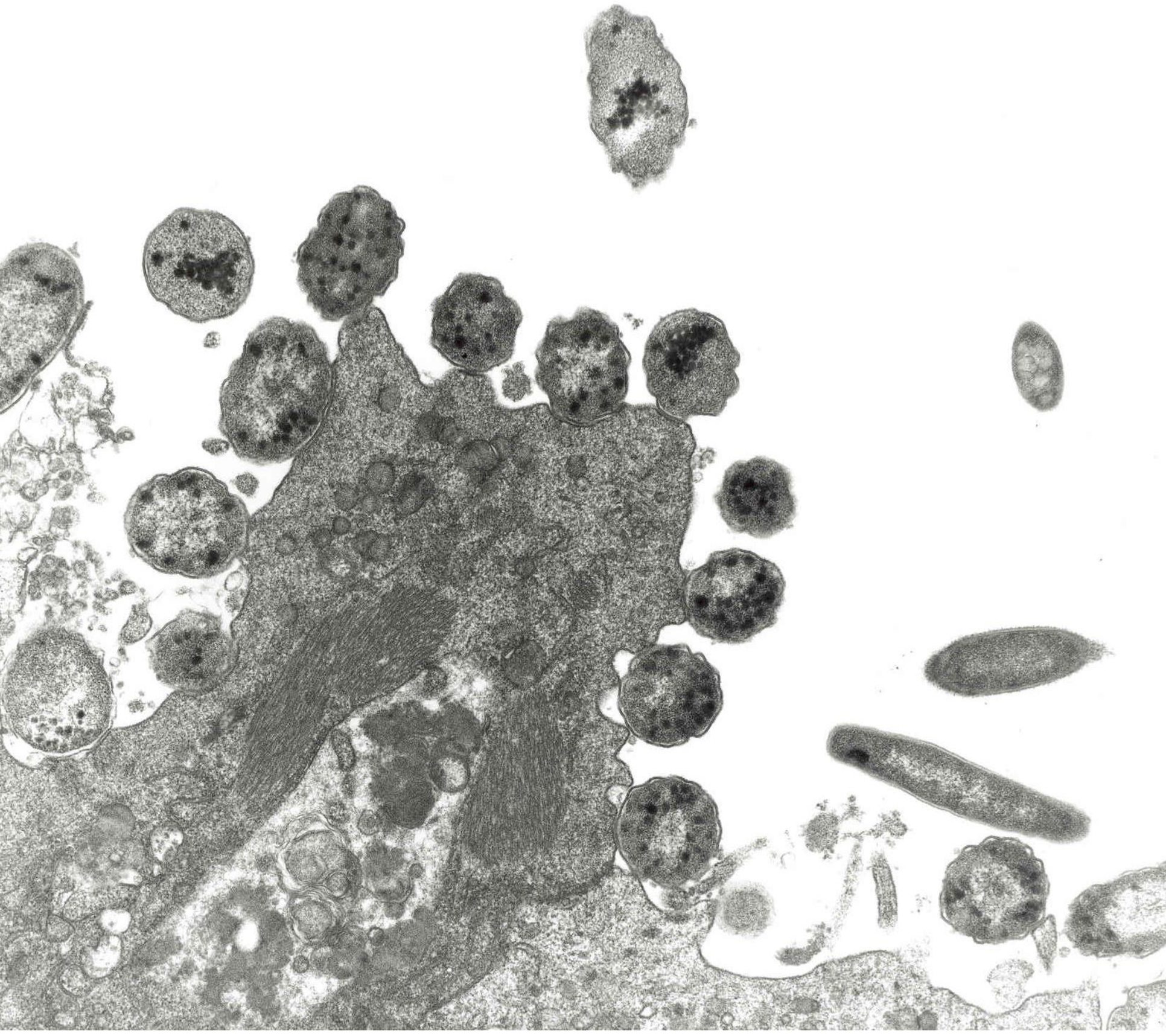
Enterotoxigenic (ETEC)	K99; F5	Neonatal pigs, lambs, calves postweaning pigs	*Colonization *Toxin	Heat stable toxin (Sta)	Secretory	Morphaologically normal epithelial cells
Enteropathogenic (EPEC) **Enterohemorrhagic (EHEC)** **Shiga toxin (STEC)**	Various	Pigs, dogs, rabbis, cats, calves	*Attachment *Effacement	Shiga	Maldigestion/ malabsorption	Enterocyte degeneration

Attaching effacing (AEEC)





PATHOGENESIS

L*ocus for enterocyte effacement* (LEE: a chromosomal pathogenicity island) →
fimbriae interacts with the enterocyte →
secretion of bacterial proteins (e.g. intimin) and transported via type III secretion system into enterocyte cytoplasm →
intimin receptor emerging on cell membrane →
response to EPEC proteins: cell's cytoskeleton reorganized: *pedestal-like structures* beneath attached bacteria →
loss of microvilli → tight junctions between enterocytes loosen →
paracellular permeability increases →
neutrophils migrate between cells into lumen

	Strains	Species	Virulence	Toxins	Diarrhea	Lesions
Enterotoxigenic (ETEC)	K99; F5	Neonatal pigs, lambs, calves postweaning pigs	*Colonization *Toxin	Heat stable toxin (Sta)	Secretory	Morphaologically normal epithelial cells
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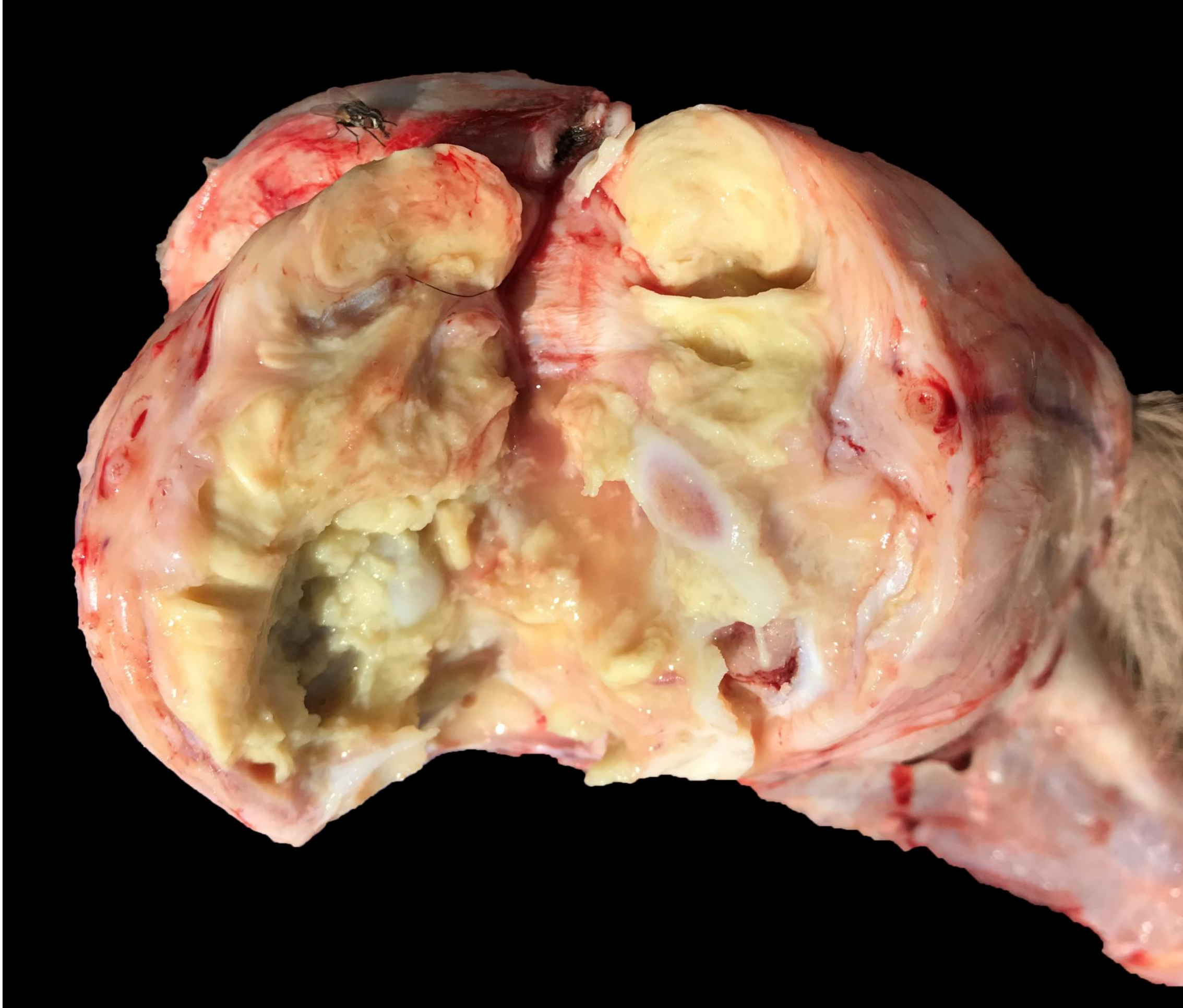
Enteroinvasive (EIEC)	Various	Several species	*Endotoxemia	LPS	---	---

Attaching effacing (AEEC)



Case 8

Pig

Contributor: Kelly Ramsay

Disease and/or morphologic diagnosis:

1-Ileitis, proliferative and hemorrhagic, multifocal, subacute, severe with severe adenomatous hyperplasia and intracytoplasmic silver-positive short curved bacilli

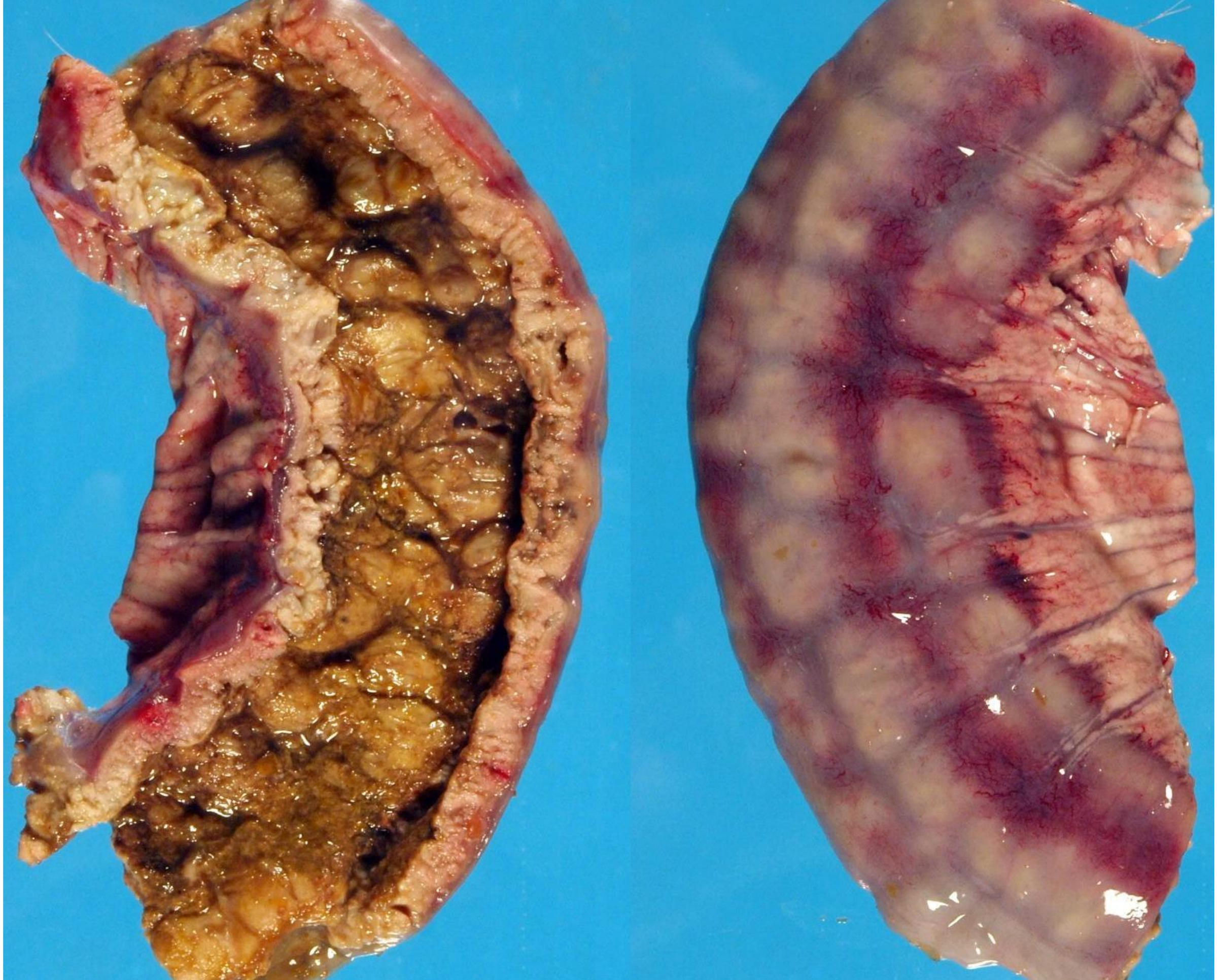
2-Colitis, lymphoplasmacytic, multifocal, subacute, moderate with intralesional spirochetes

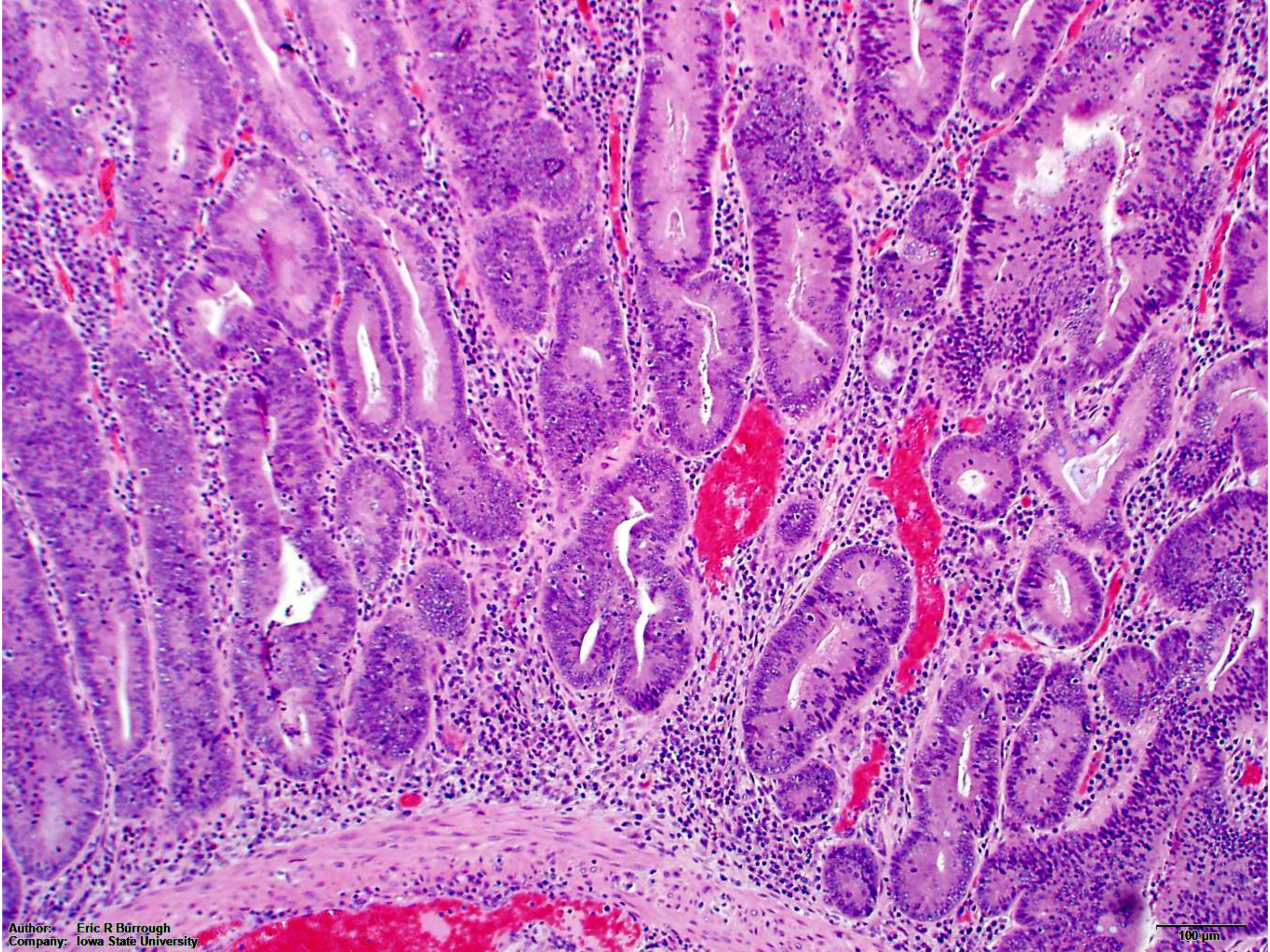
Etiology:

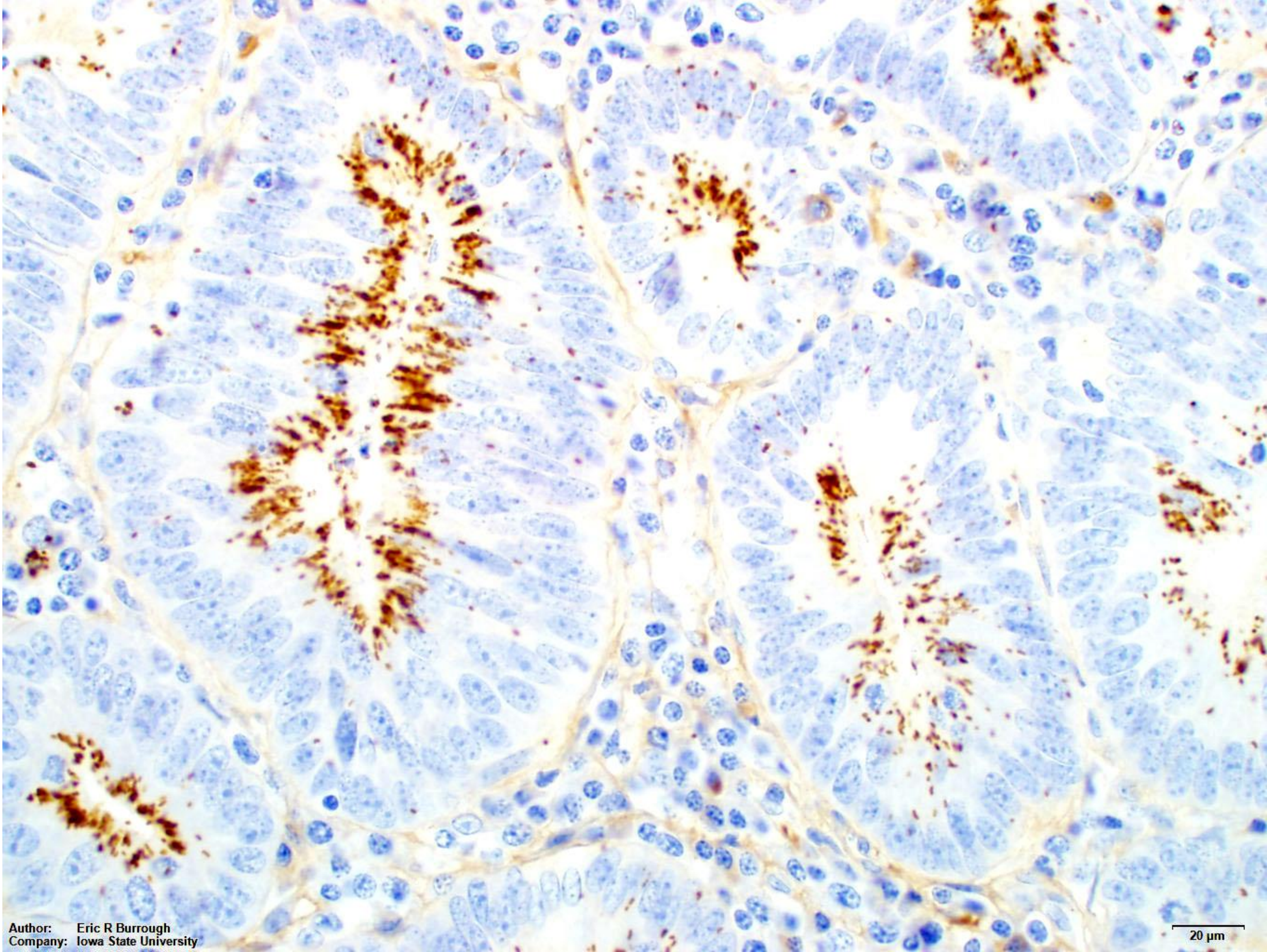
Lawsonia intracellularis
Brachyspira pilosicoli/Brachyspira hyodysenteriae

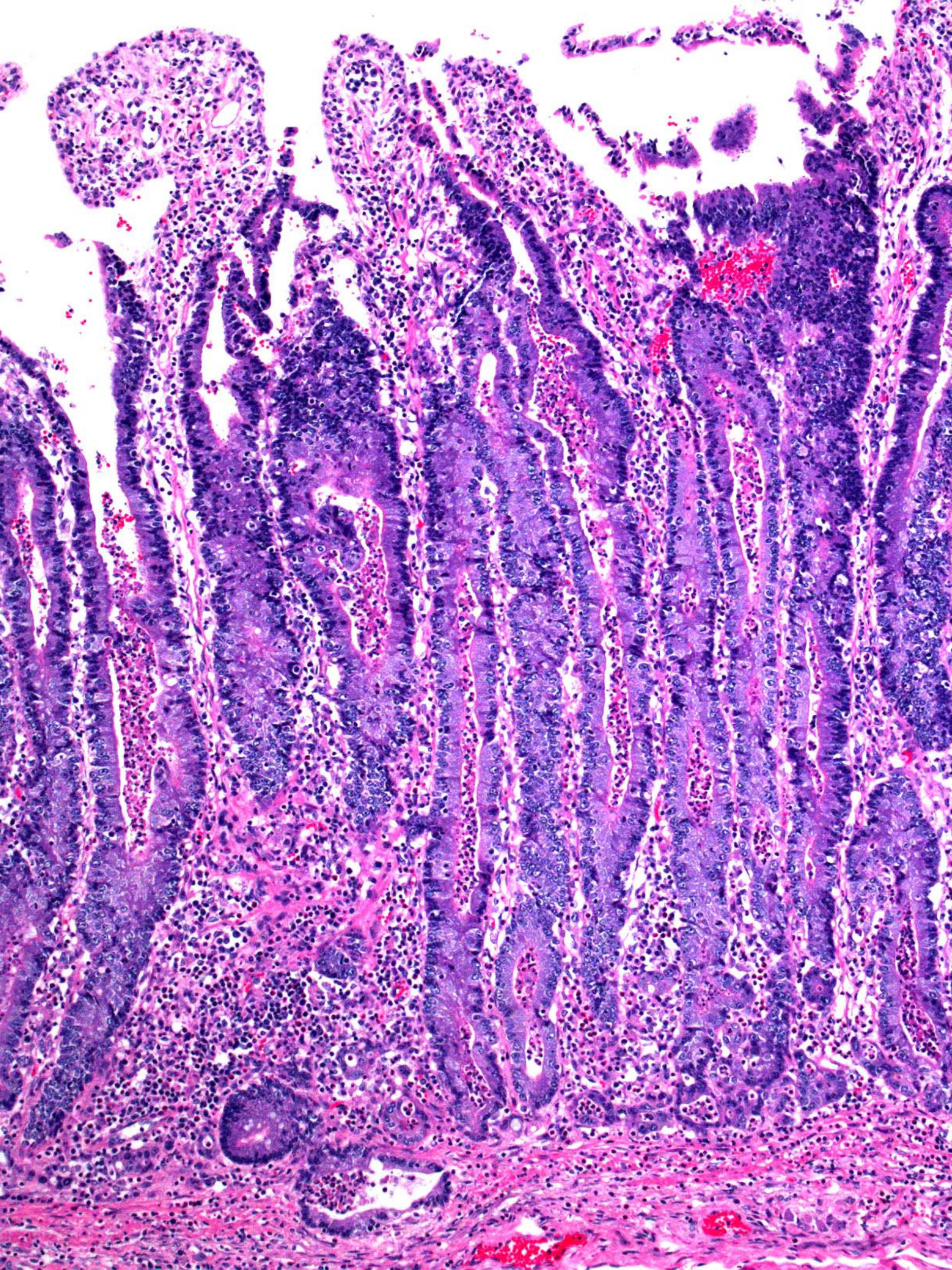
Porcine proliferative enteropathy

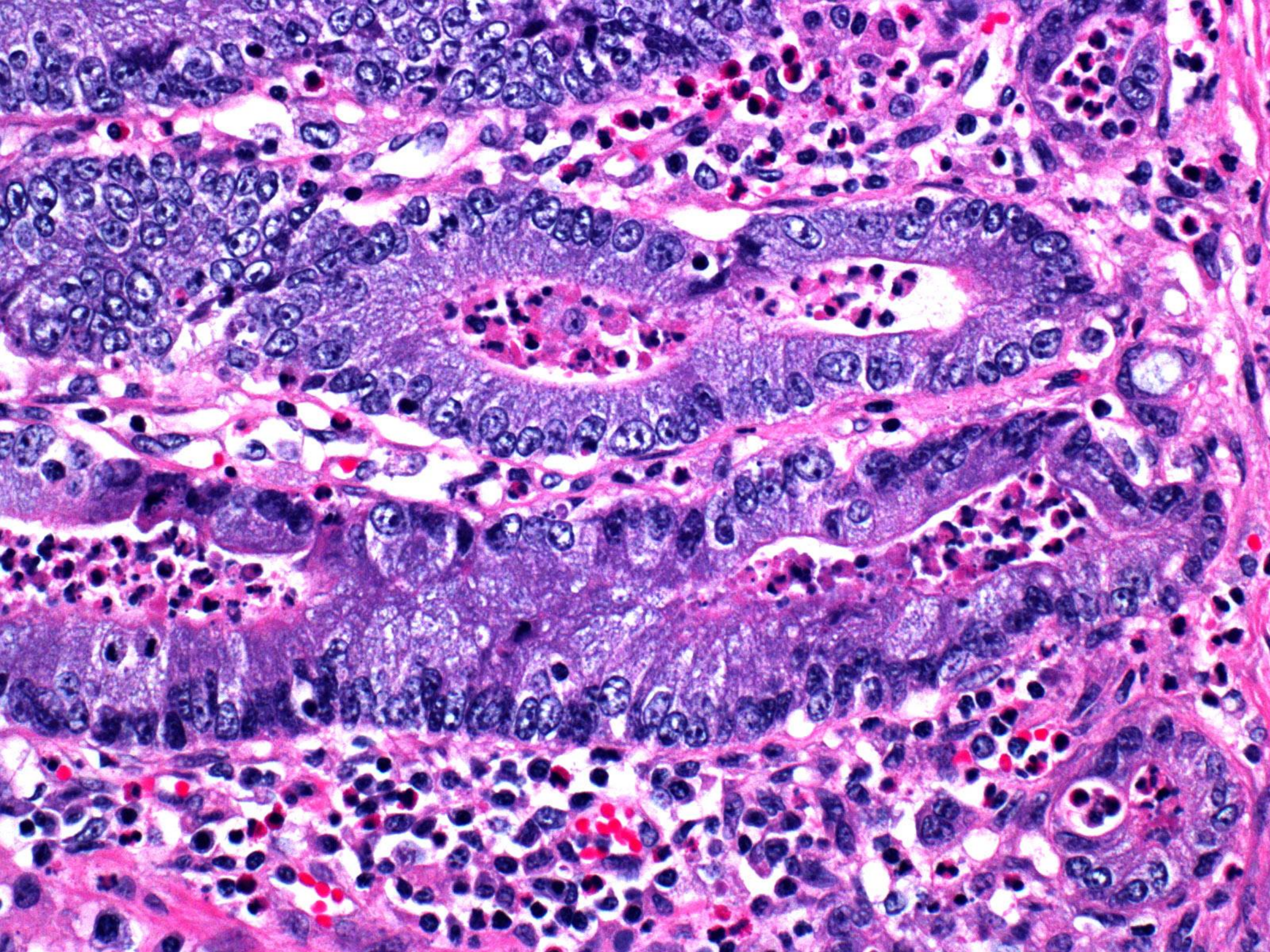
* *porcine intestinal adenomatosis*
* *necrotic enteritis*
* *proliferative hemorrhagic enteropathy*




Author: Eric R Burrough
Company: Iowa State University
100 µm


Author: Eric R Burrough
Company: Iowa State University
20 µm





* Swine dysentery

Brachyspira hyodysenteriae

Fibrinohemorrhagic erosive typhlocolitis

* Intestinal spirochetosis

Brachyspira pilosicoli

Non-hemorrhagic colitis

* Swine dysentery

Brachyspira hyodysenteriae

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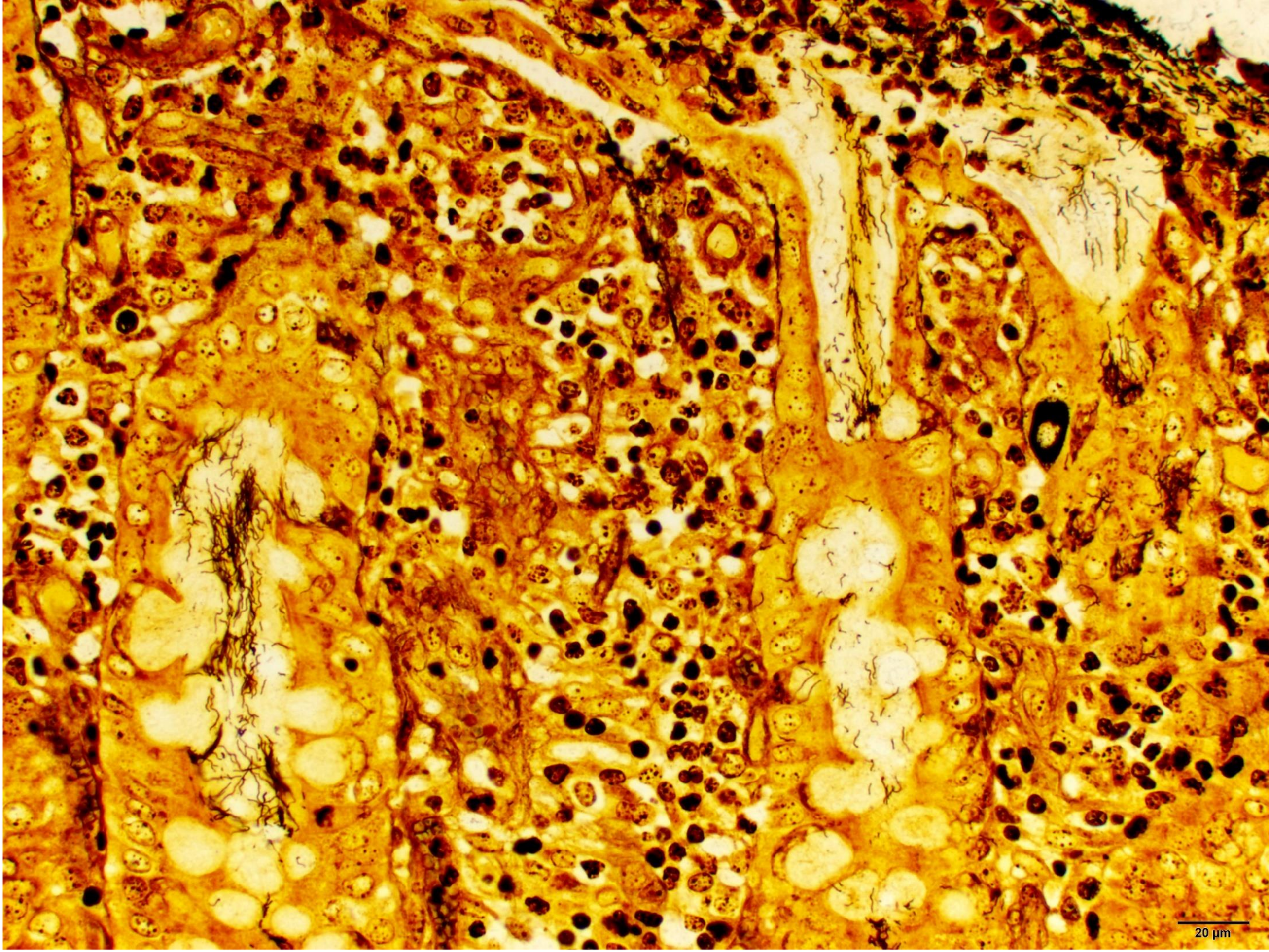
* Intestinal spirochetosis

Brachyspira pilosicoli

Non-hemorrhagic colitis


20 µm

* Swine dysentery

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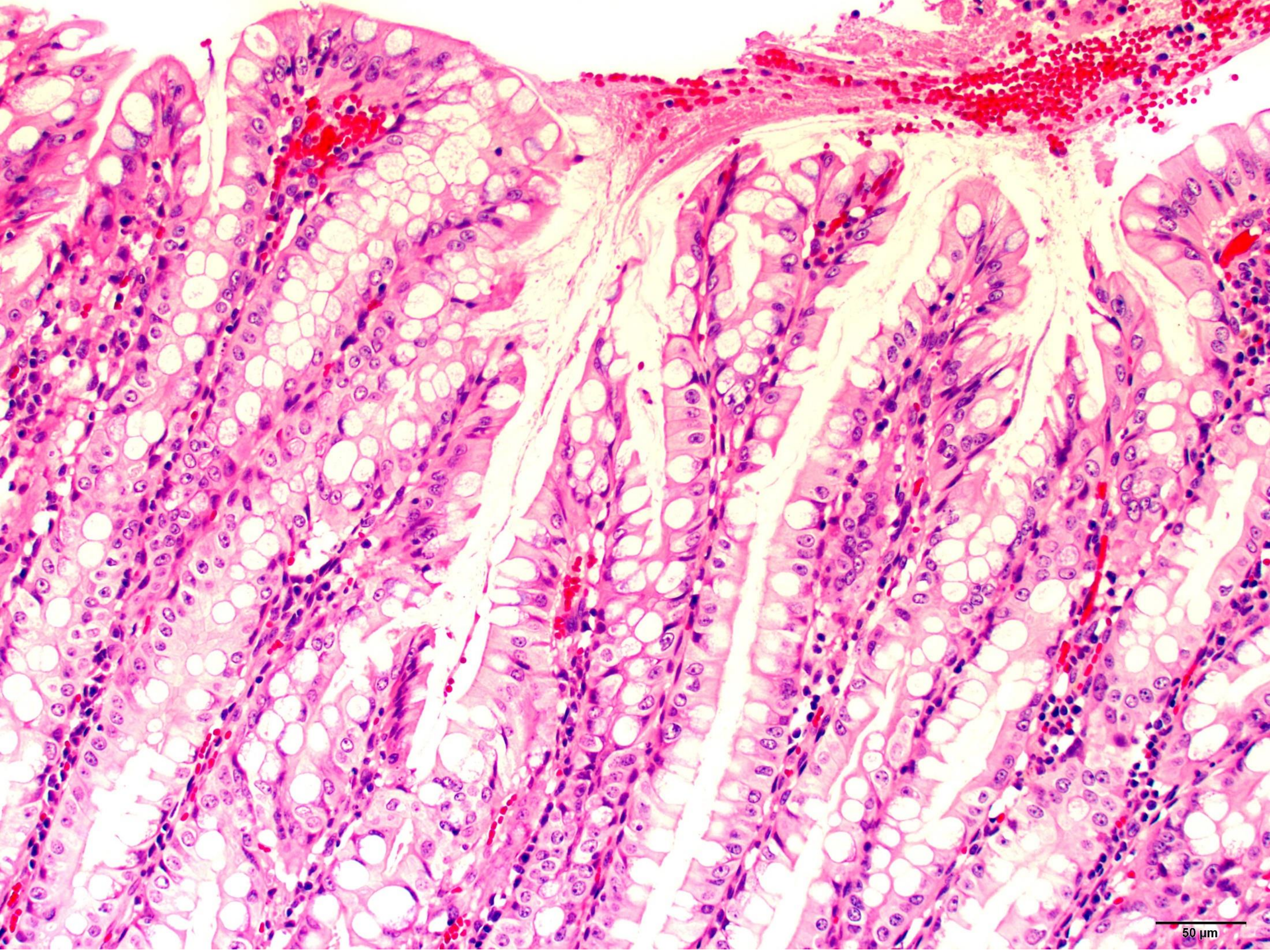
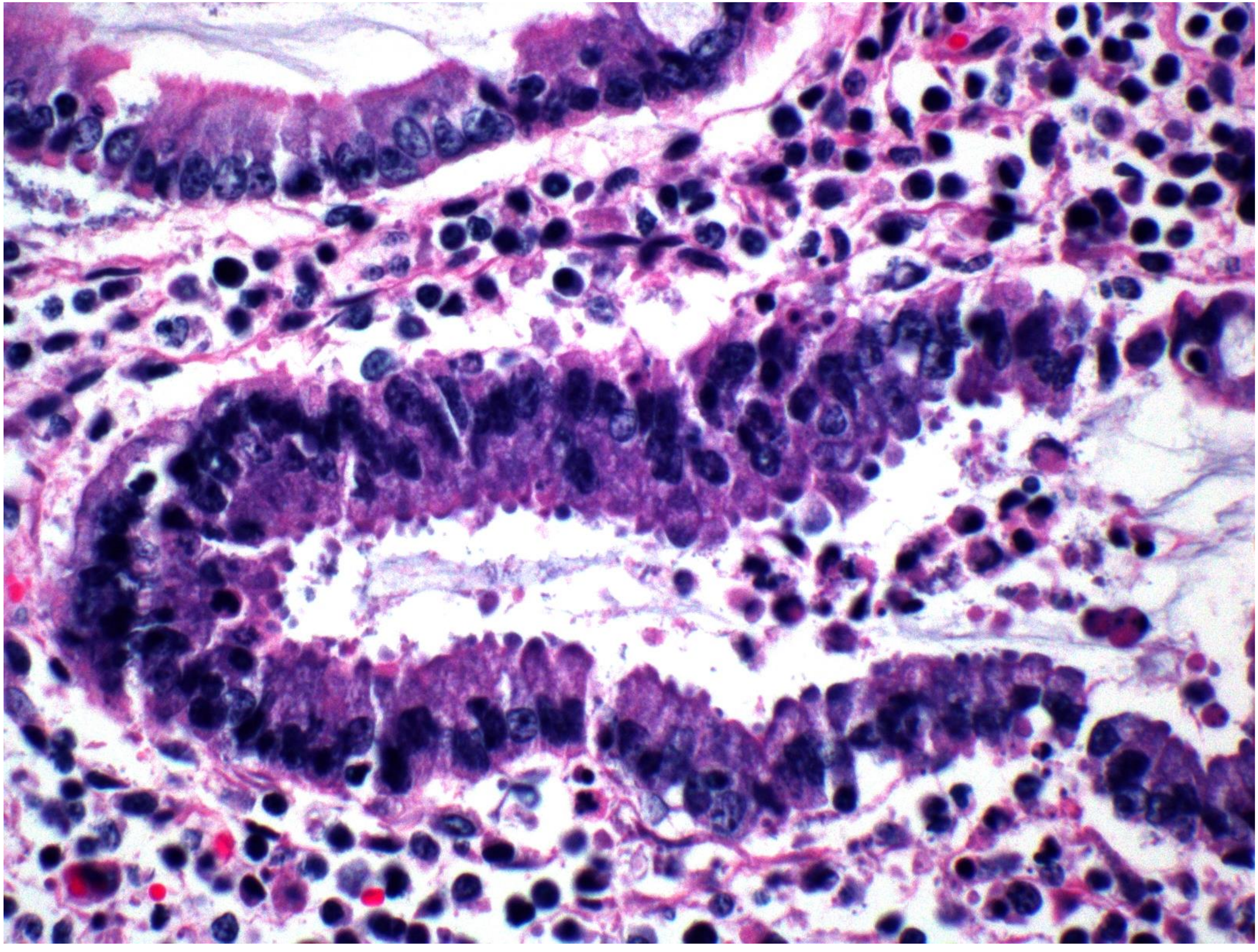
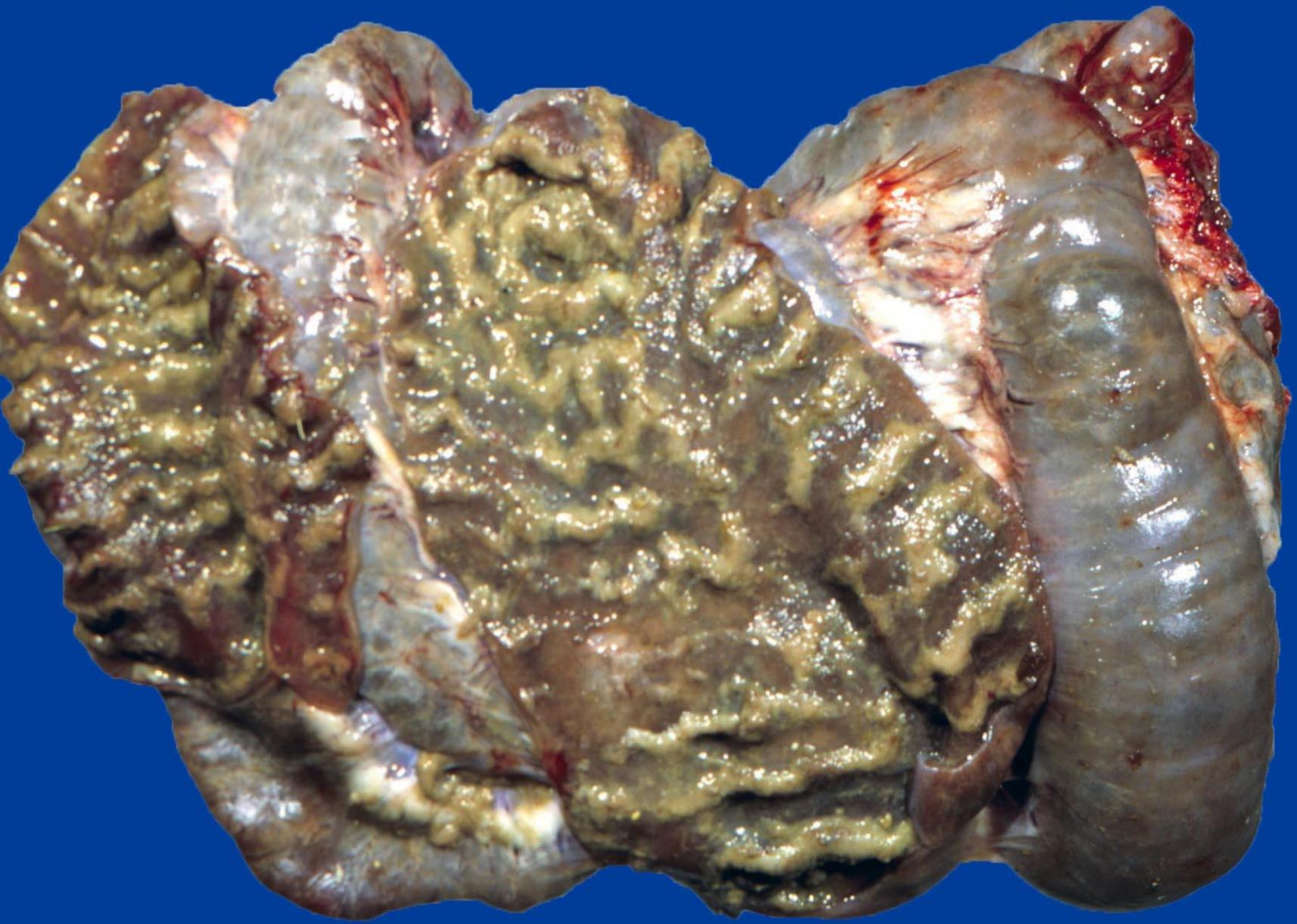
Brachyspira pilosicoli

Non-hemorrhagic colitis


50 µm





Review

Swine Dysentery: Etiopathogenesis and Diagnosis of a Reemerging Disease

Veterinary Pathology
2017, Vol. 54(1) 22-31

DOI: 10.1177/0300985816653795
journals.sagepub.com/home/vet

E. R. Burrough[1]

Abstract

Swine dysentery is a severe enteric disease in pigs, which is characterized by bloody to mucoid diarrhea and associated with reduced growth performance and variable mortality. This disease is most often observed in grower–finisher pigs, wherein

Case 9

Dog

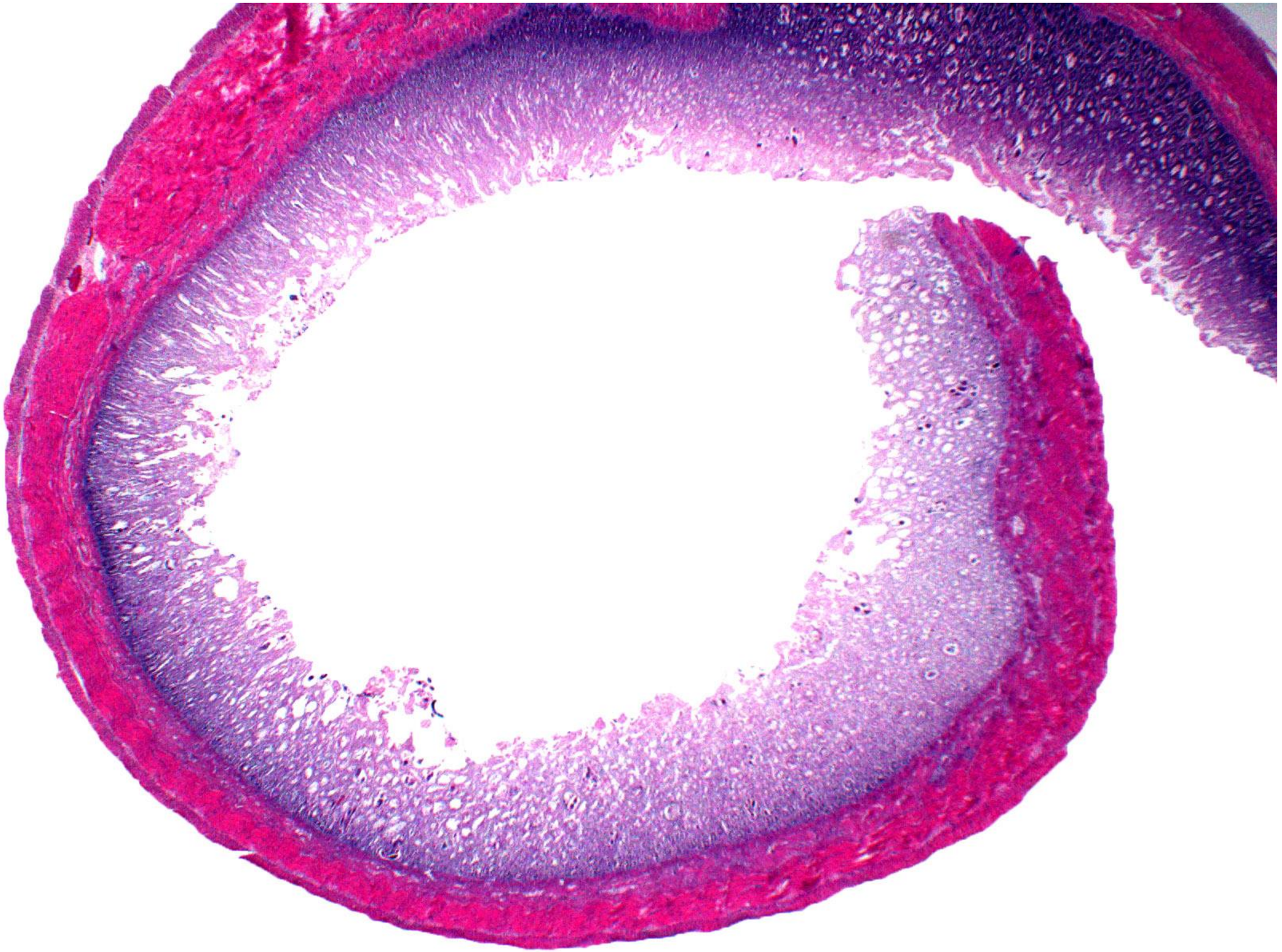
Contributor: Rachel Bone

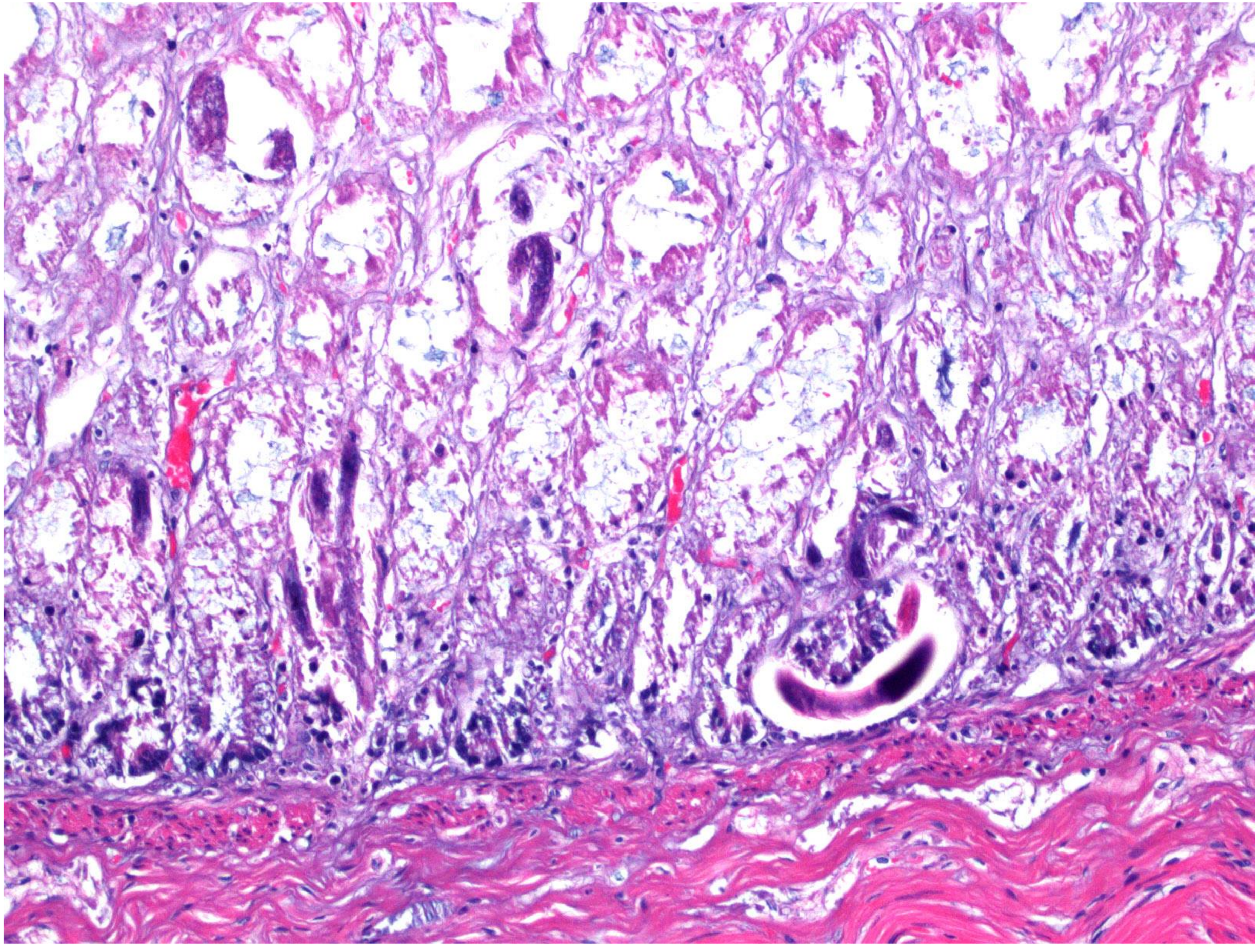
Disease and/or morphologic diagnosis:

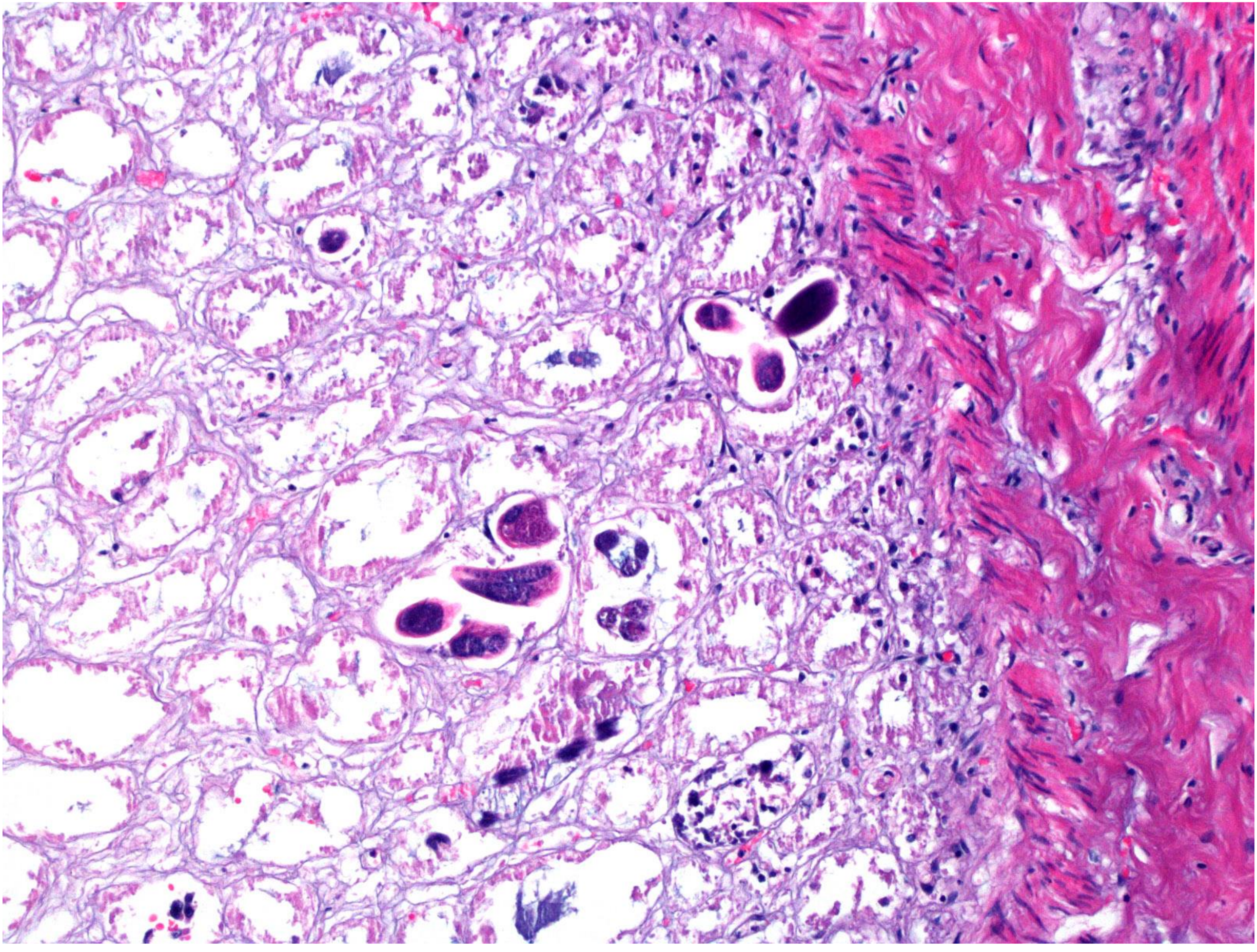
Enteritis, histiocytic, lymphoplasmacytic, acute, multifocal, moderate with crypt hyperplasia, crypt abscesses, and intralesional nematode- adults, larvae and eggs consistent with *Strongyloides* sp

Etiology:

Strongyloides sp. enteritis with pulmonary migration







SPECIAL ISSUE REVIEW

Strongyloides spp. infections of veterinary importance

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[3] *University of Miyazaki, Faculty of Agriculture, Veterinary Parasitic Diseases, Gakuen-kibanadai, Nishi 1-1, Miyazaki 889-2192, Japan*
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(*Received 11 March 2016; revised 6 May 2016; accepted 10 May 2016; first published online 4 July 2016*)

SUMMARY

This paper reviews the occurrence and impact of threadworms, *Strongyloides* spp., in companion animals and large live