

**PPE**



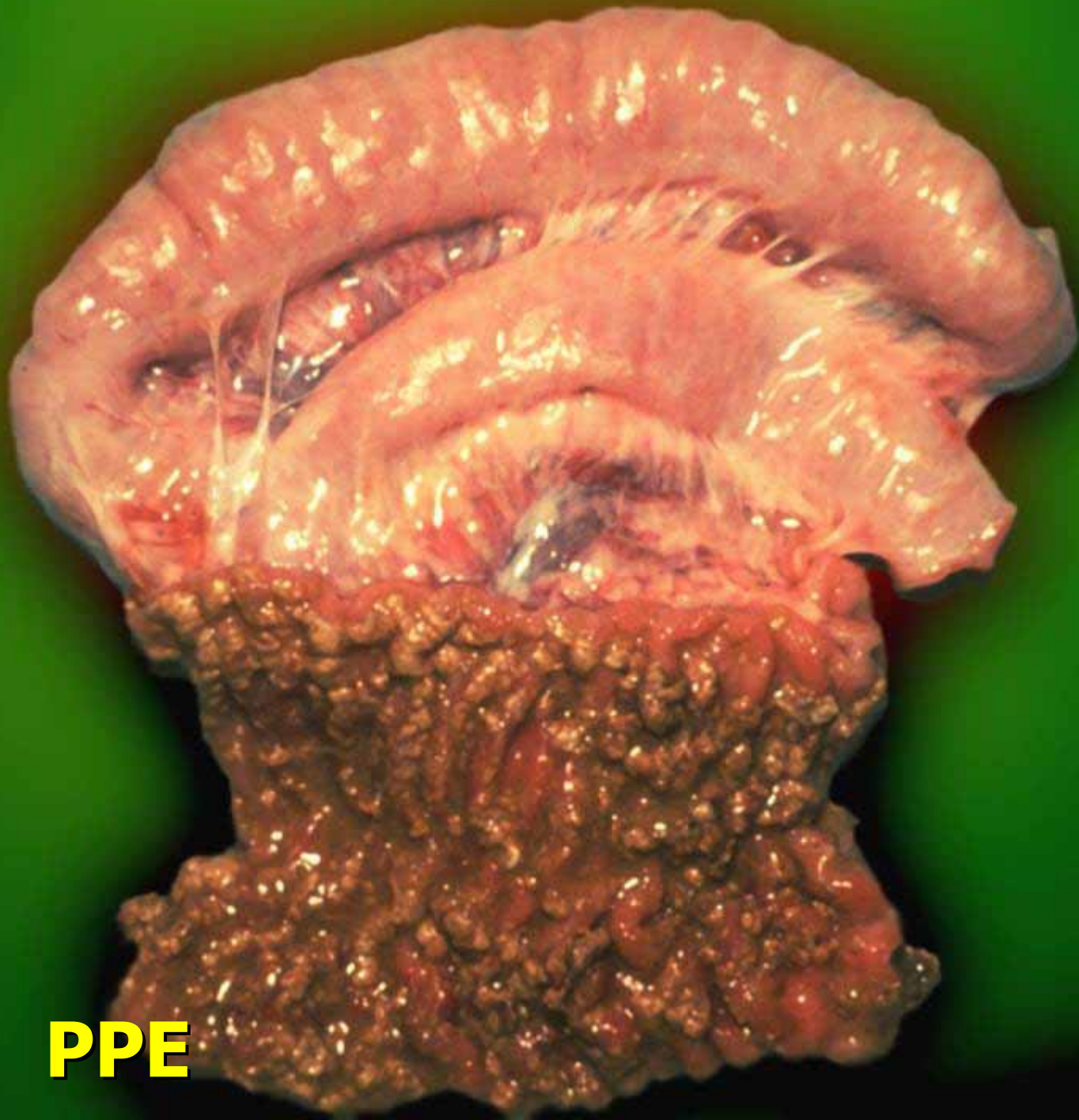
**PPE**



**PPE**



**PPE**



**PPE**



**PPE**

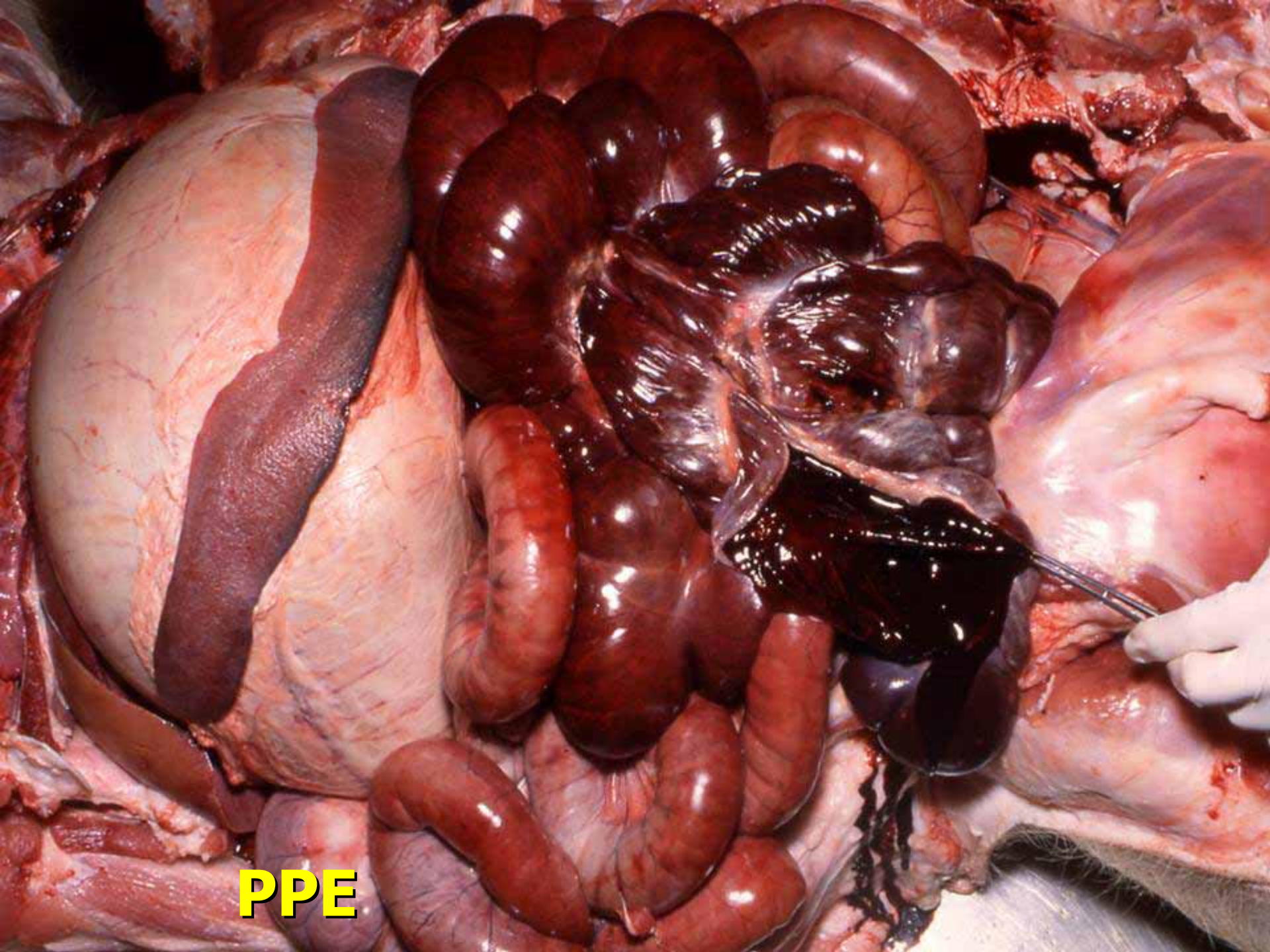


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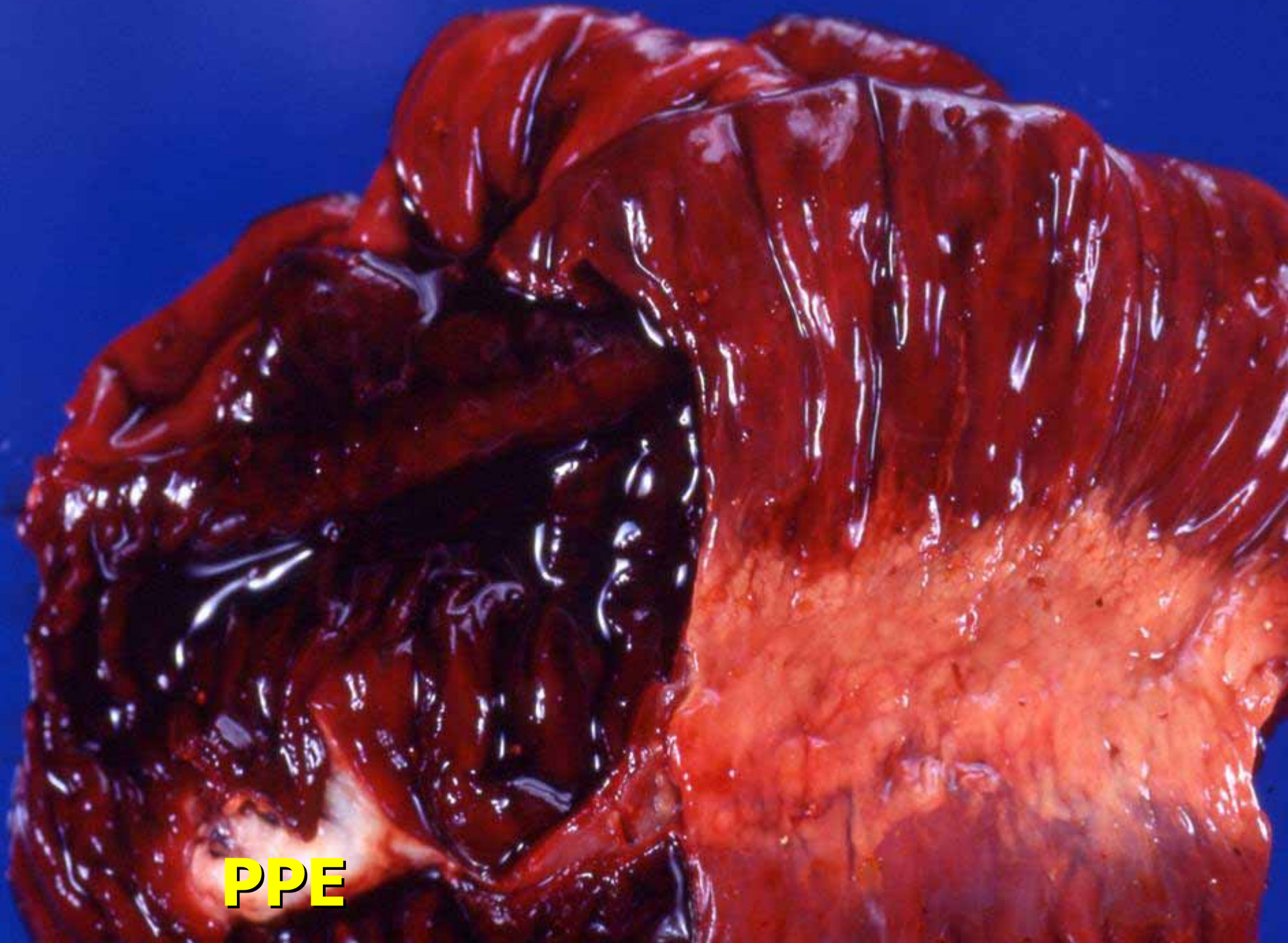


**PPE**





**PPE**

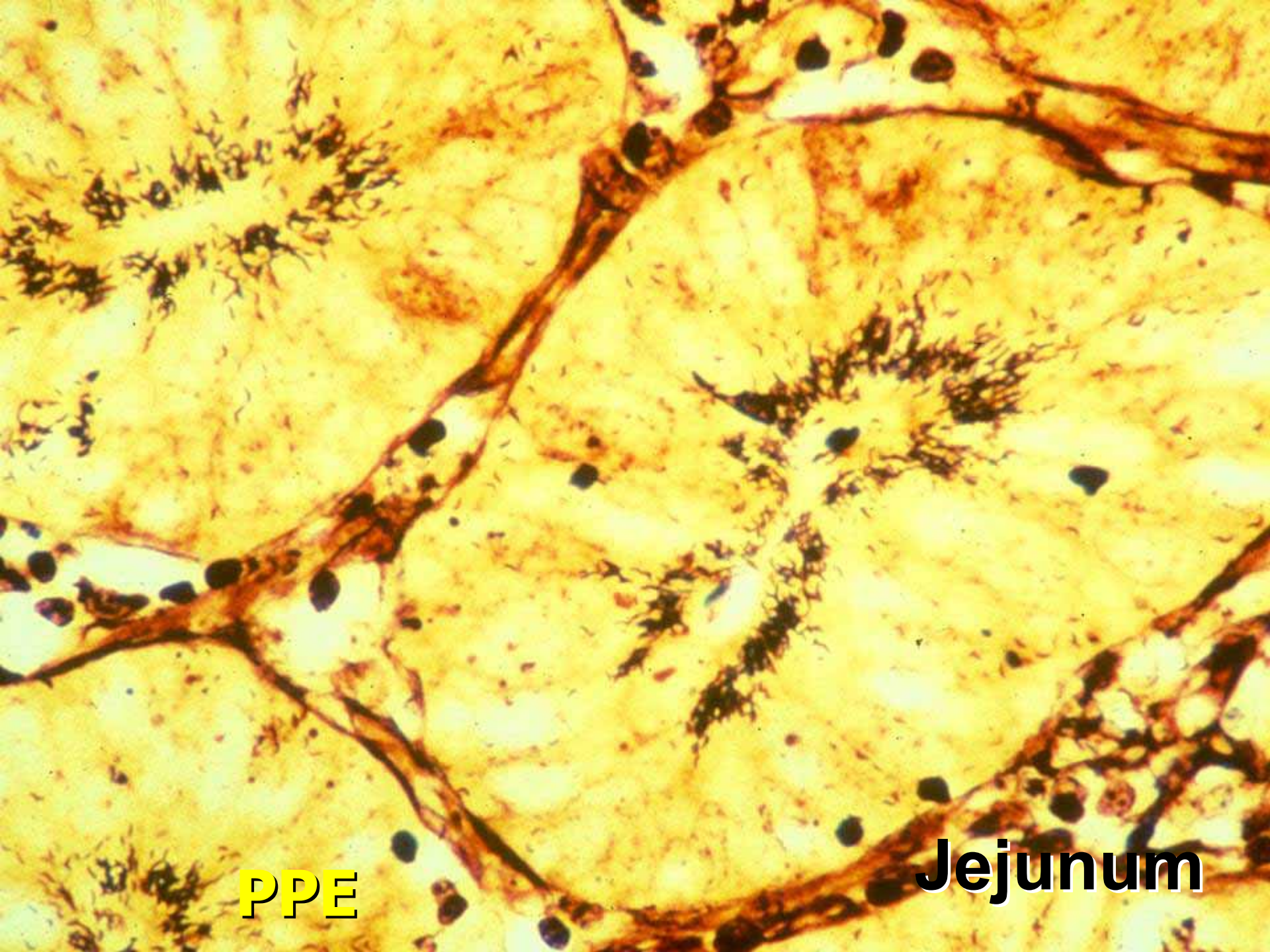


**PPE**



**PPE**

**Jejunum**



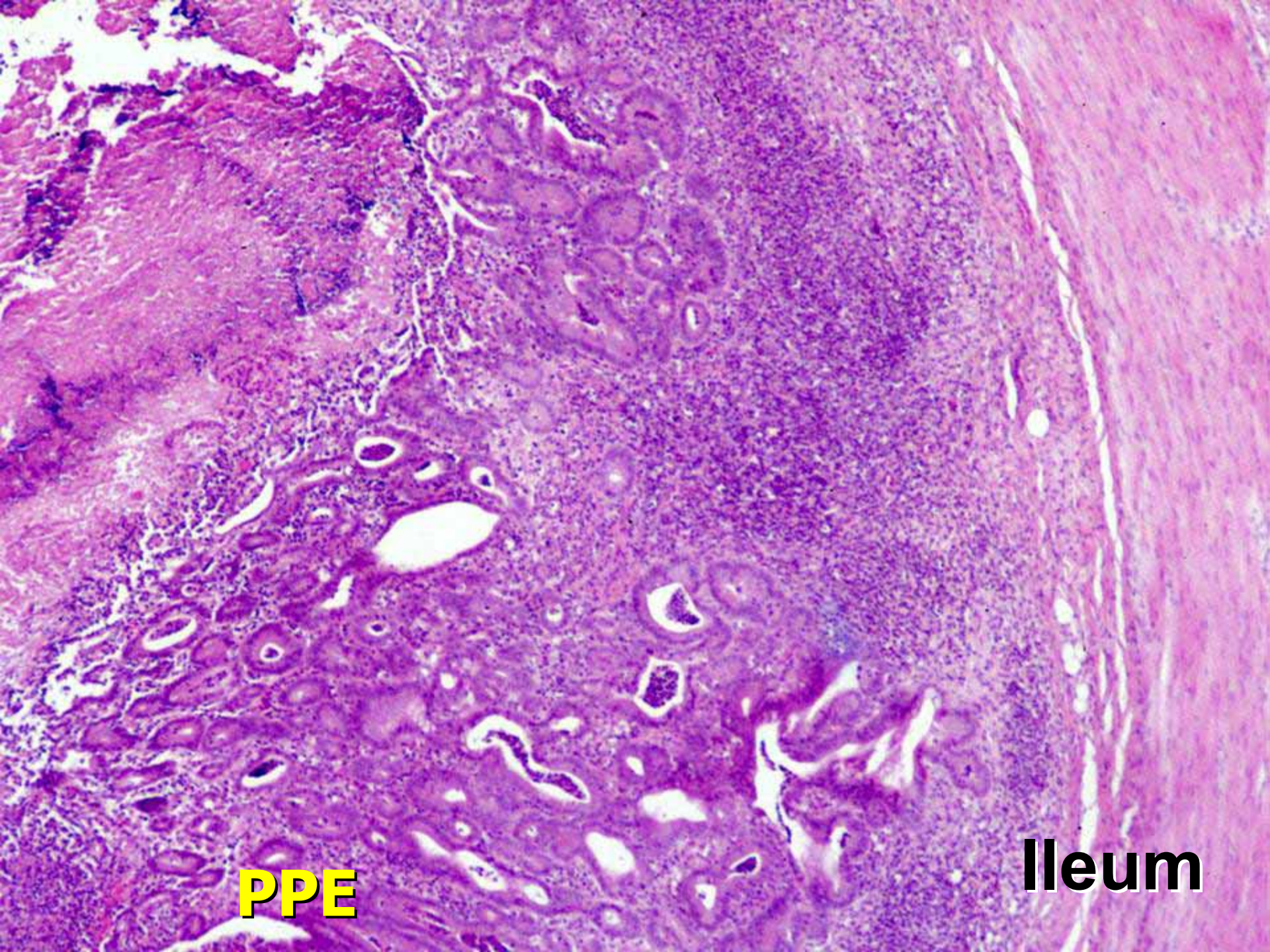
**PPE**

**Jejunum**



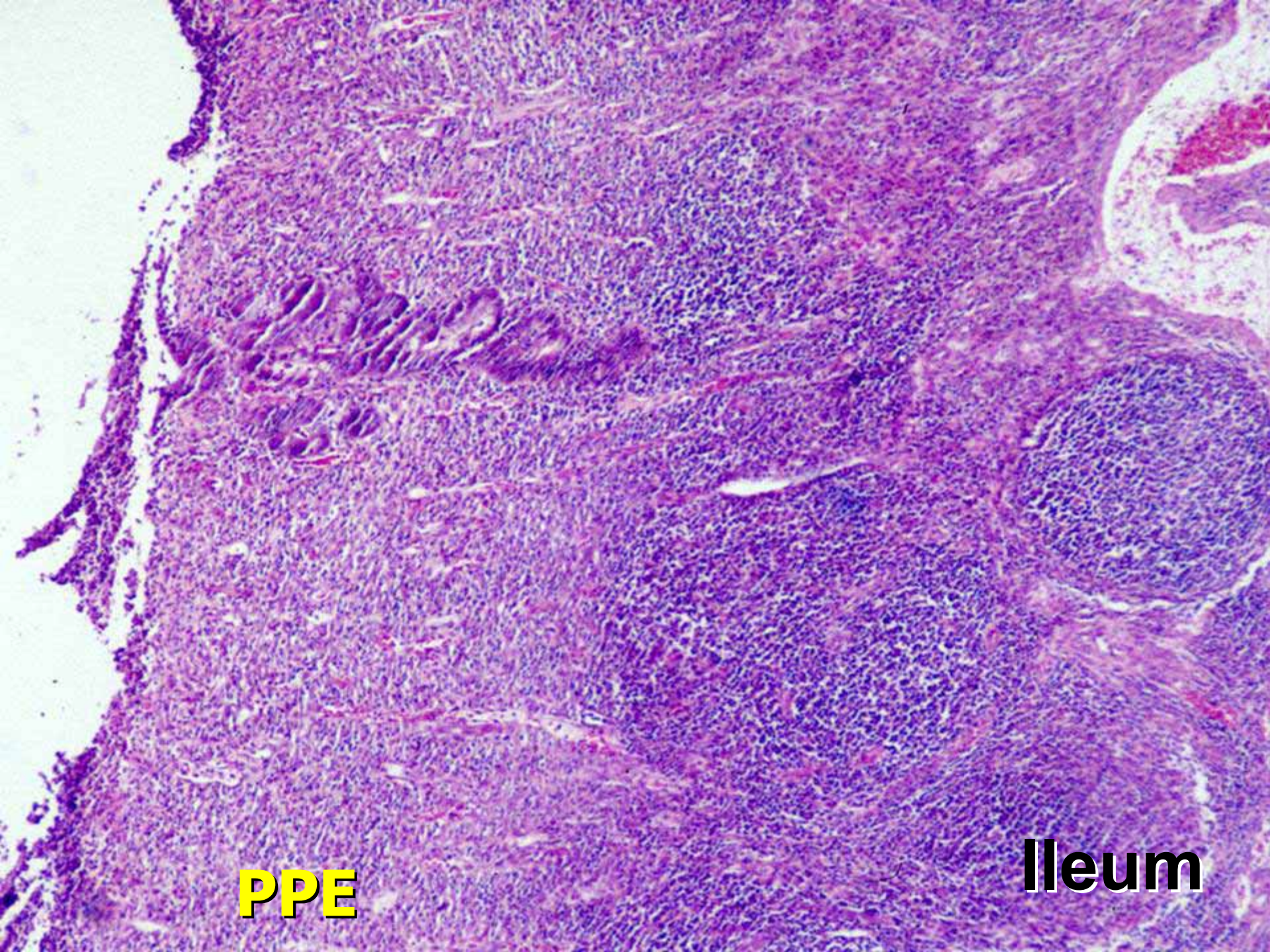
**PPE**

**Cecum**



**PPE**

**Ileum**



**PPE**

**Ileum**



**"I'm changing the mission. Instead of guarding the house, we're going after the cat."**



# Brachyspira sp. in Swine

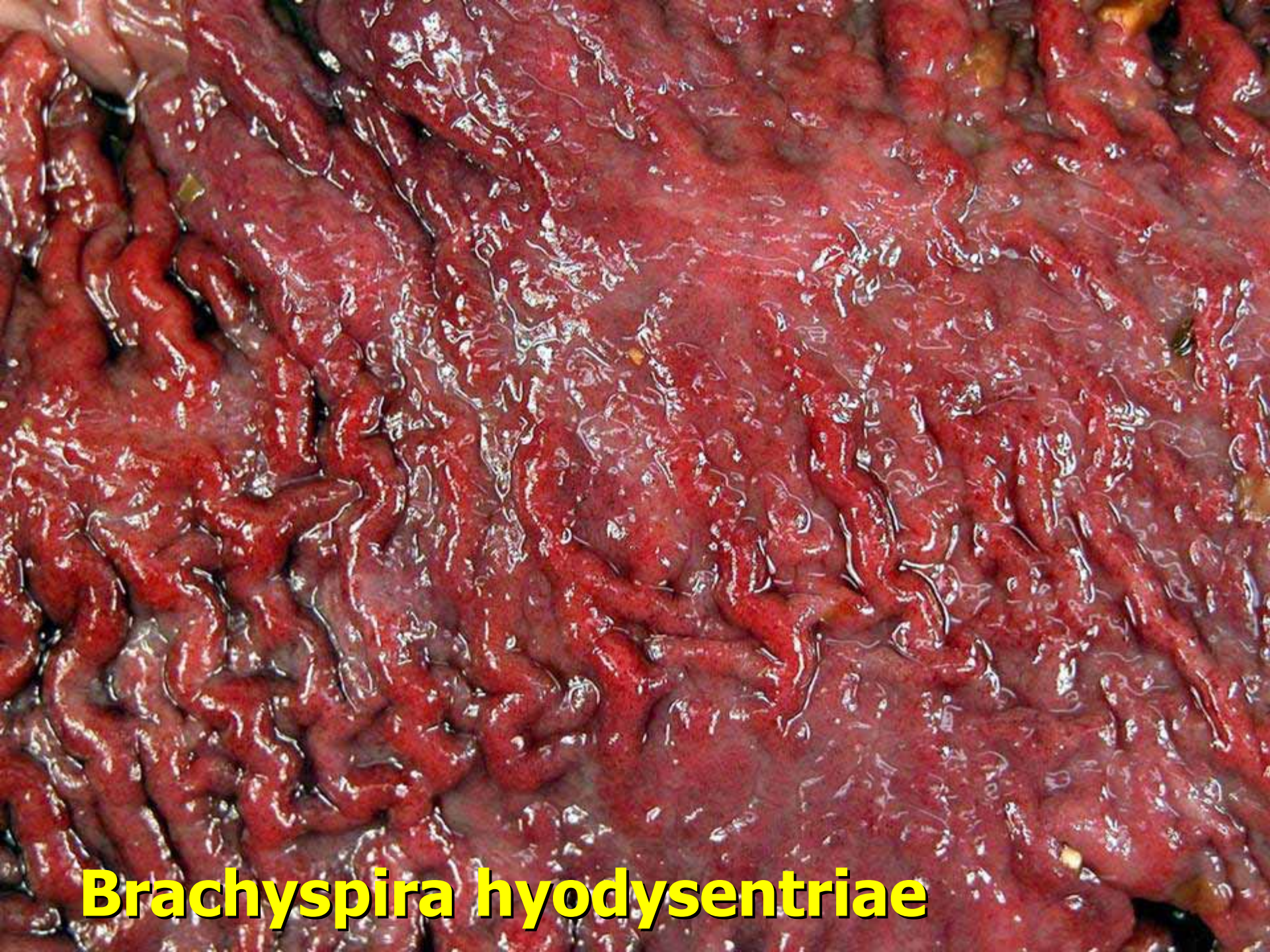
Organism	$\beta$ Hem.	# A.F.	Disease
<b>B. hyodysenteriae</b>	<b>S</b>	<b>7-14</b>	<b>Swine Dysentery</b>
<b>B. intermedia</b>	<b>W</b>	<b>7-14</b>	<b>Nonpathogenic</b>
<b>B. innocens</b>	<b>W</b>	<b>7-14</b>	<b>Nonpathogenic</b>
<b>B. murdochii</b>	<b>W</b>	<b>7-14</b>	<b>Nonpathogenic</b>
<b>B. pilosicoli</b>	<b>W</b>	<b>4-6</b>	<b>Intestinal Spirochetosis</b>

# **Brachyspira hyodysenteriae**

- **morphologically identical to *Treponema pallidum* (syphilis)**
- **“Swine Dysentery” is a well-defined clinical disease with well-defined lesions**
- **seroprevalence is greater than rate of disease**
- **can be in a herd without clinical disease**
- **mild disease can resemble spirochetosis**
  - **clinical signs**
  - **gross lesions**
  - **microscopic lesions**



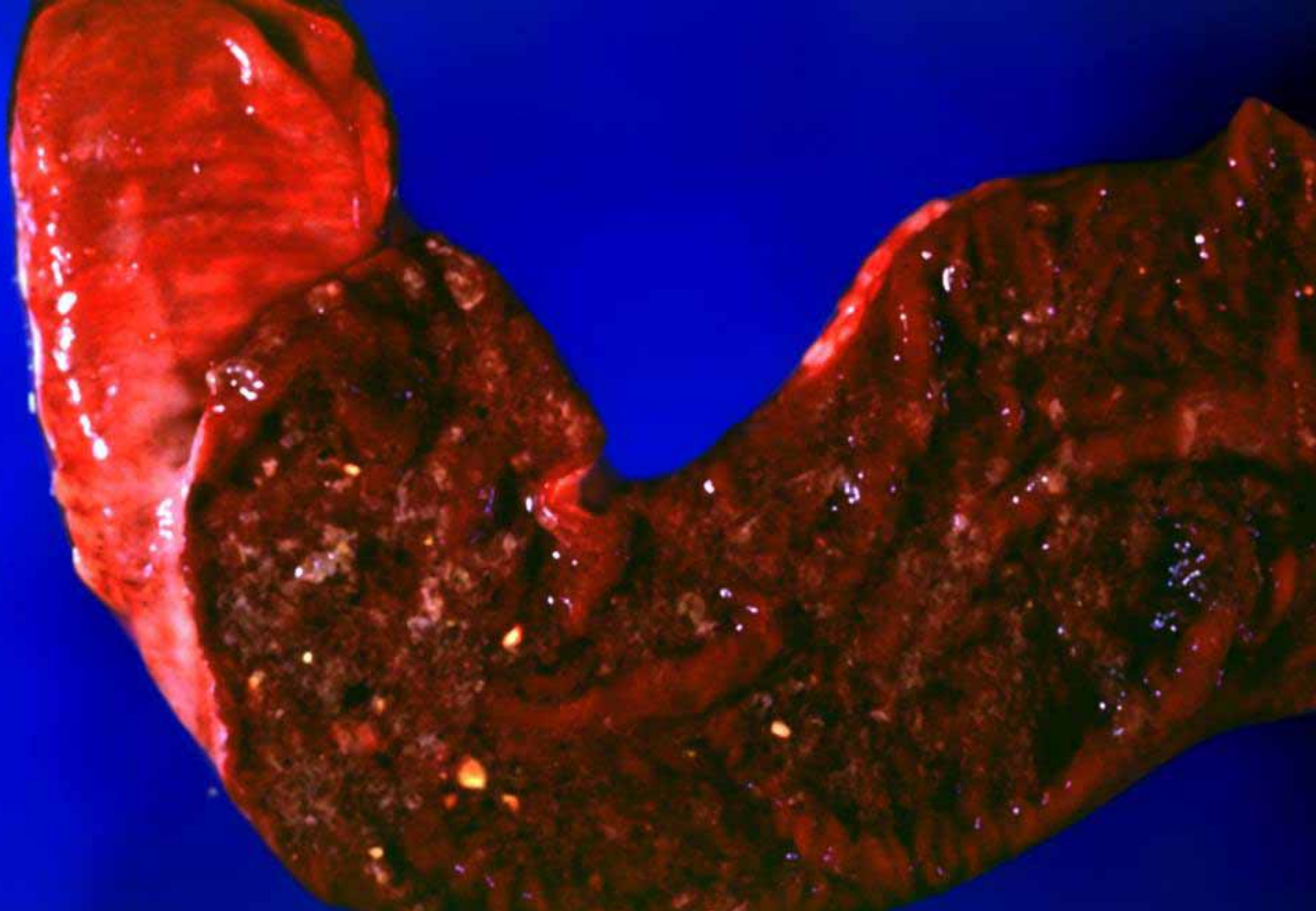
**Brachyspira hyodysenteriae**



**Brachyspira hyodysenteriae**



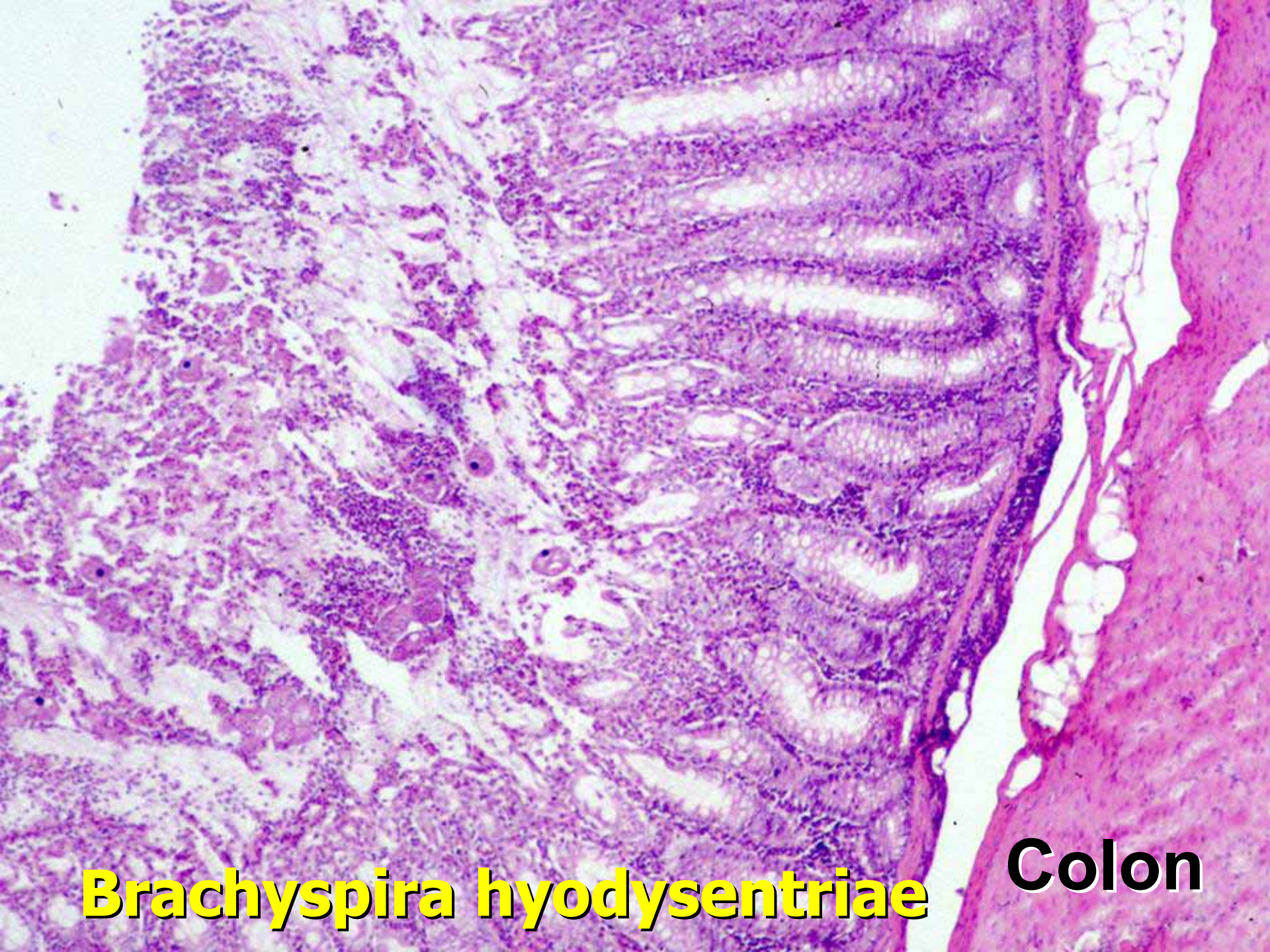
**Brachyspira hyodysenteriae**



**Brachyspira hyodysenteriae**



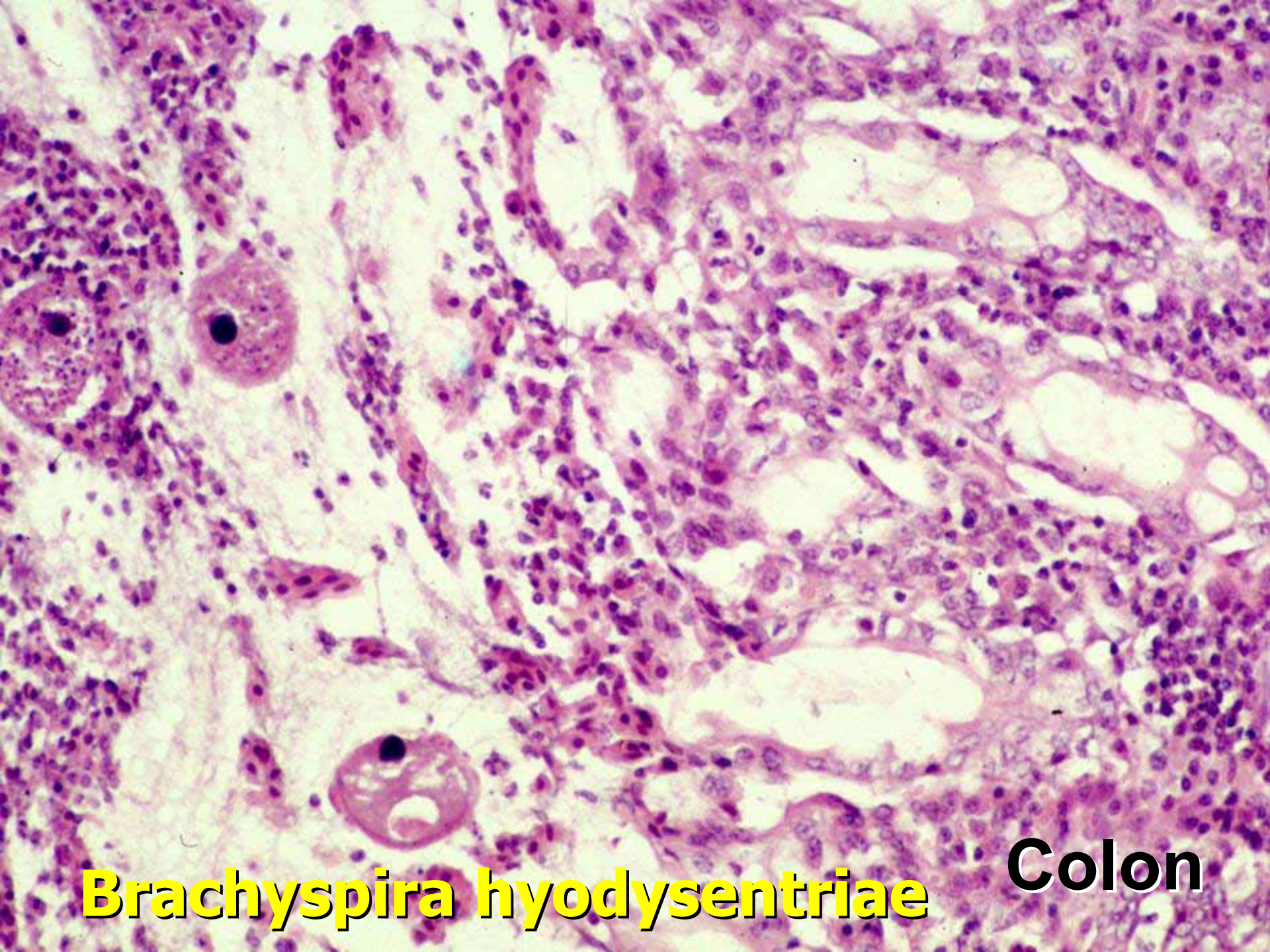
**Brachyspira hyodysenteriae**



**Brachyspira hyodysenteriae**

**Colon**





**Brachyspira hyodysenteriae**

**Colon**



**Brachyspira hyodysenteriae**

**Colon**

# Colonic Spirochetosis

- weaned to adult pigs
- affects humans (potentially zoonotic), non-human primates, pigs, dogs, guinea pigs, opossums, wild and domesticated fowl
- *Serpulina pilosicoli* (*Anguillina coli*)
- genetically distinct from *S. hyodysenteriae* and *S. innocens*
- weak beta hemolysis, indole negative; hydrolyze hippurate
- 4-6 axial fibrils (vs. 7-14)
- mild fibrinous colitis
- colonize surface of mature colonic epithelium
  - heavy perpendicular growth “brush border”



**Brachyspira pilosicoli**



**Brachyspira pilosicoli**



**Colitis cystica**

Salmonella

DAIRY MILK



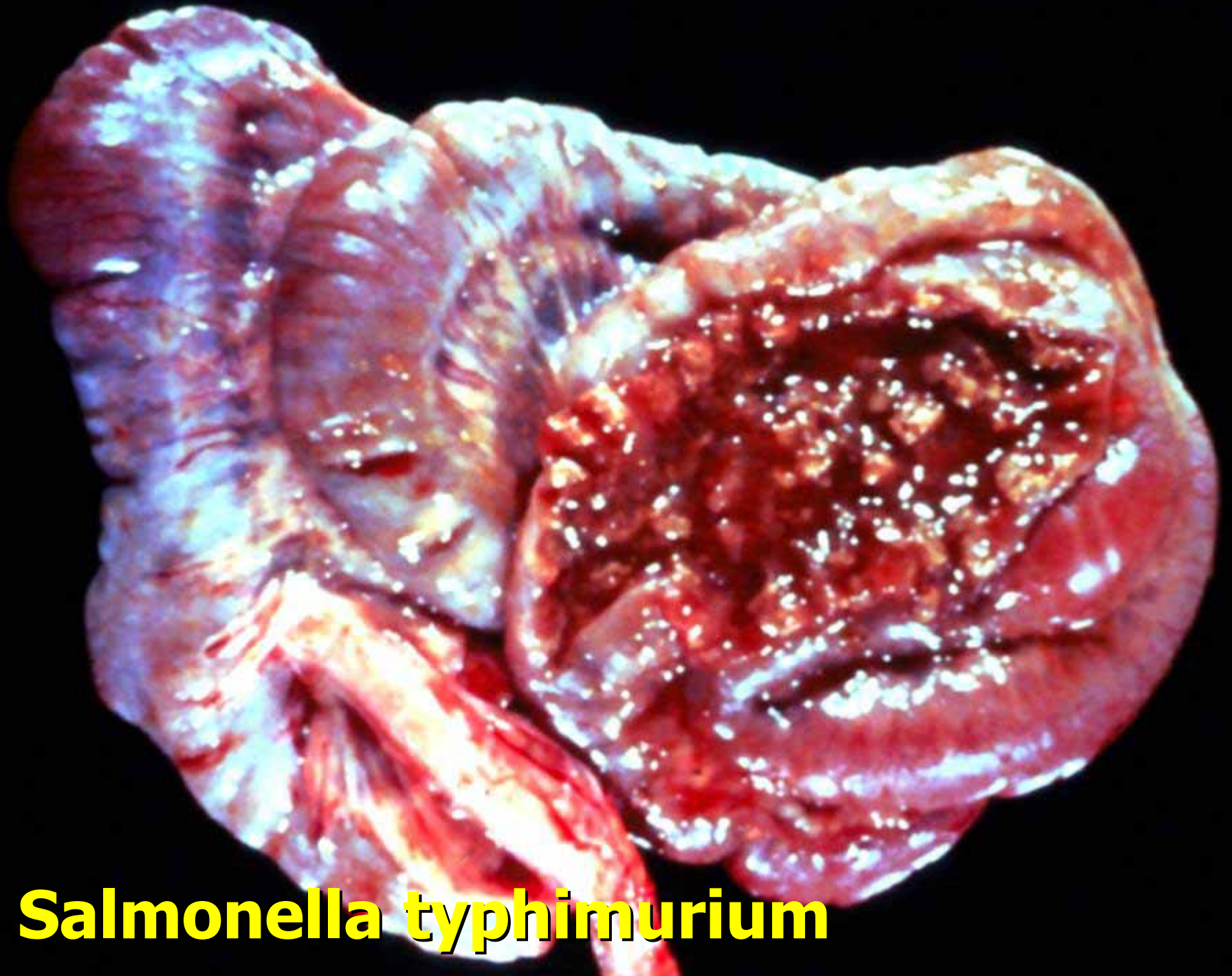


**Salmonella typhimurium**

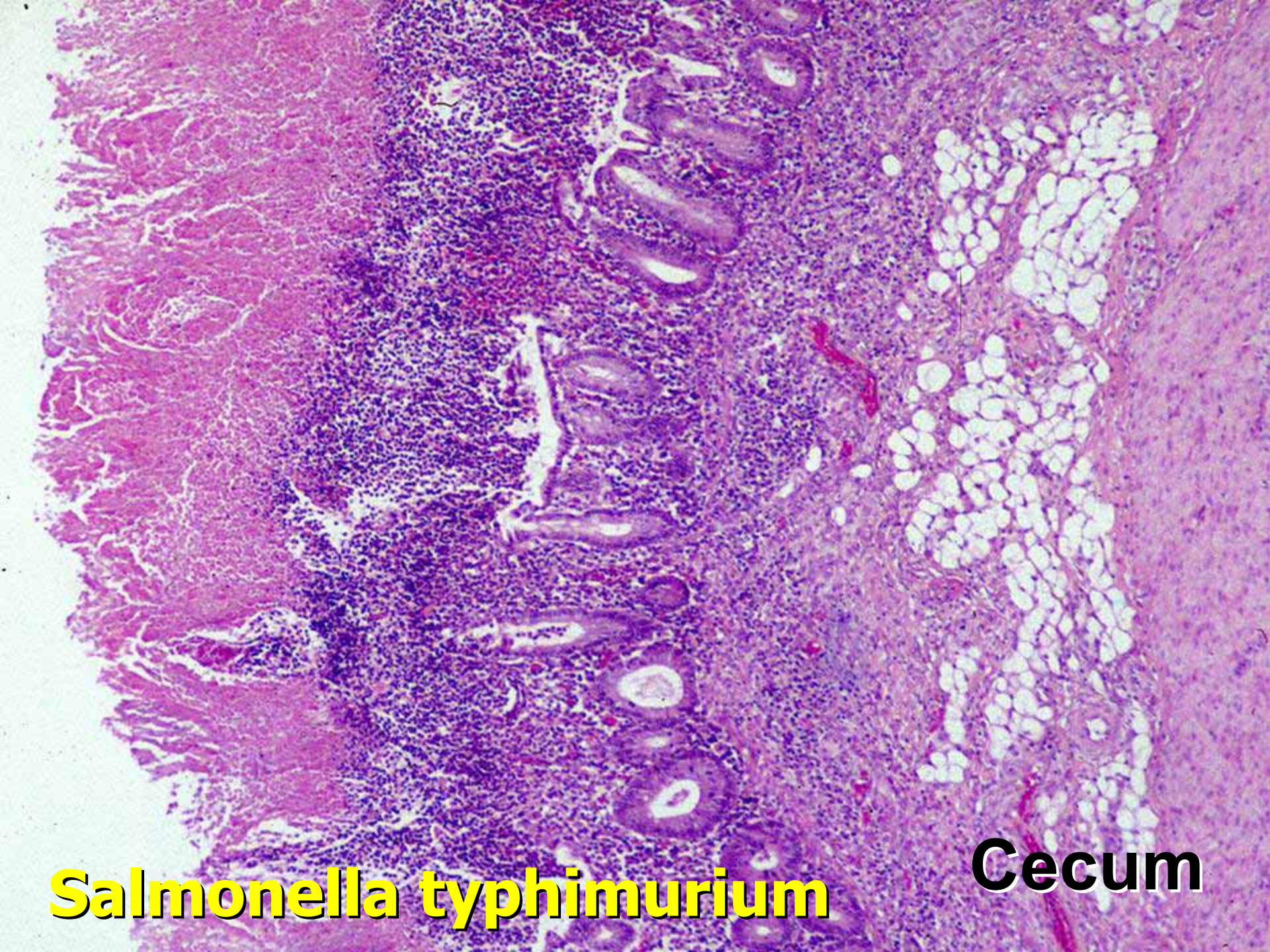




**Salmonella typhimurium**

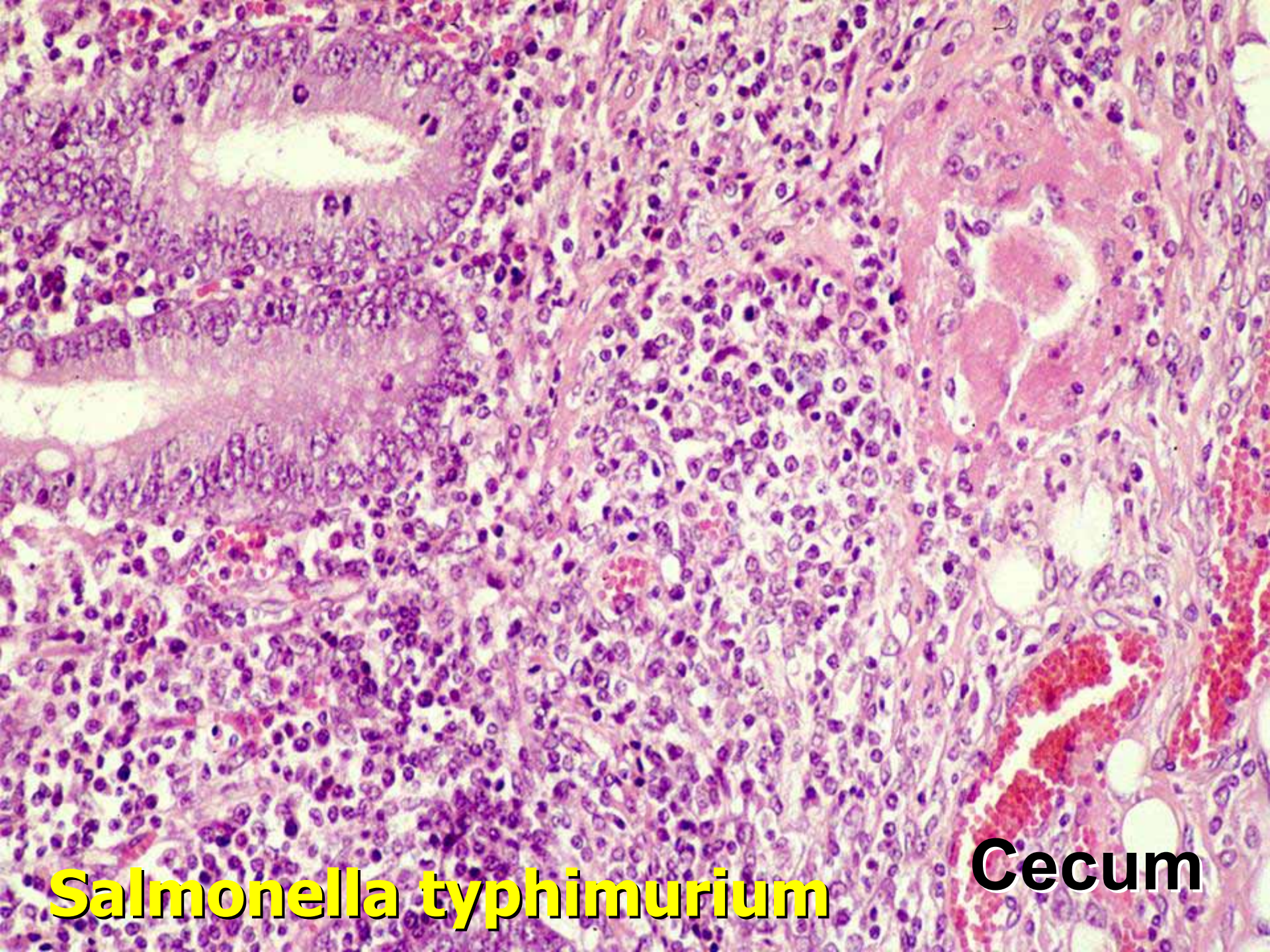


**Salmonella typhimurium**



**Salmonella typhimurium**

**Cecum**

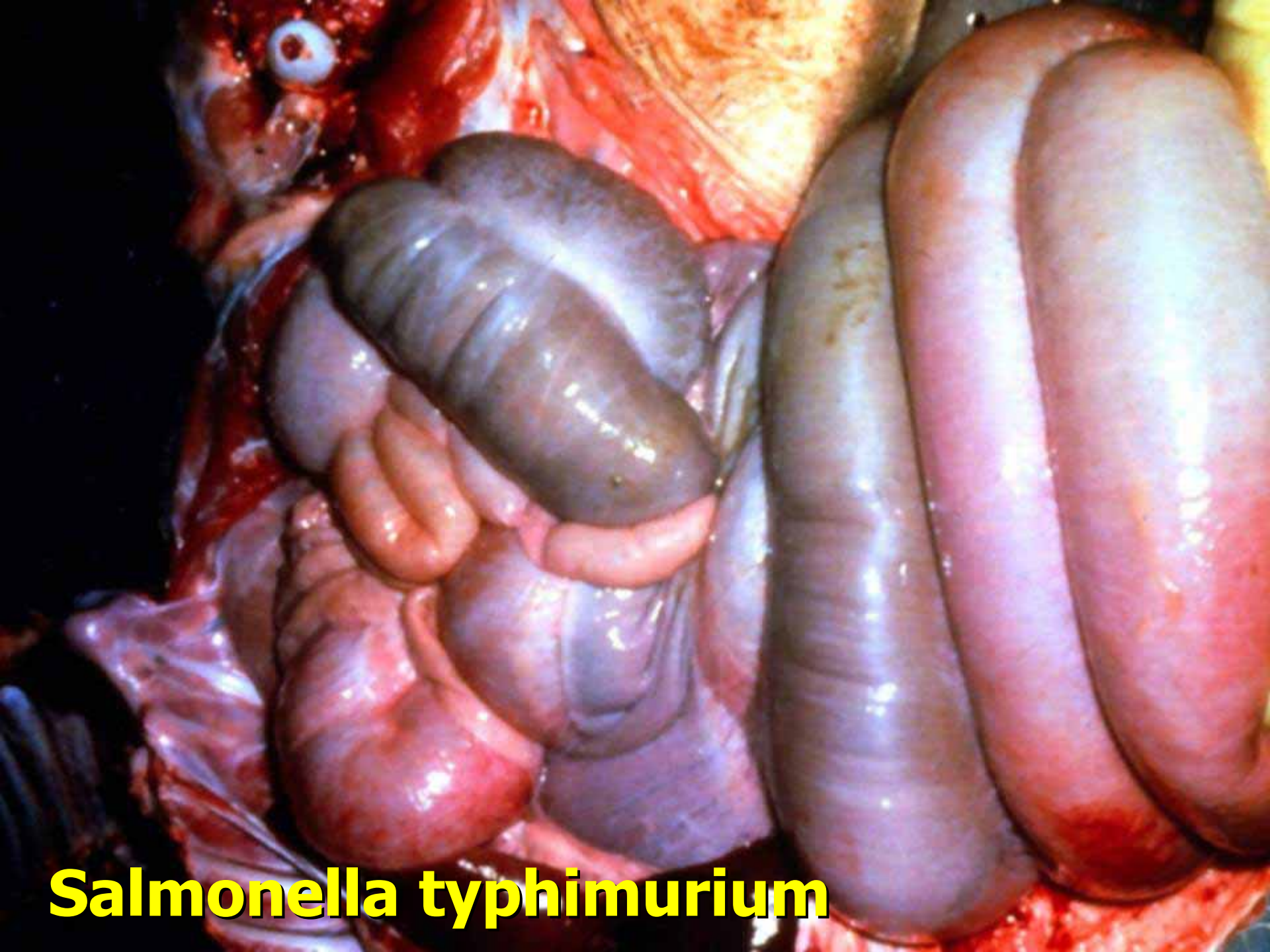


**Salmonella typhimurium**

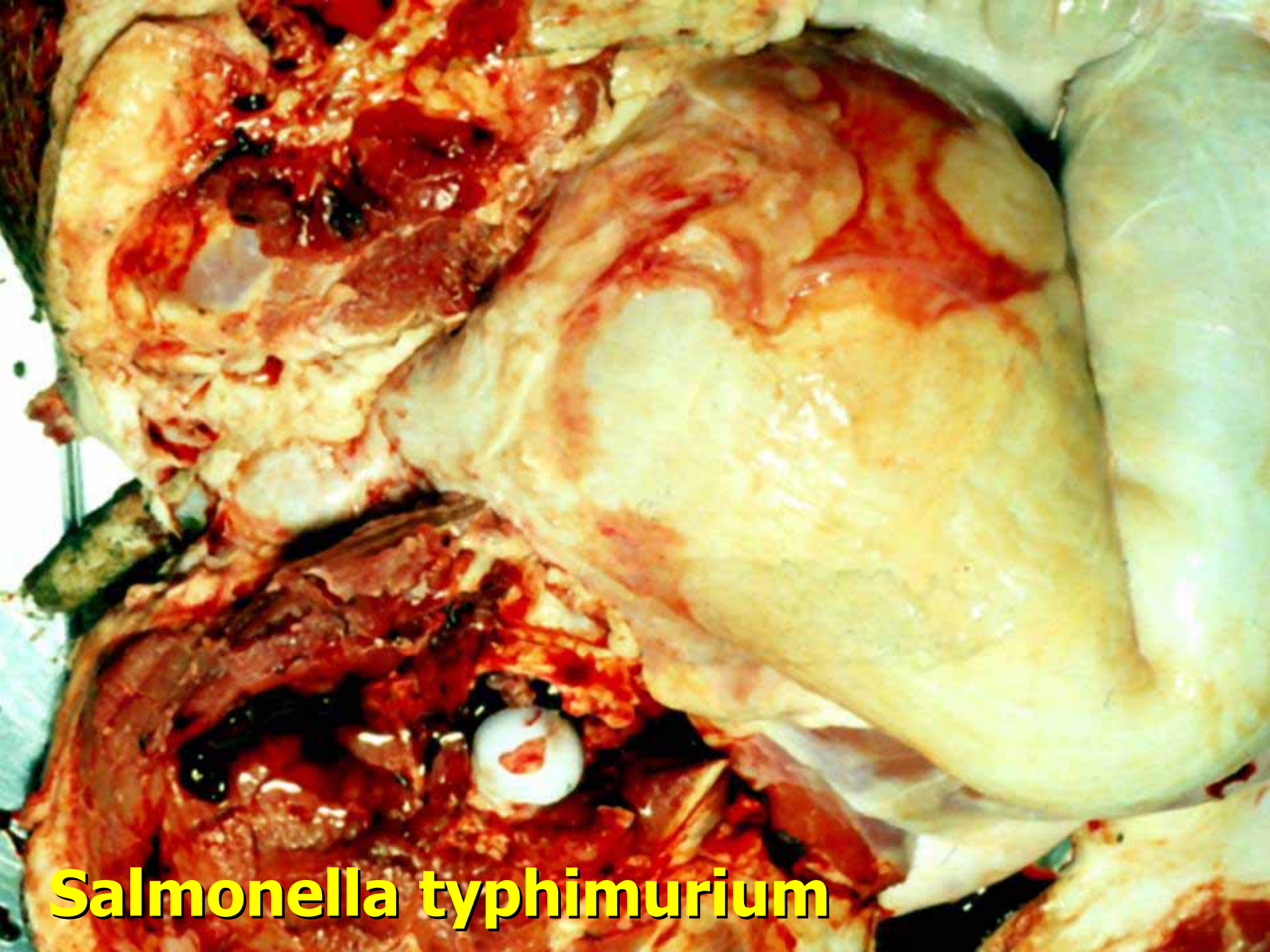
**Cecum**



**Salmonella typhimurium**



**Salmonella typhimurium**



**Salmonella typhimurium**



**Salmonella typhimurium**

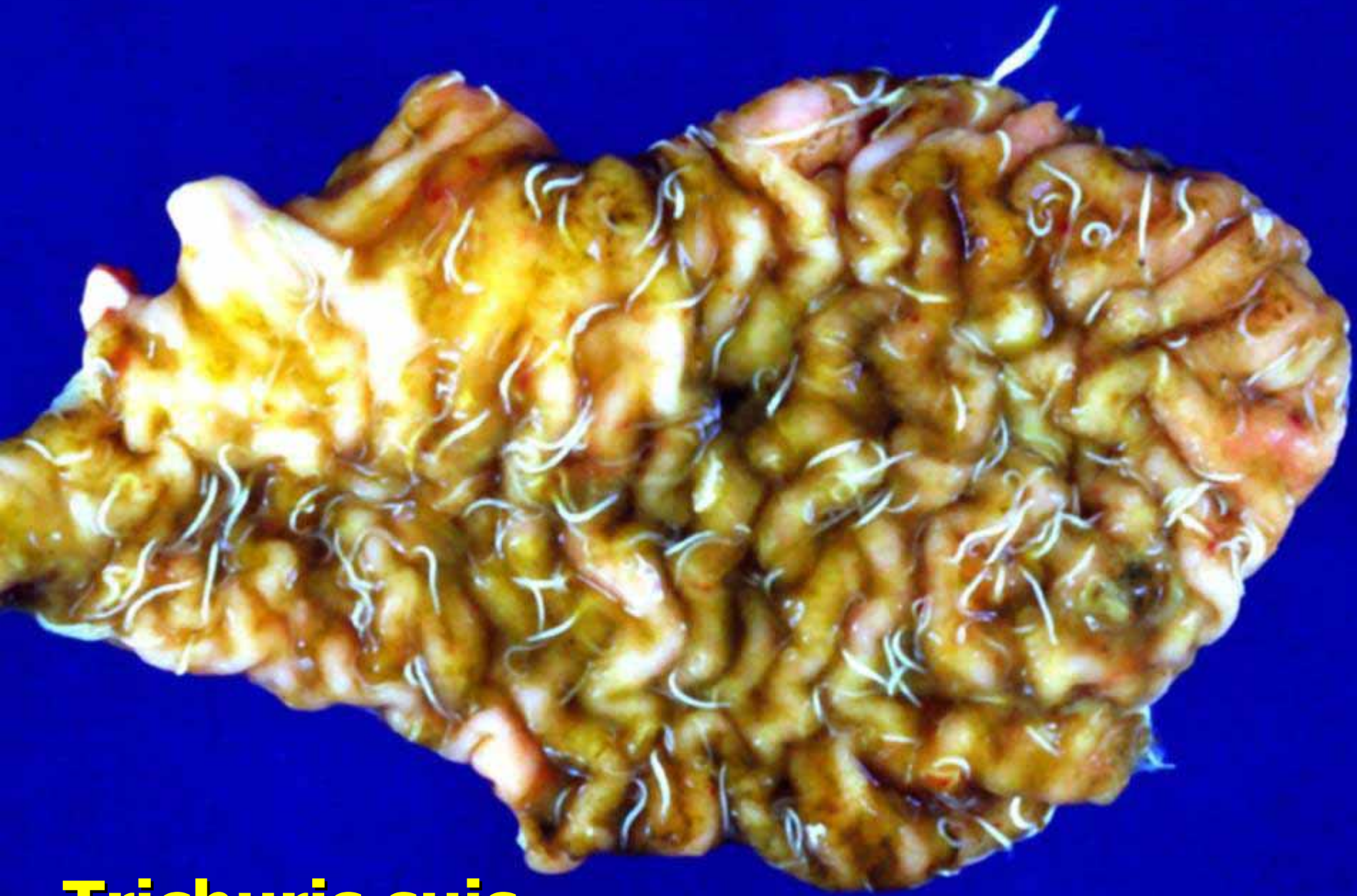




**Prolaps**



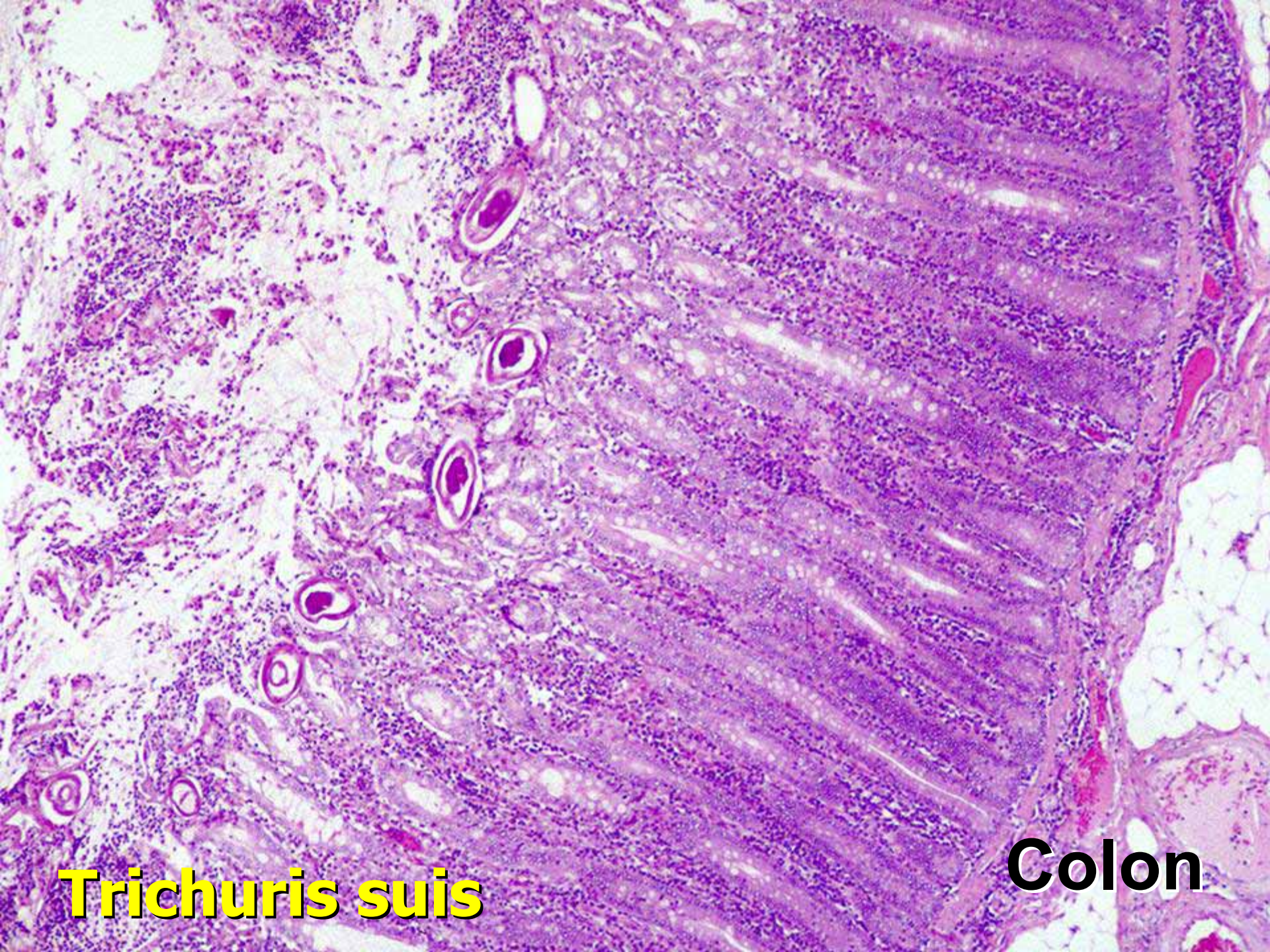
**Salmonella typhisuis**



**Trichuris suis**



**Trichuris suis**



**Trichuris suis**

**Colon**



**Trichuris suis**

**Colon**

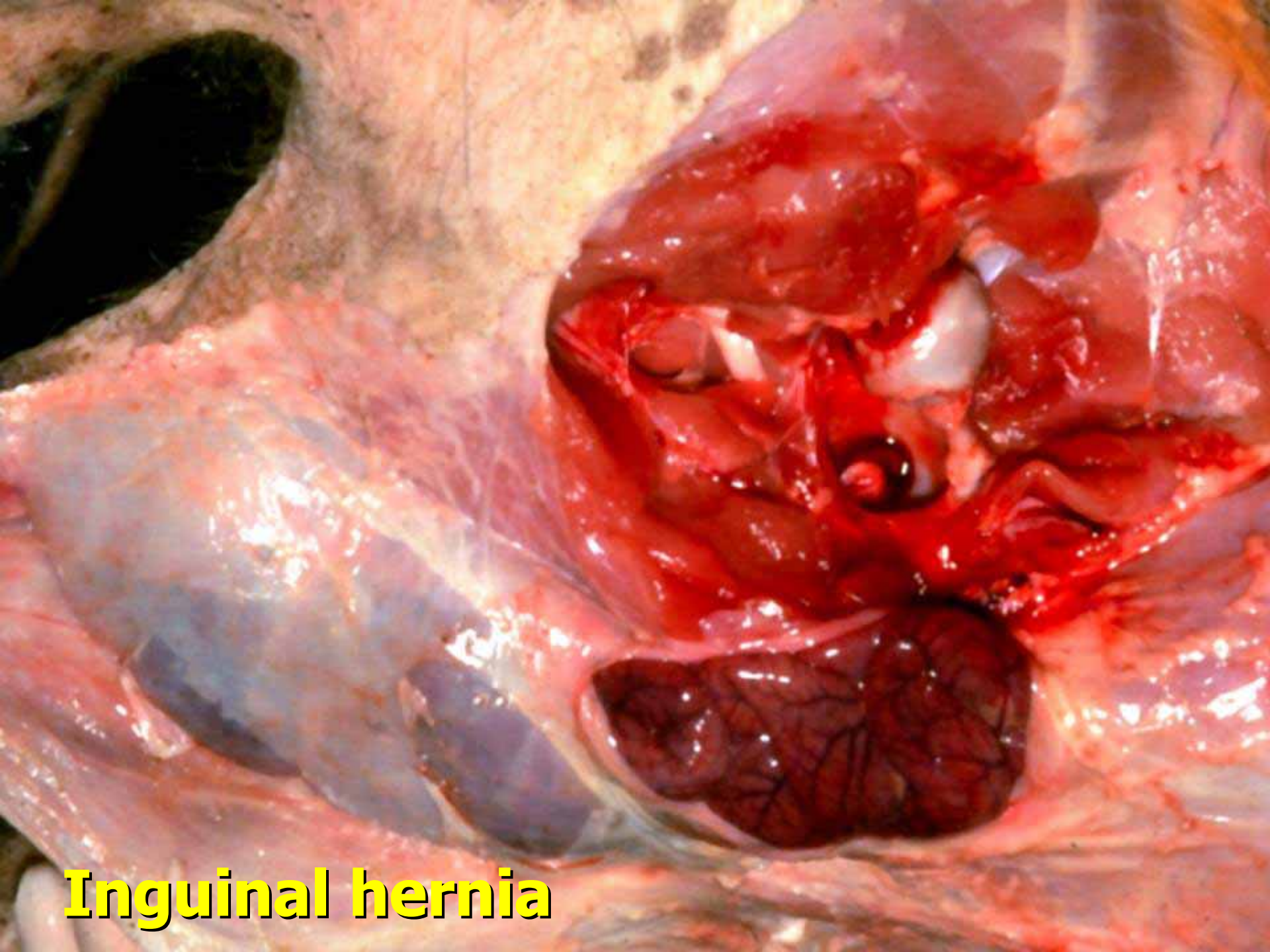


**Warfarin**

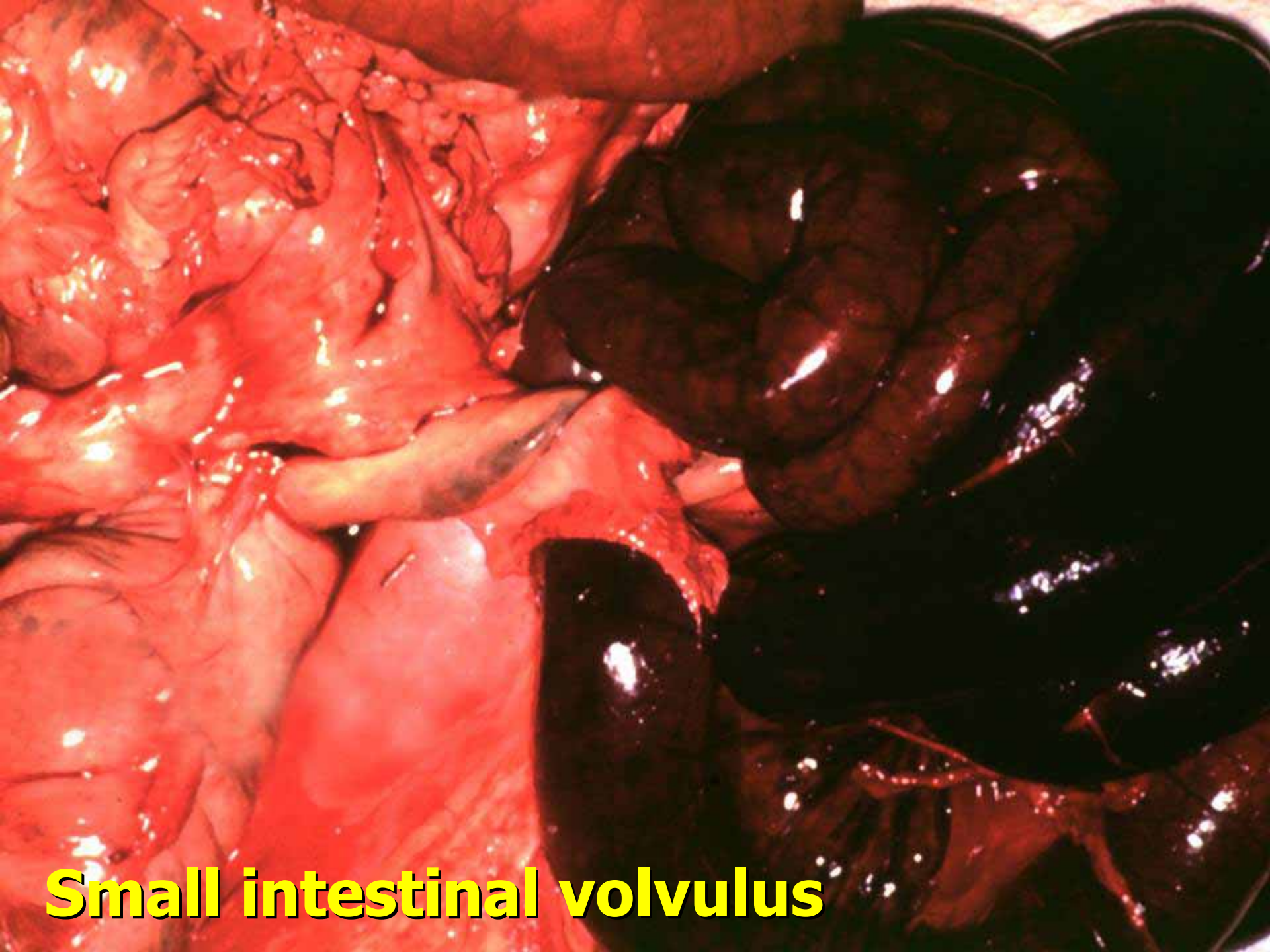


**Warfarin**

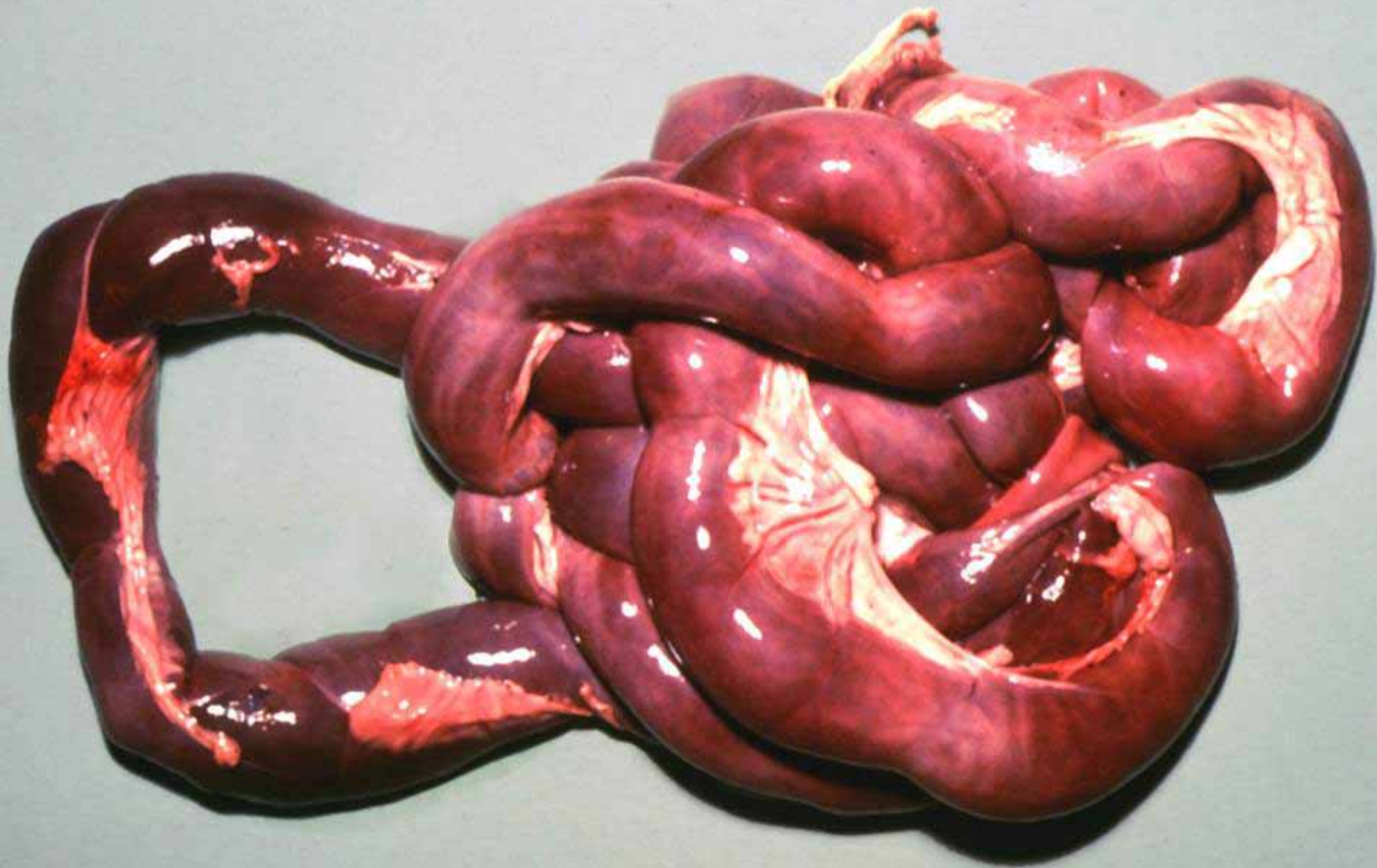




**Inguinal hernia**



**Small intestinal volvulus**



**Small intestinal volvulus**



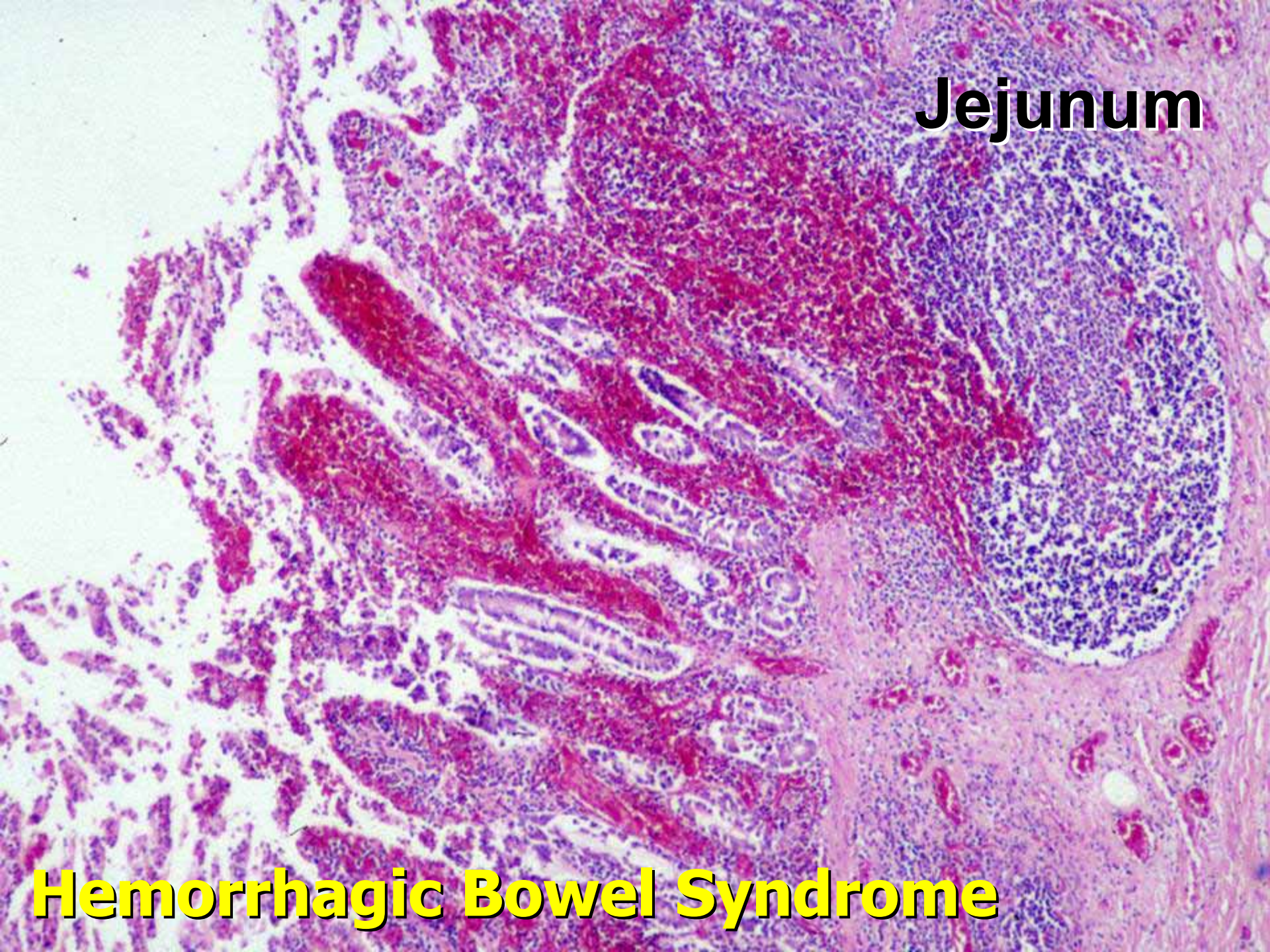
**Small intestinal volvulus**

**Jejunum**



**Hemorrhagic Bowel Syndrome**

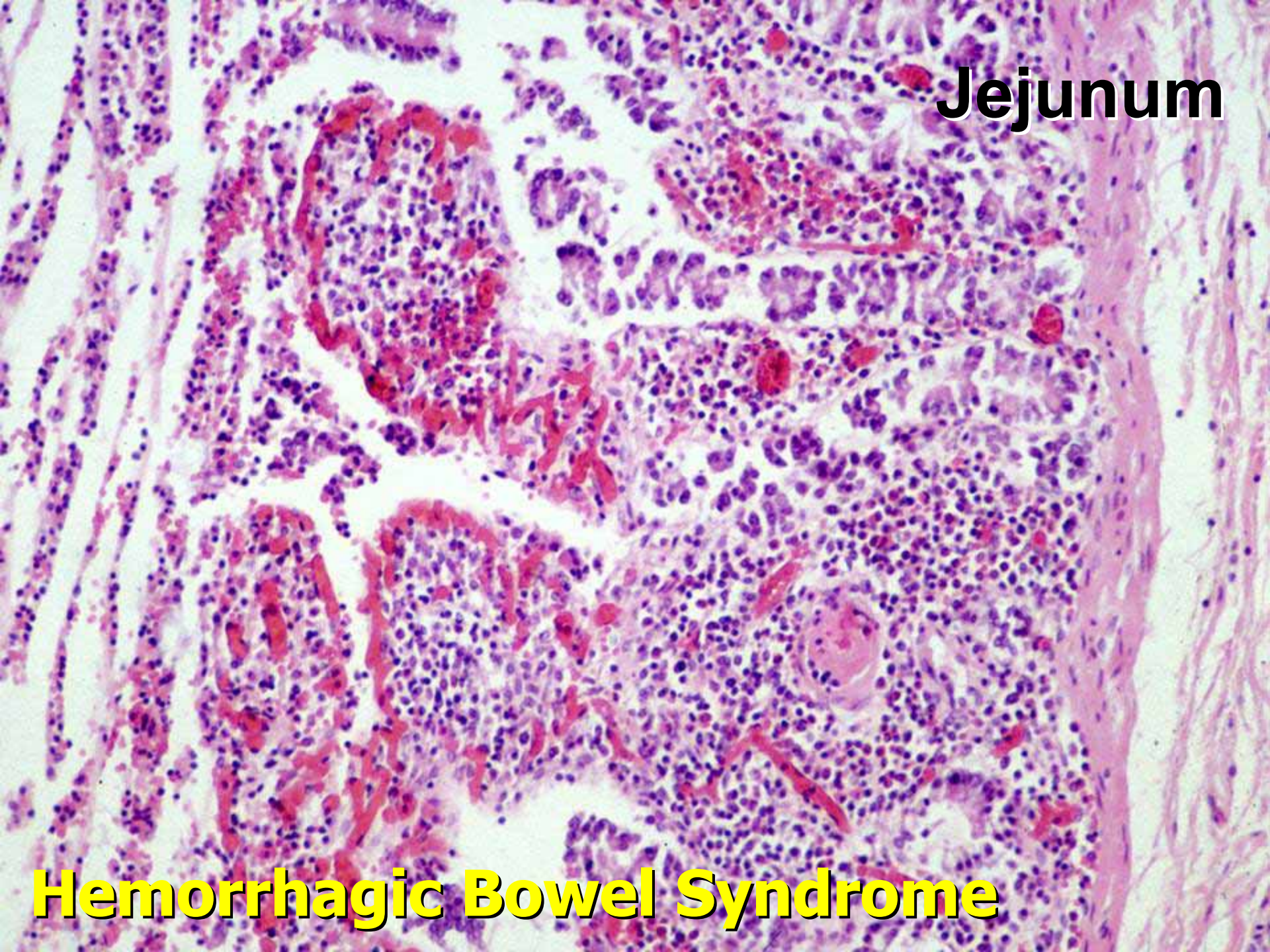
**Jejunum**

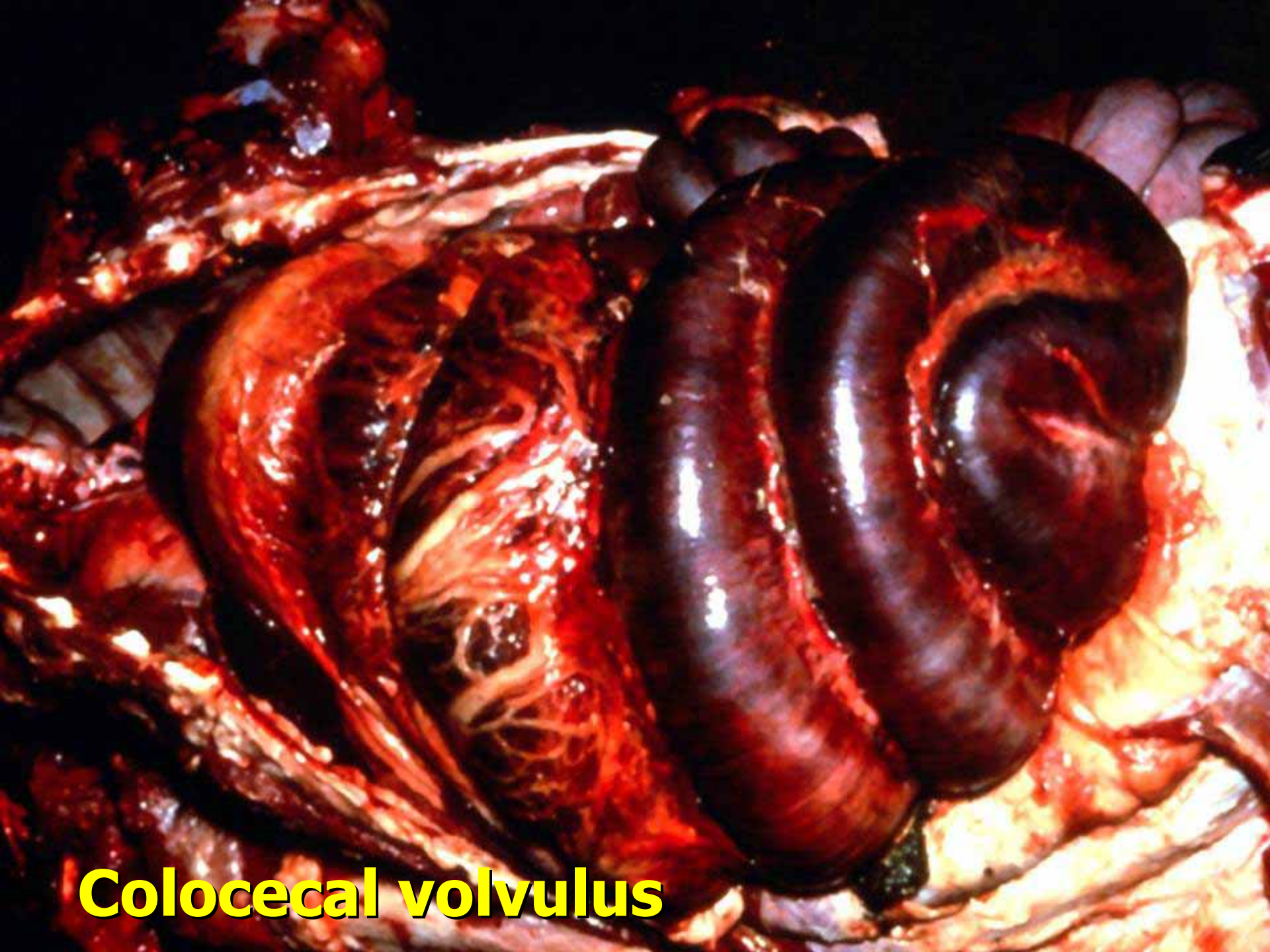


**Hemorrhagic Bowel Syndrome**

**Jejunum**

**Hemorrhagic Bowel Syndrome**



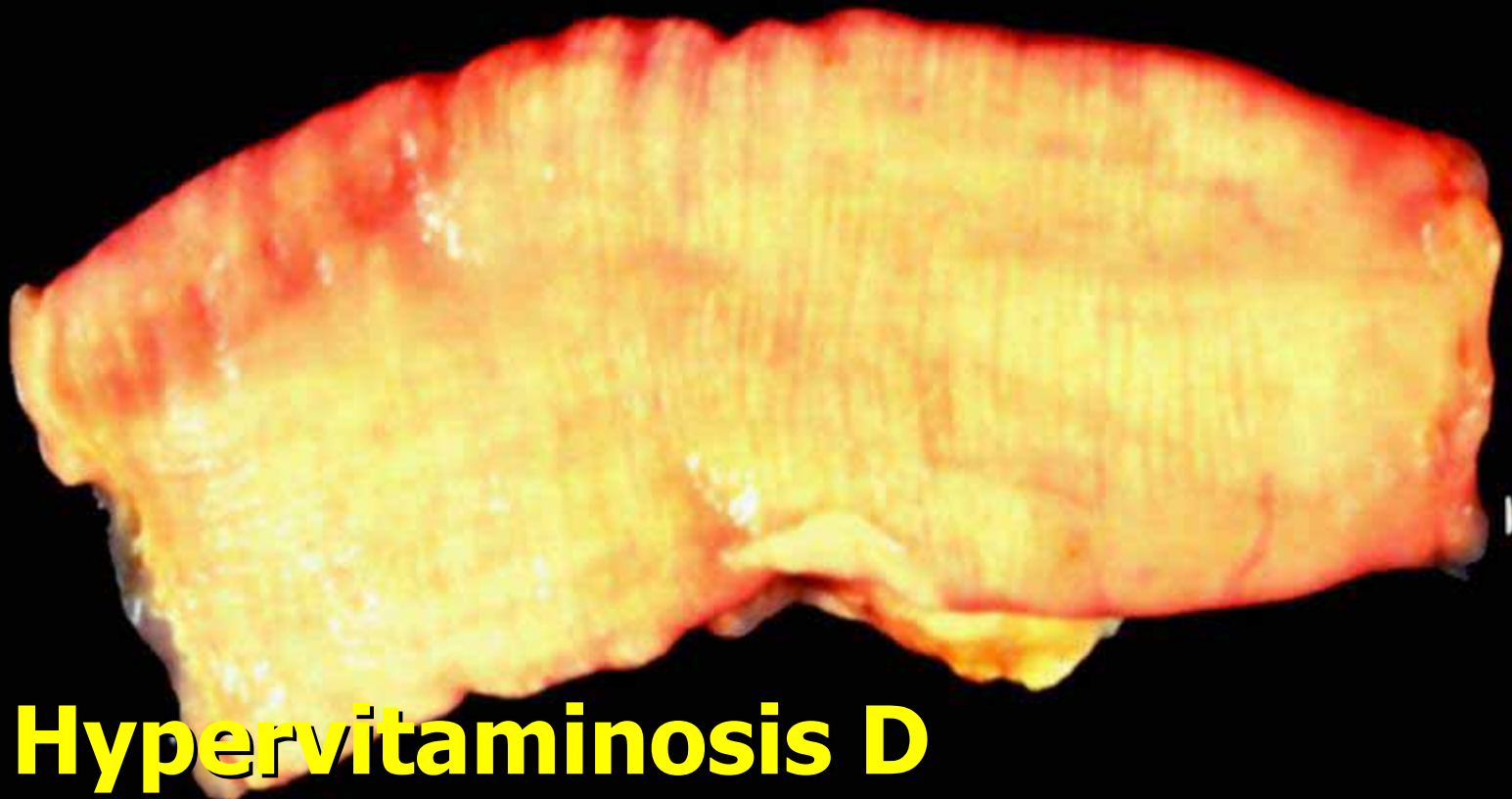
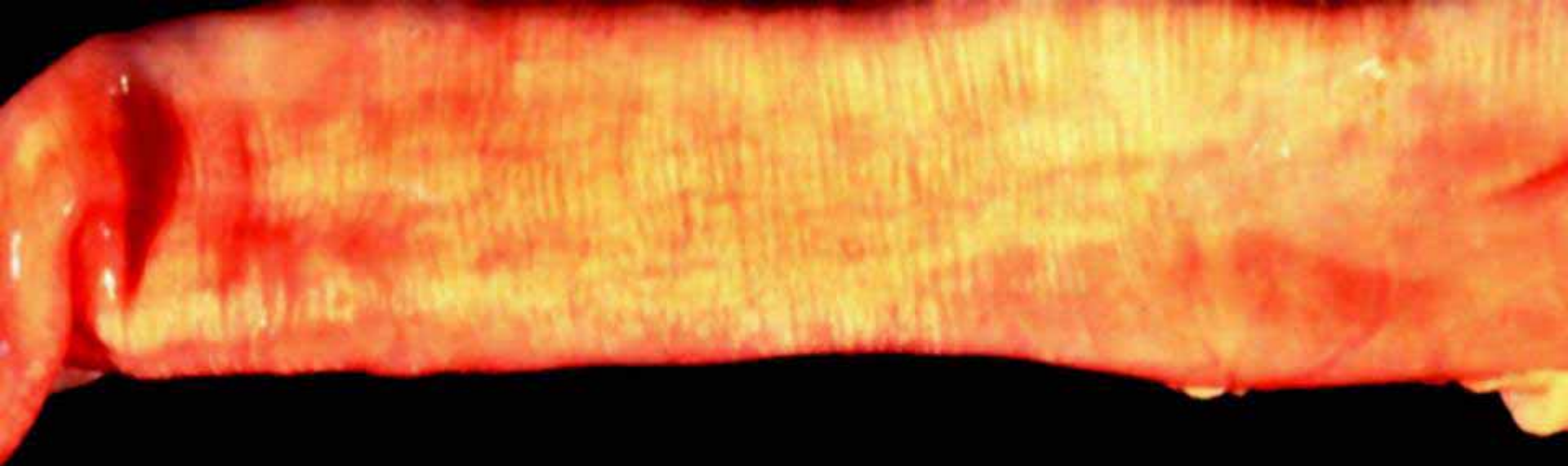


**Colocecocolic volvulus**





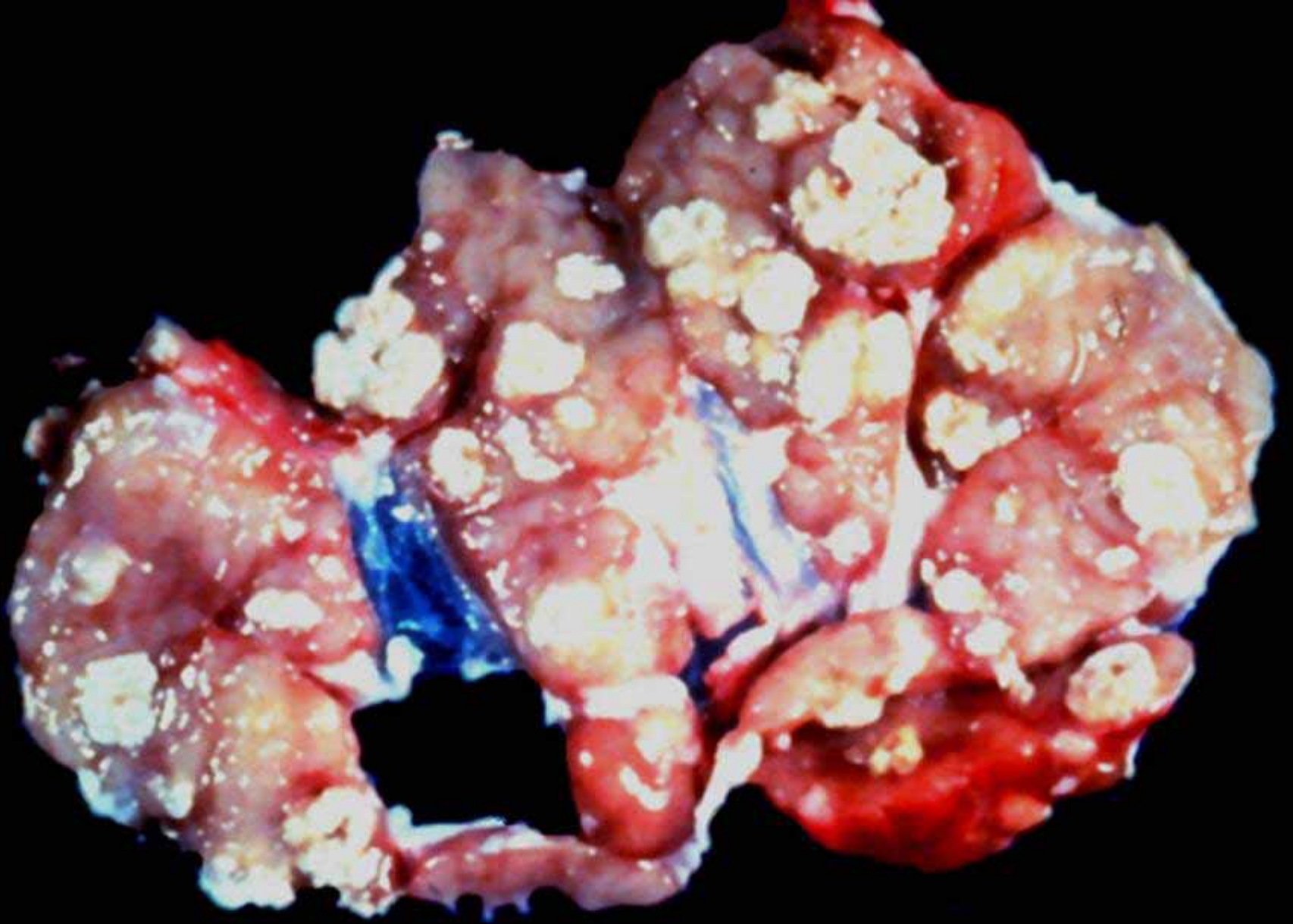
**Melena – gastric ulcer**



**Hypervitaminosis D**



**Mycobacterium avium**



**Mycobacterium avium**