Infeksjoner i GI- tractus. Hva finner patologen?

Bakterier
Virus
Sopp
Protozoer (Encellet)
Helminter (parasitt-ormer)

GI- infeksjon

- Hyppig årsak i verden: morbiditet/ mortalitet
- Hos pas. med nedsatt immun. / transpl.
- Reiseaktivitet

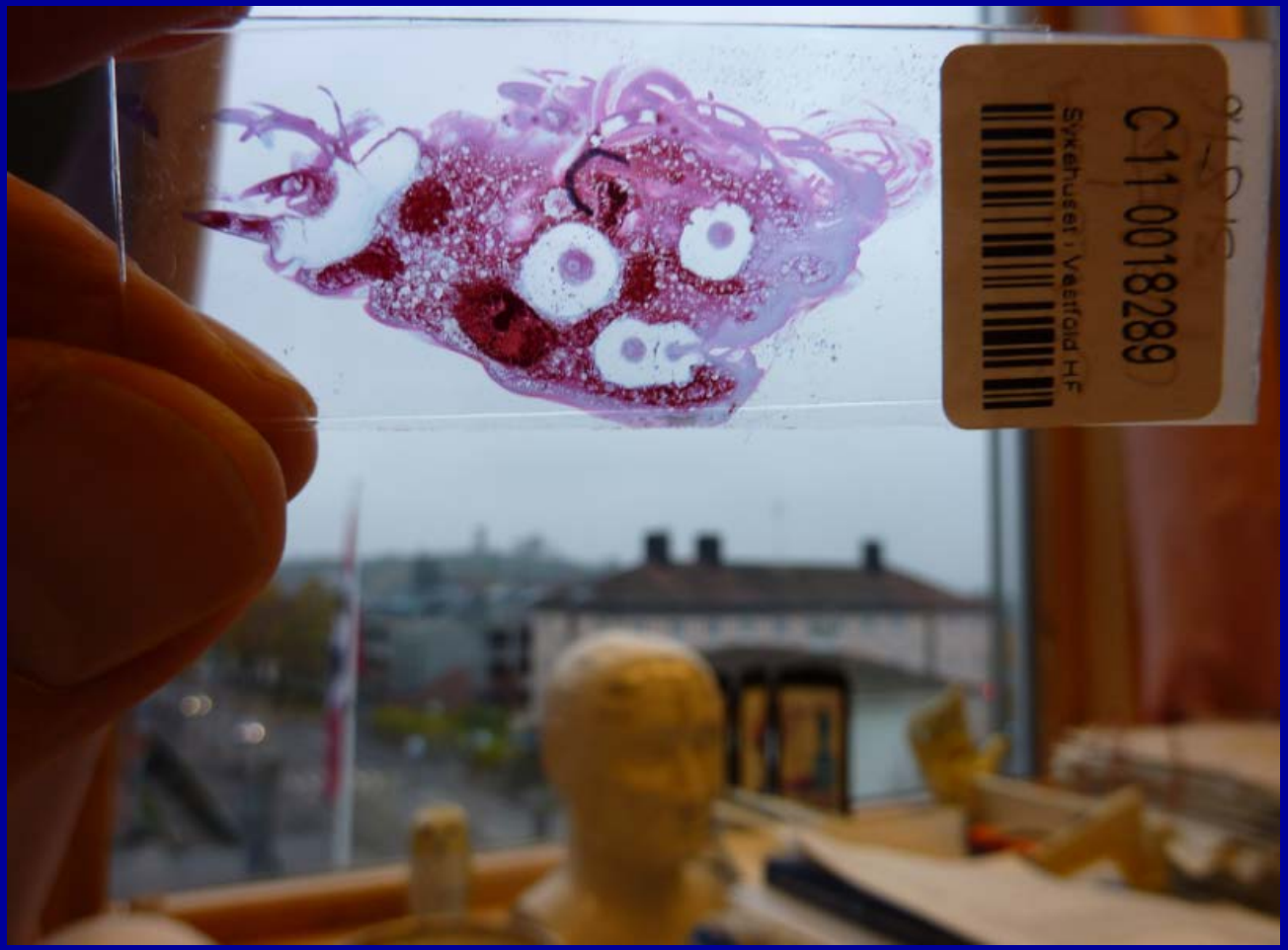
Patologer kan bl. a. skille:

Akutt, ”selvbegrensende”

Kronisk (ulcerøs kolitt/ Mb. Crohn)

Finne organismen

Mikroskopi



Mikroskopi

- Rutine histologi/ cytologi/ spes.farver

  Identifikasjon av patogenet

  F. eks. Gardia, Amøbe, CMV, Sopp

  Spesiell lesjon, for eks. ganulom

  TBC, Yersinia

  Immunhistokjemi, (In situ hybridisering,

  PCR), EL

Sykehistorie, viktig for oss:

Symptomer/ Skopifunn/ Reise/ Mat/ Immun.-

I Øsofagus/ Ventrikkel

- Sopp: Candida

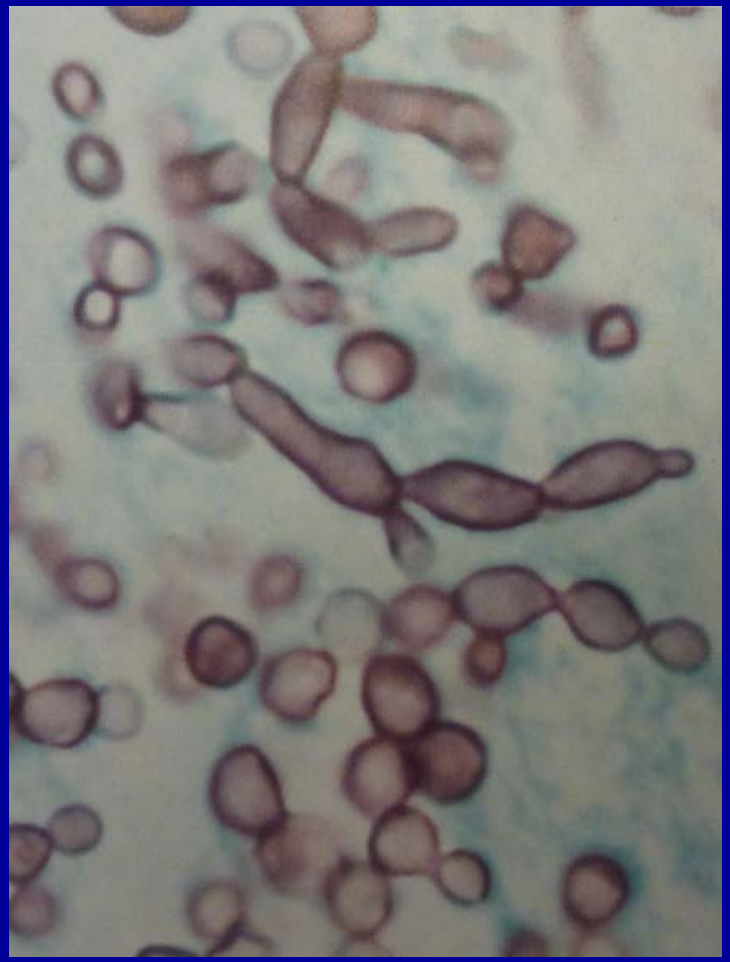
  Vanligste infeksjon/ ofte i ulcusområde

  Invasiv candidiasis/ ved ulcus ventriculi

  Hvitt belegg

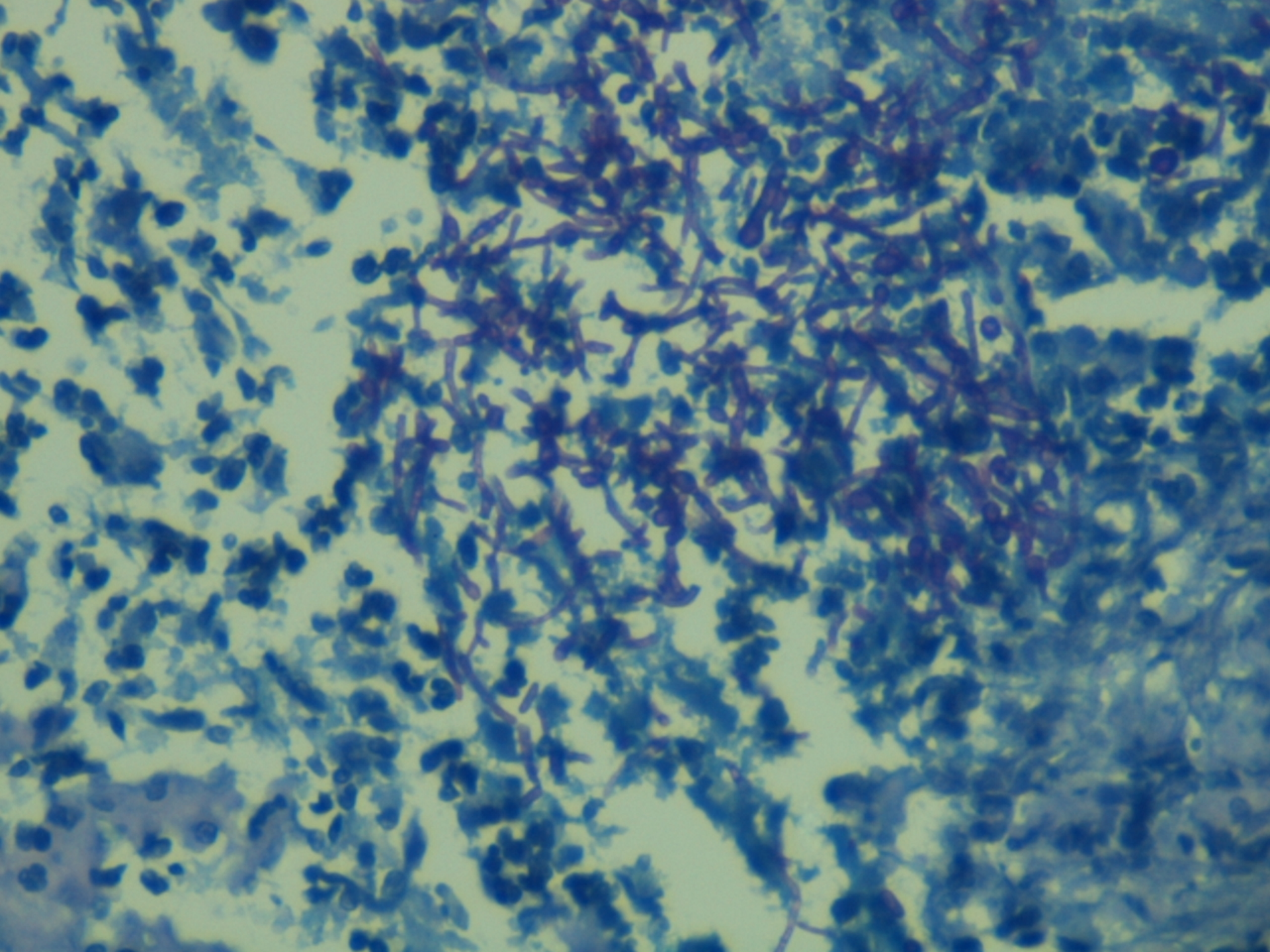
(PAS- farve: rød)

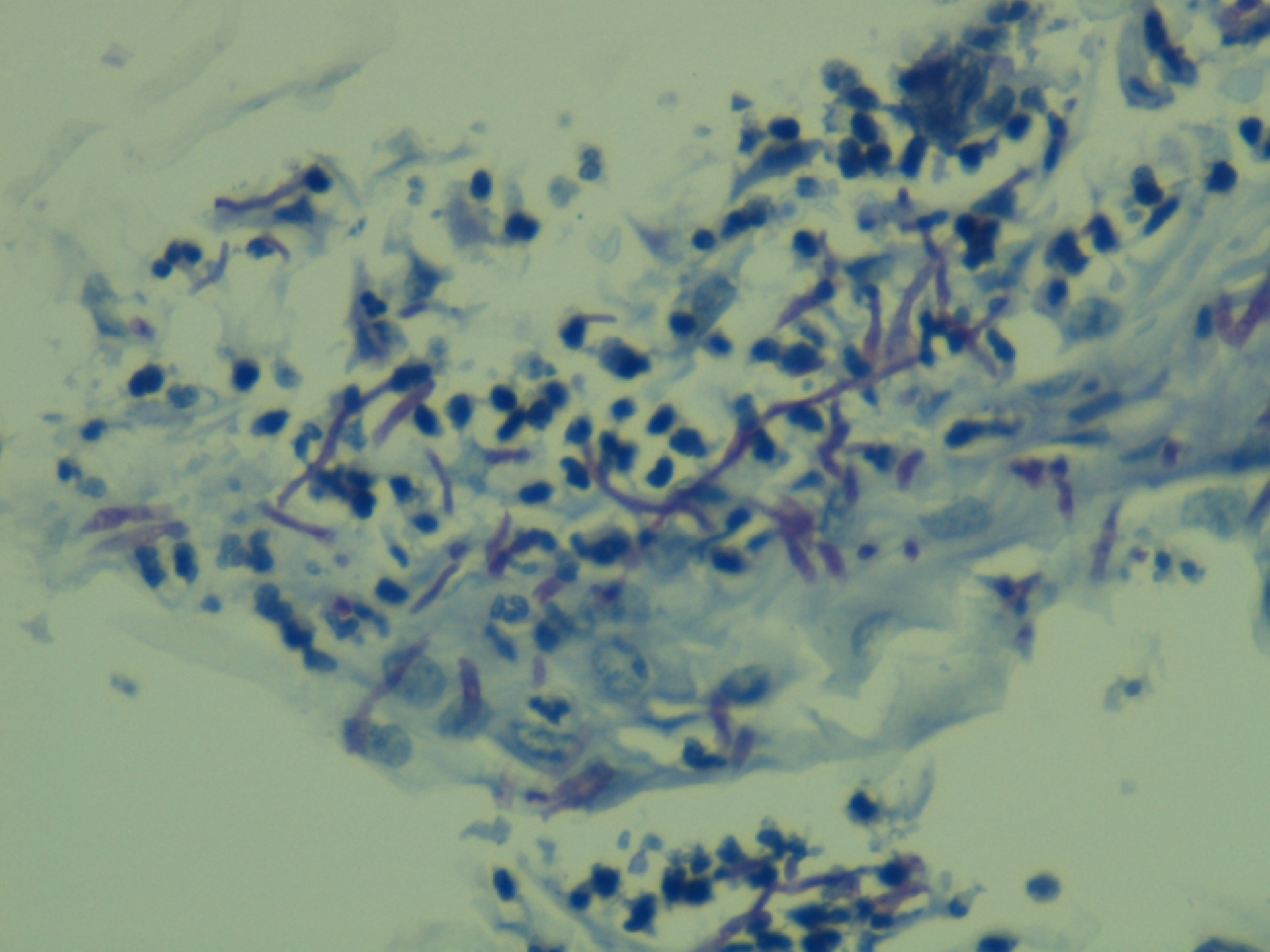
Sopp



Candida

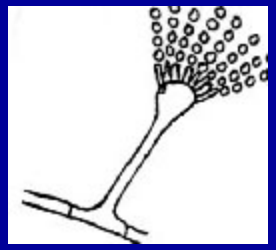
Aspergillus



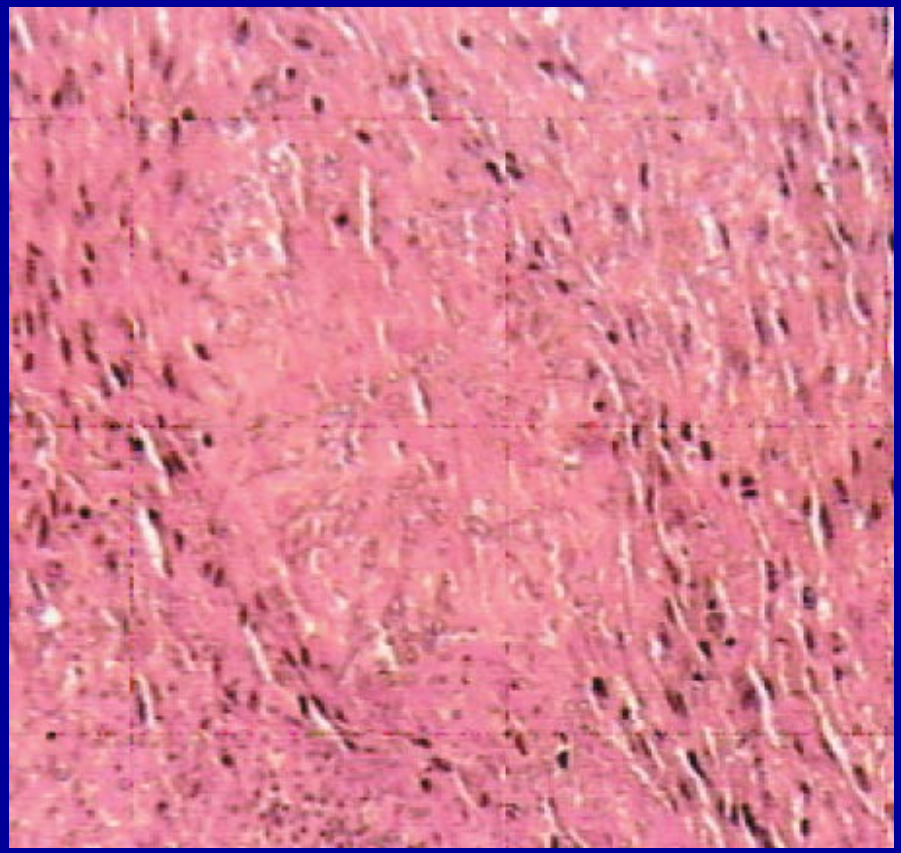


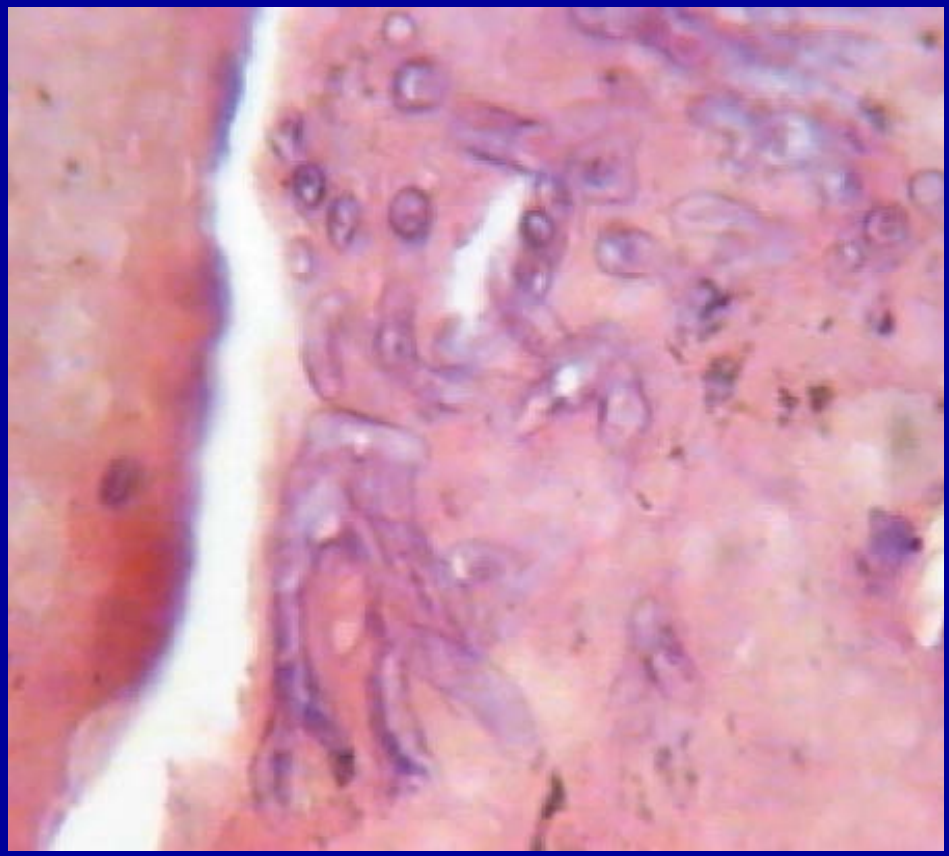
Asbergillose

Hos pas. med nedsatt Immun.



Asbergillose

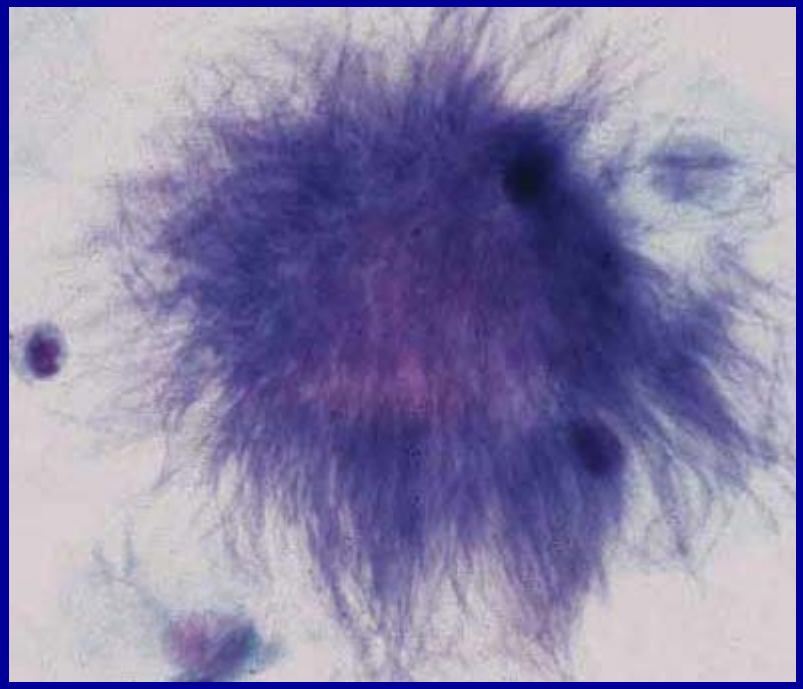




Actinomyces (Bakterie)

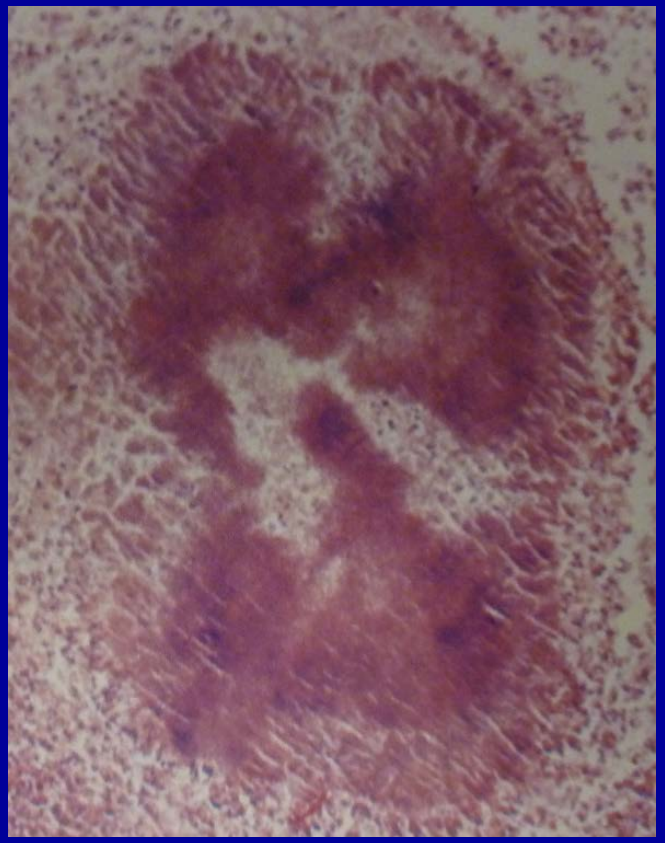
Likner på sopp
(Gram + anaerob bakterie)

Klinisk bilde:
Kan se ut som klinisk tumor!



”Sulfur”/ Svovelaktig

PAS + (”sopp”), Gram+ (”bakt.”)



Herpes simplex

Hele GI-traktus/

vanligst øsofagus/ ano-rectum

- Oftest hos immunsvekket pas.

Da, ofte generell/ livstruende

- Hos immunkompetente,

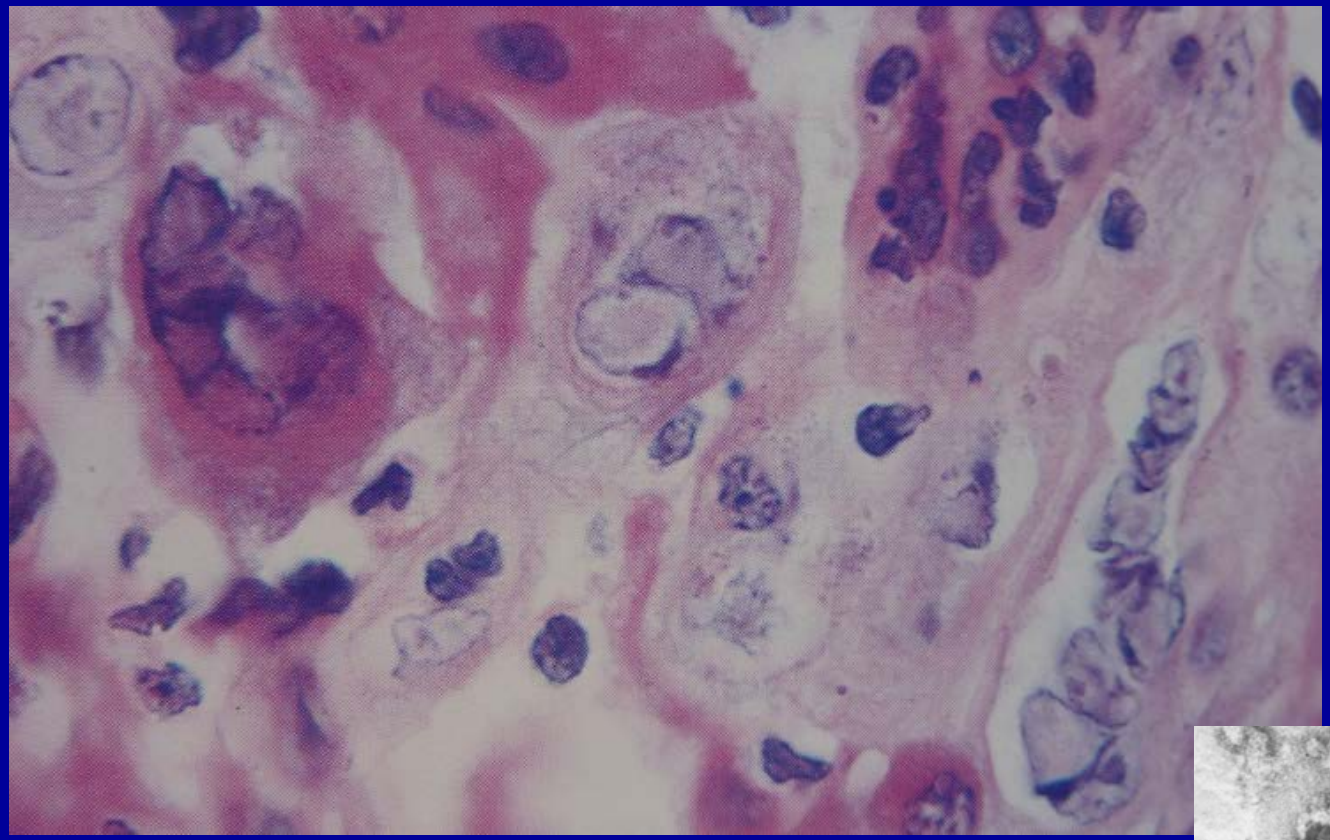
ofte selvbegensende

- Dysfagi, brystsmerter, oppkast, feber

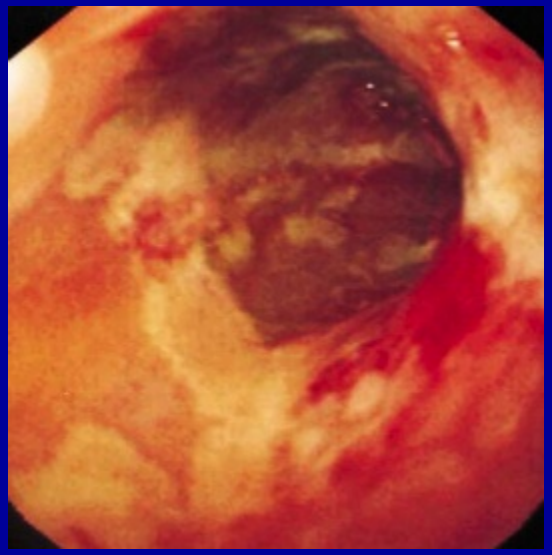
I rutinesnitt, immunhistokjemi,

in situ hybridisering

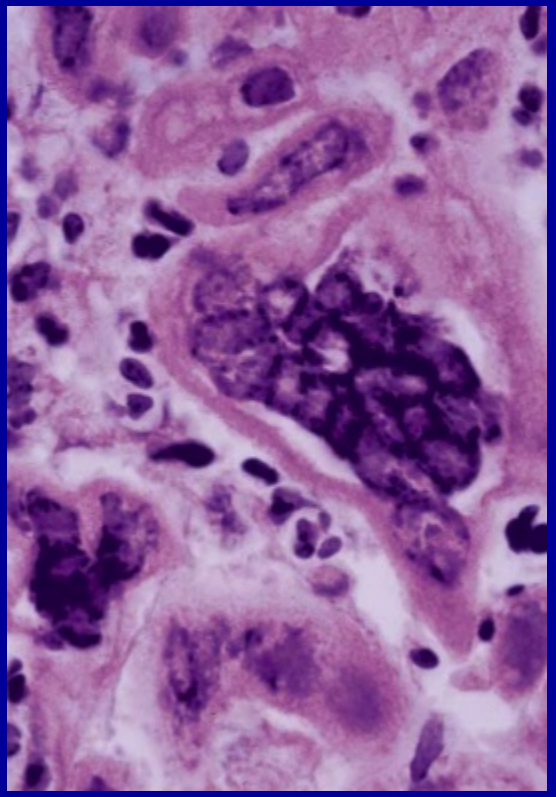
Herpes- virus

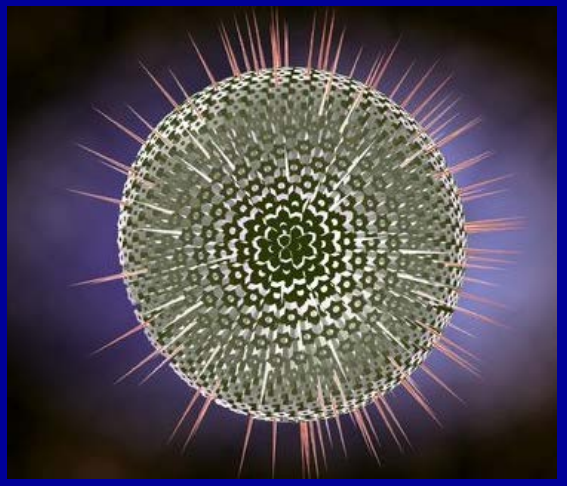


Herpes virus

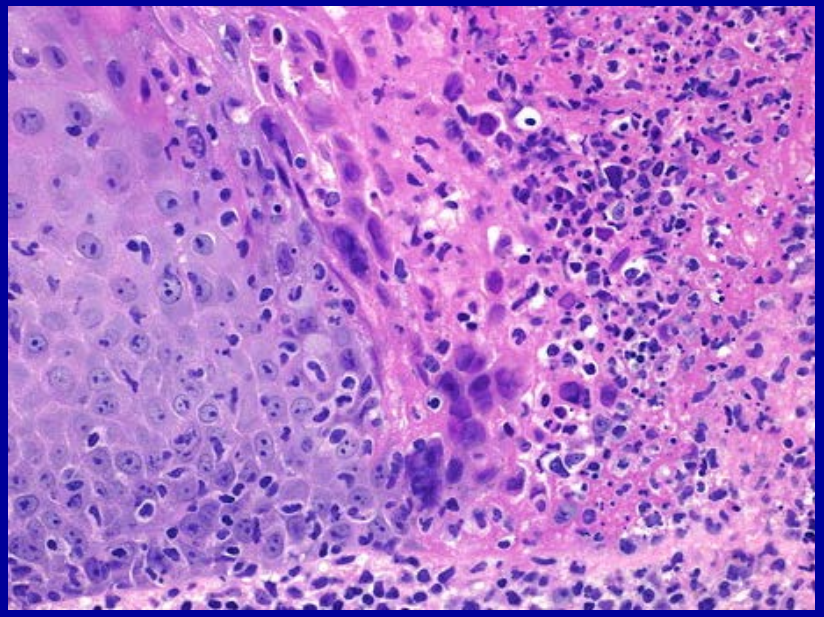


Øsofagus



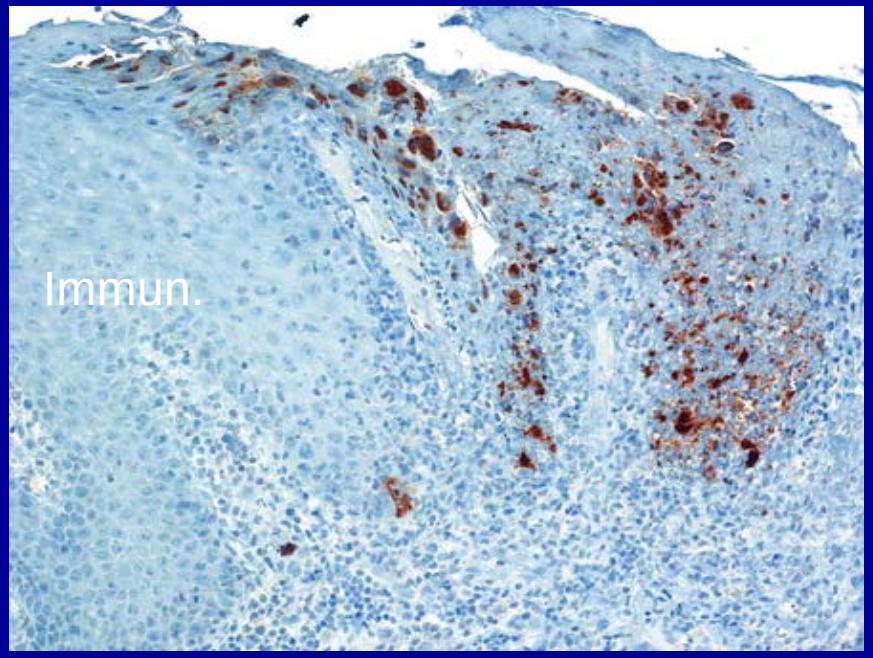


Herpesvirus

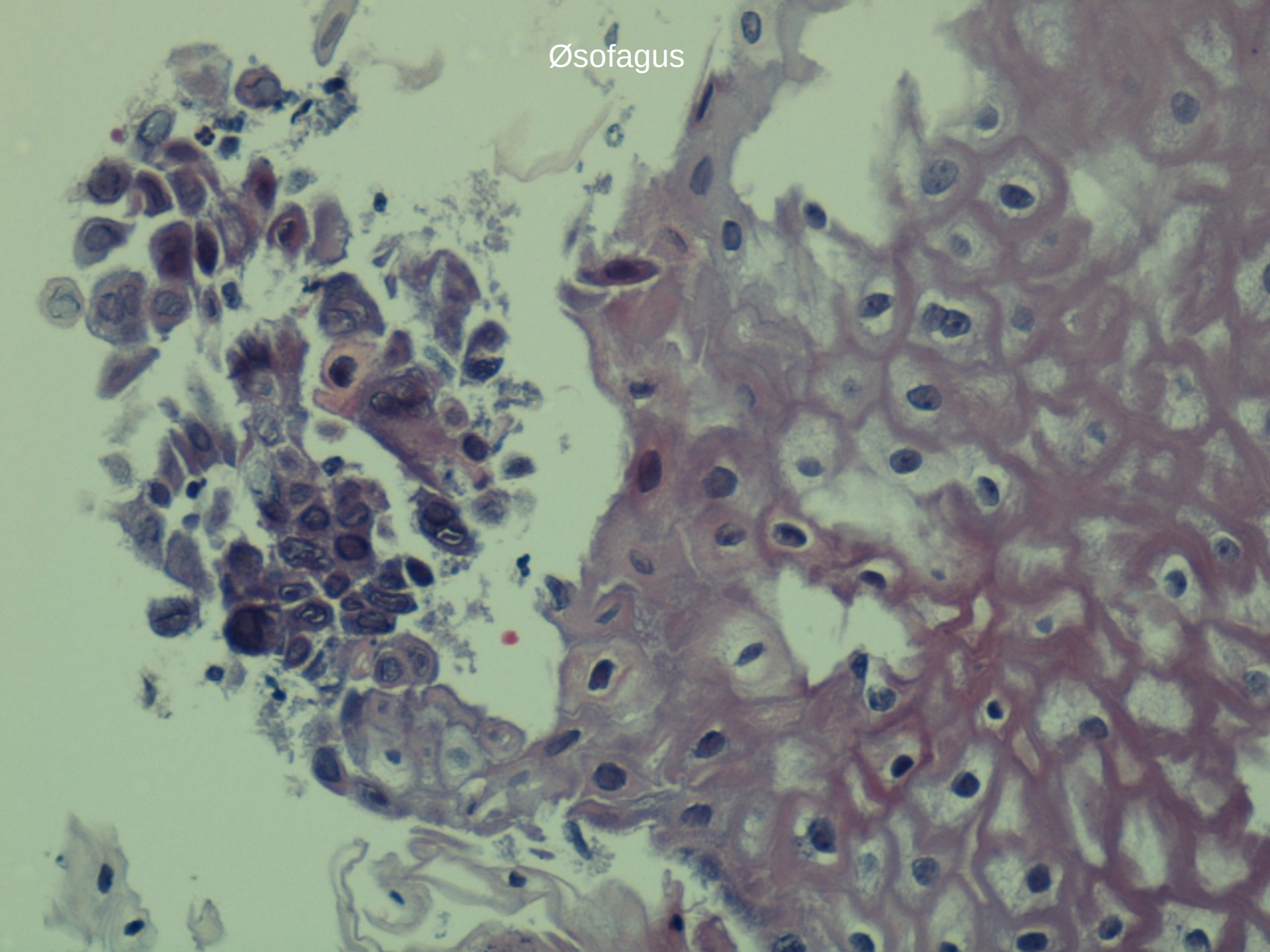


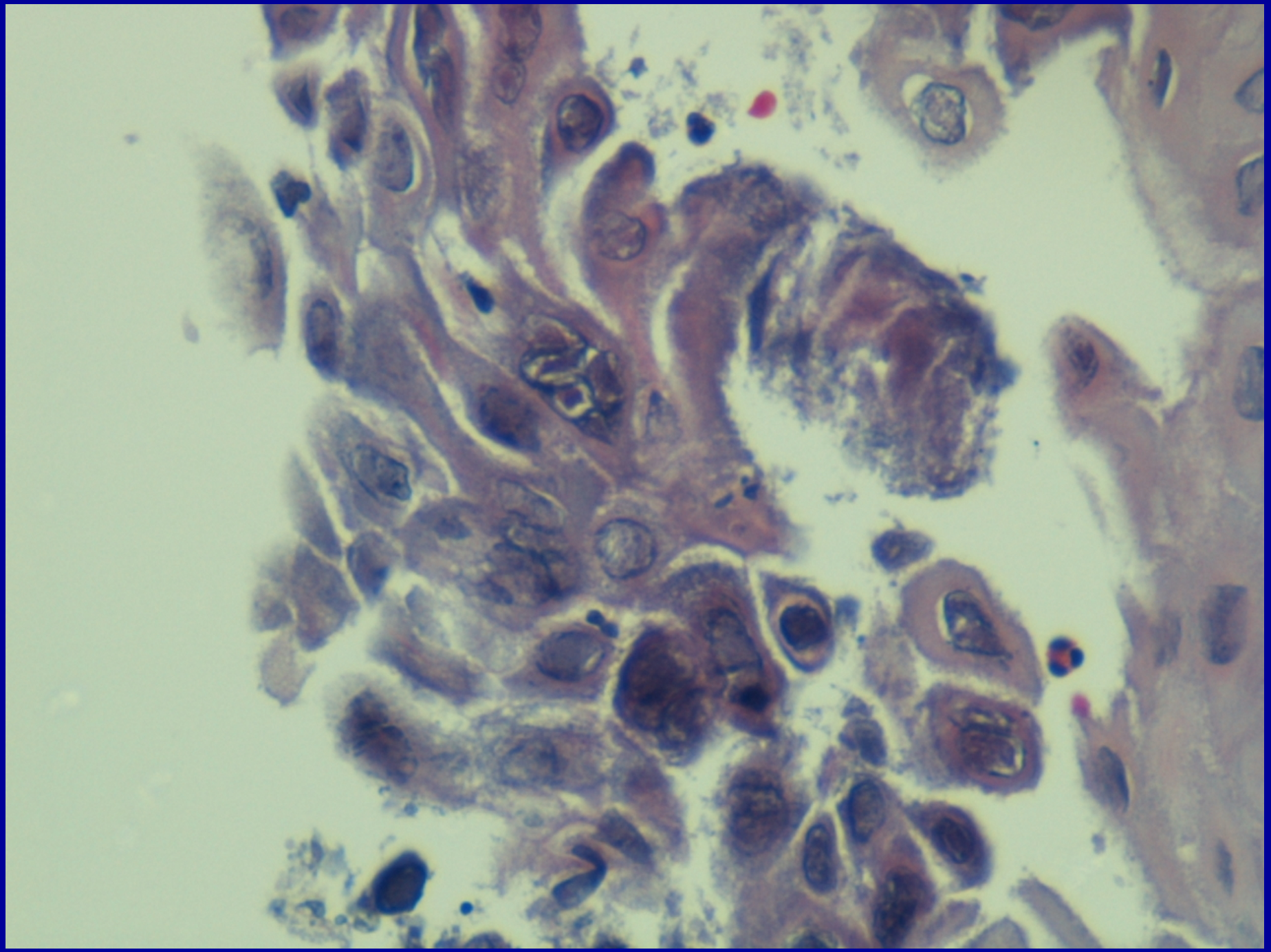
Herpesvirus og adenovirus:
ofte overfladisk

(CMV-: ofte i ulcusdybde)



Øsofagus/ anal:
HPV


Øsofagus



Cytomegalovirus

- Immunsupremerte pasienter (HIV, Transplantasjon, Cytostatica/ Corticoider)
- Reaktivitet av latent infeksjon

  (<90% av befolkningen sero-pos).
- Hos immunkompetente personer: ”Selvbegrensende sykdom”
- Særlig colon/ rektum (munn- rektum)

Cytomegalovirus

- Diarre (blod-”vann”)(smerte/ feber/ vekt)

BARN: Kan likne på **Ménétrier's** sykdom!

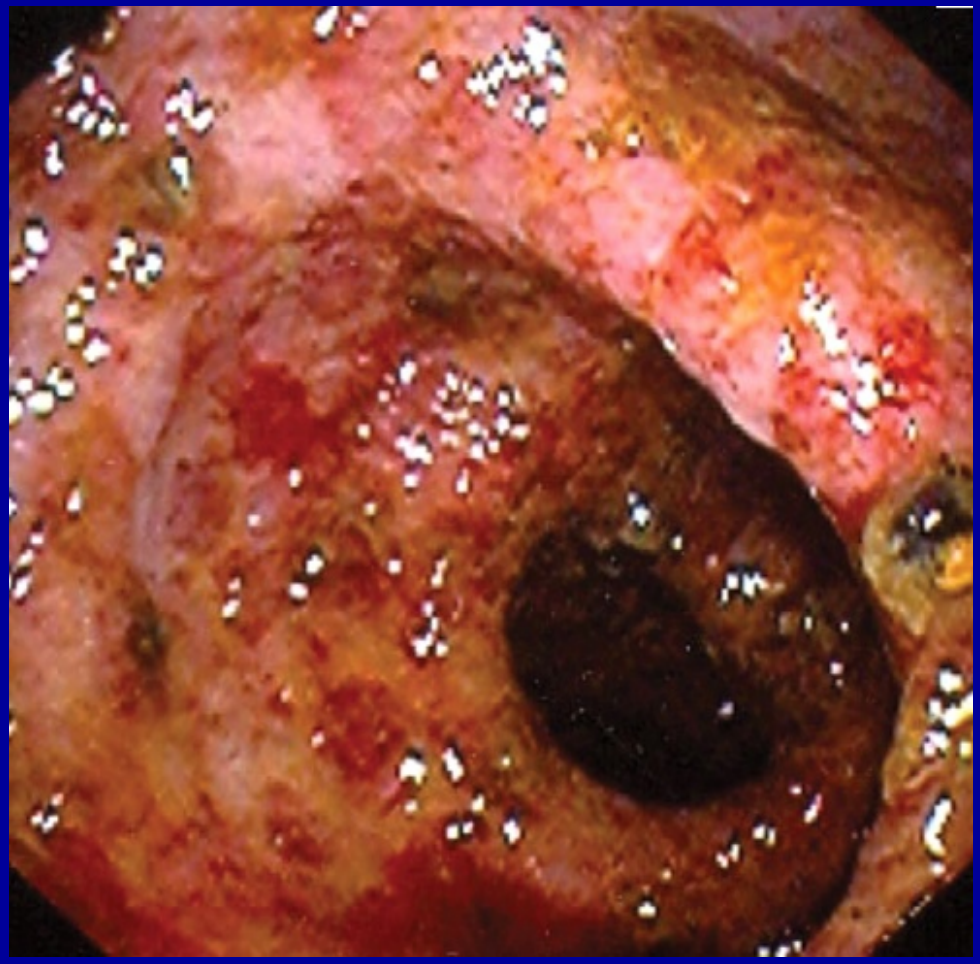
Makro.: Ulcus (Crohn-lik./
Pseudomembraner

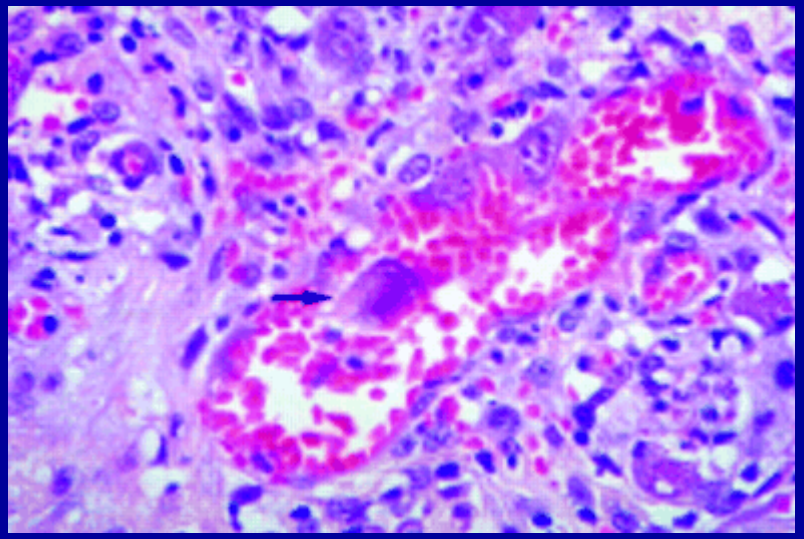
Mikro.: Inklusjoner:
Intracytoplasmatisk, intranukleært
I endotel/ stromaceller, (epitel)

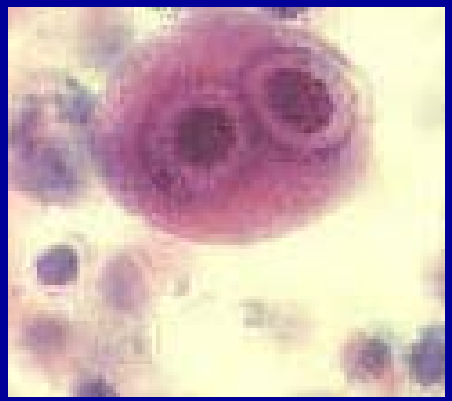
Immunhistokjemi

Cytolmegalovirus, Tarm

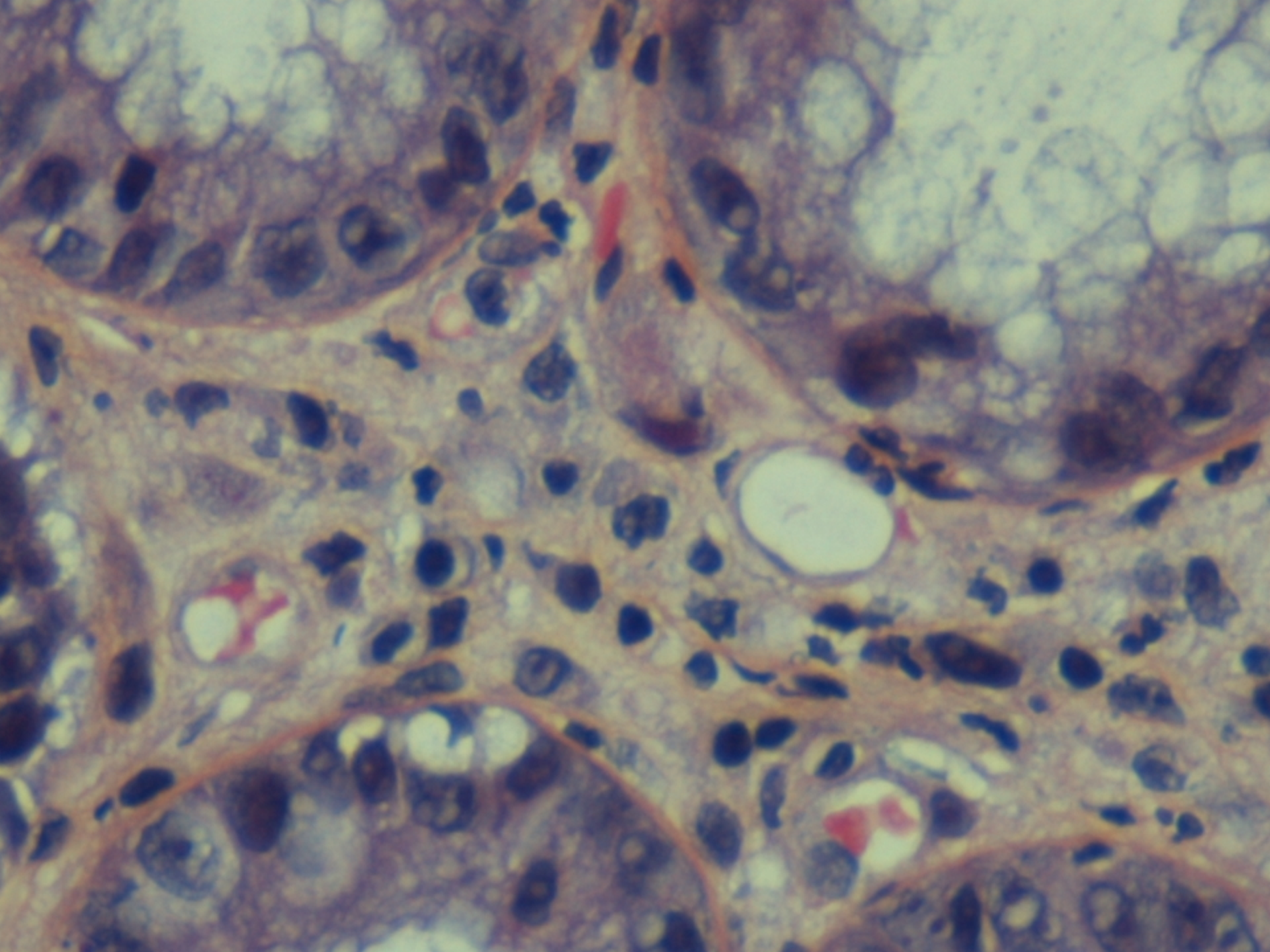
Typisk, blødning

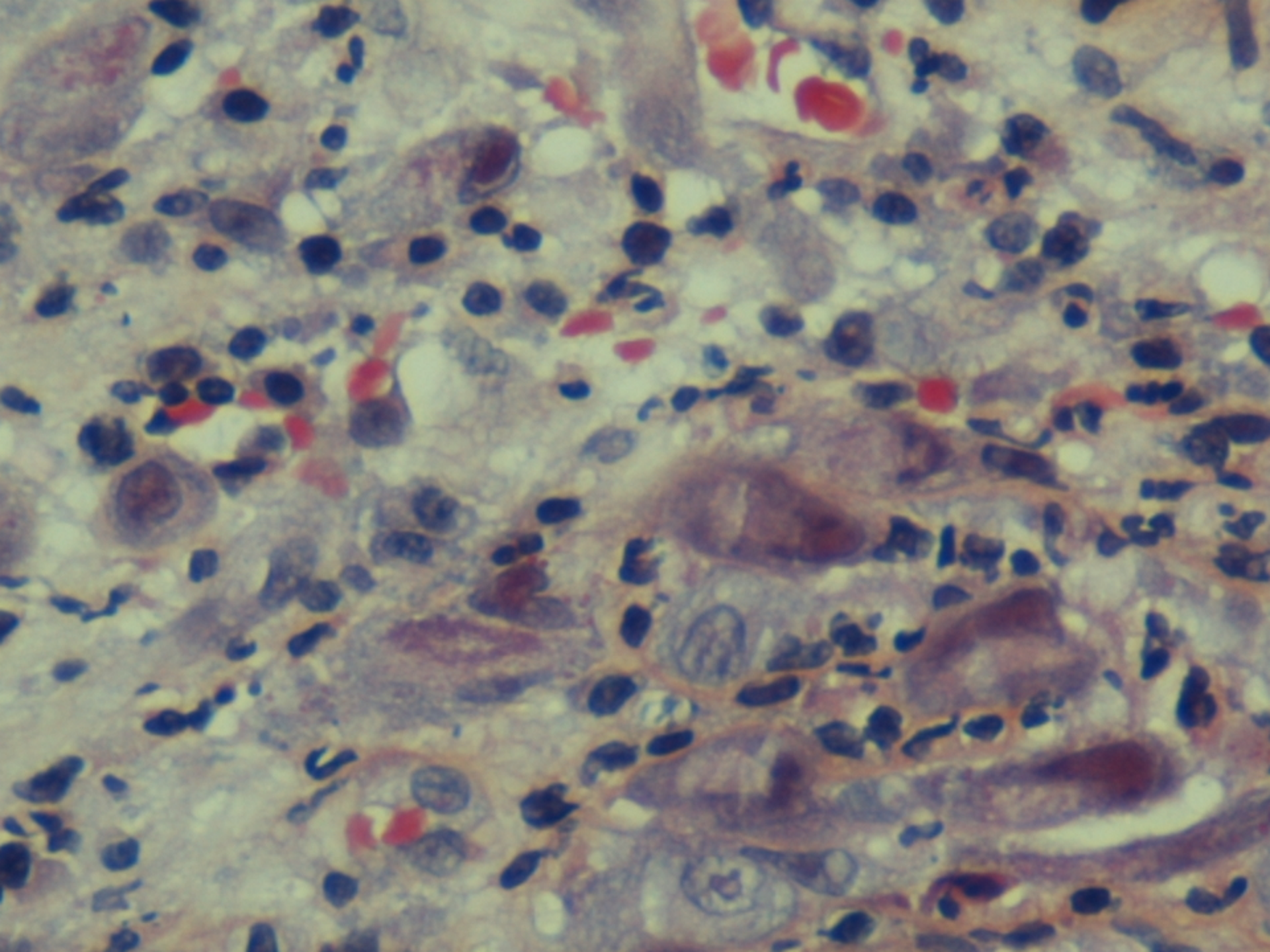






”Ugle-øye”





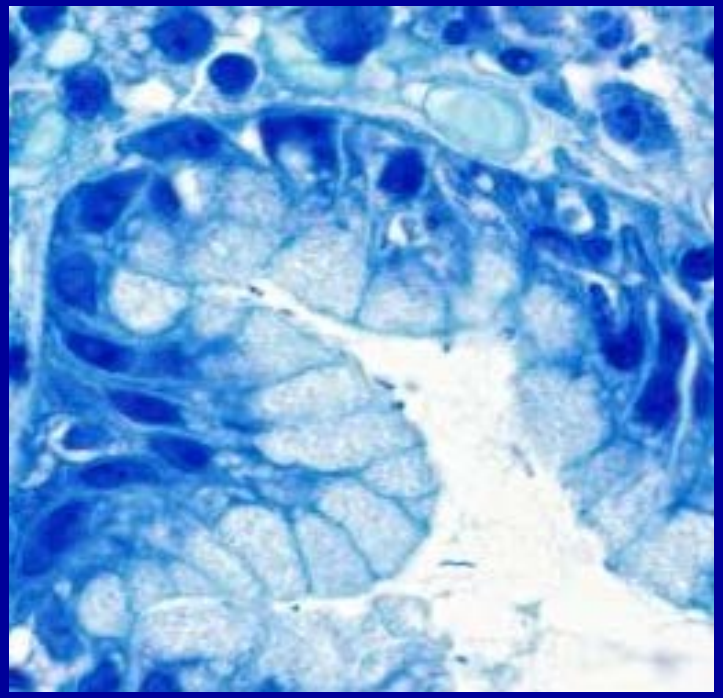
Ventrikkel

Helicobacter

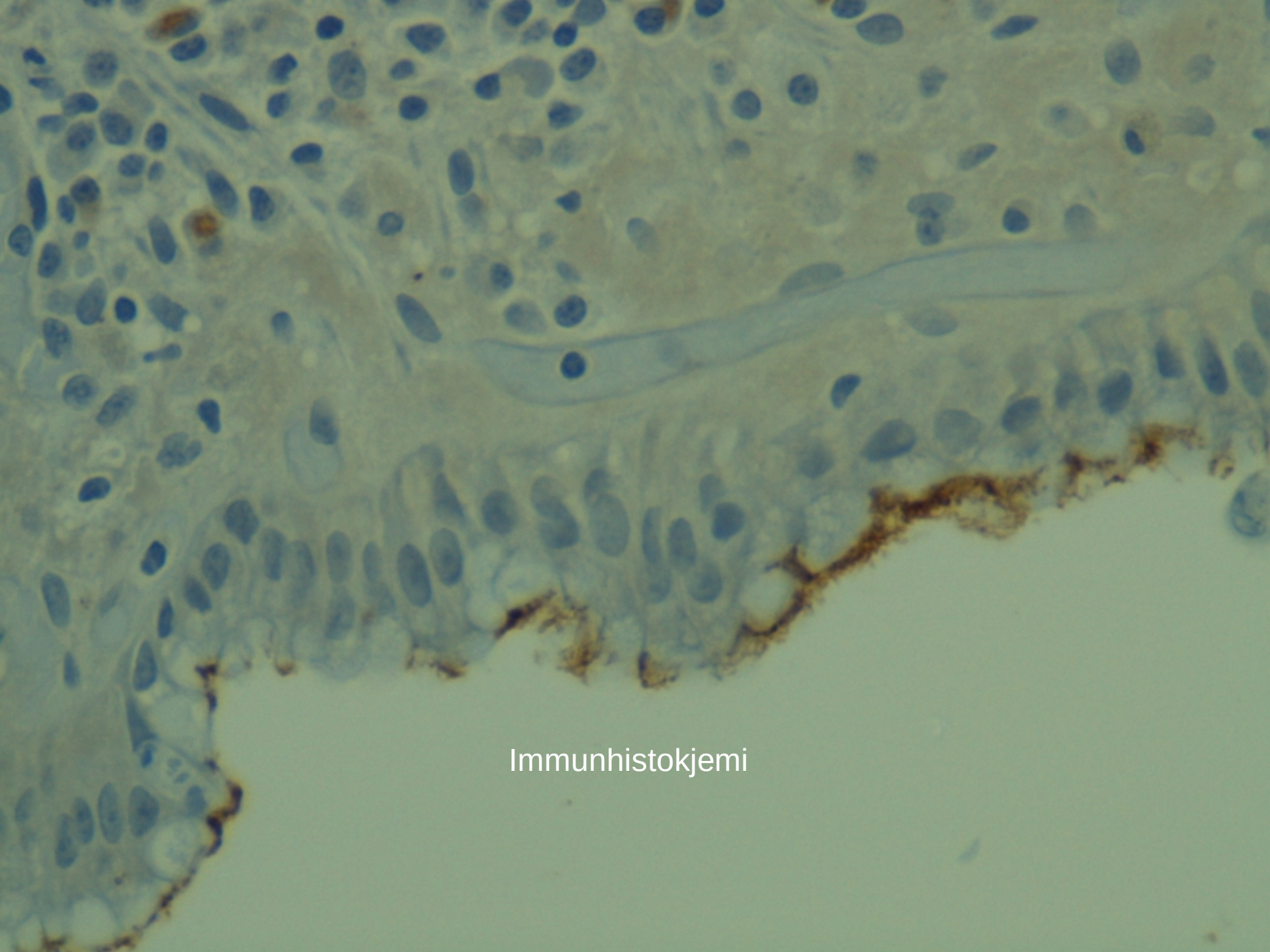
Bakteriell gastritt

TBC

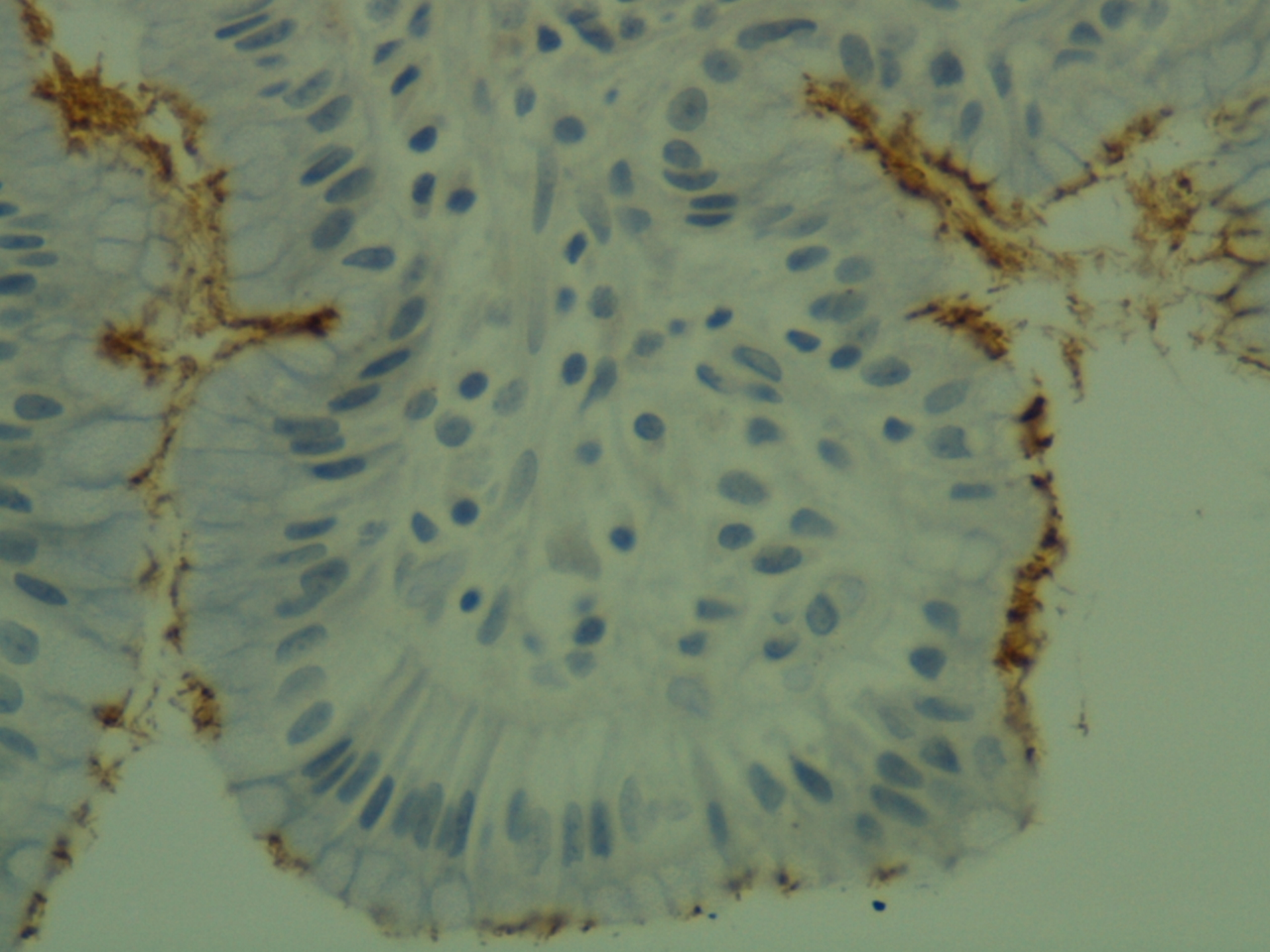
Helicobacter pylori



Giemsa farve

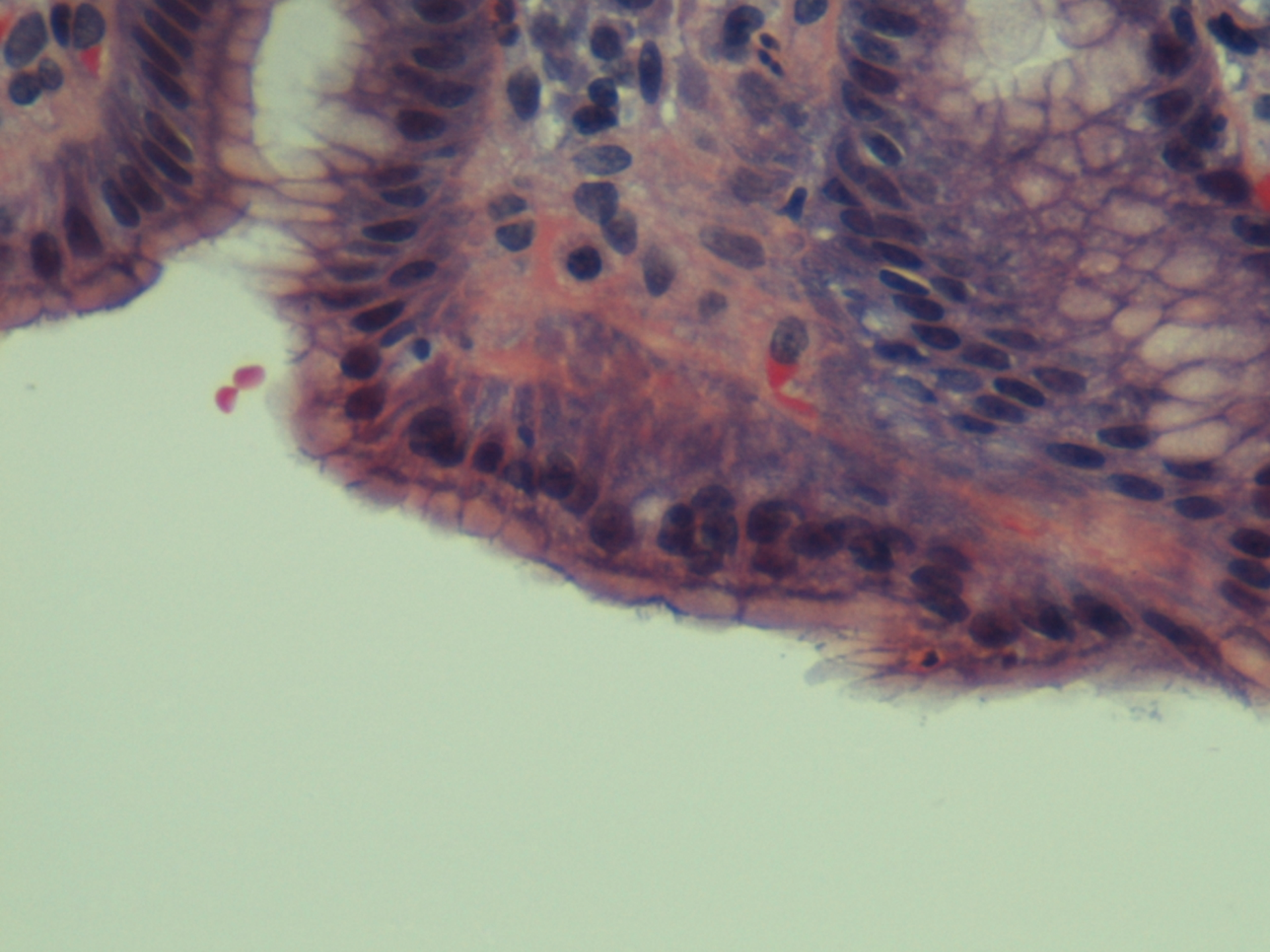


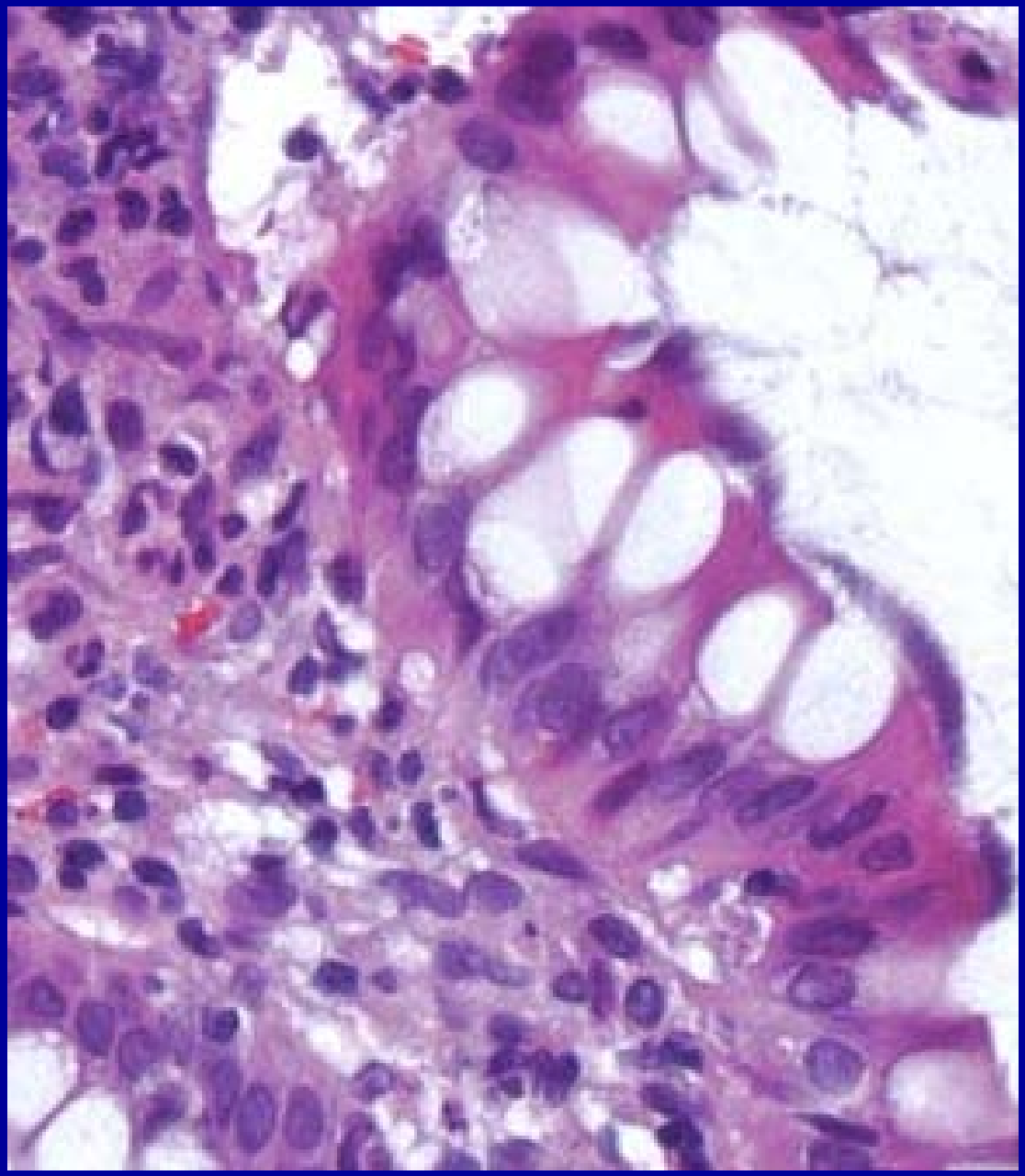
Immunhistokjemi



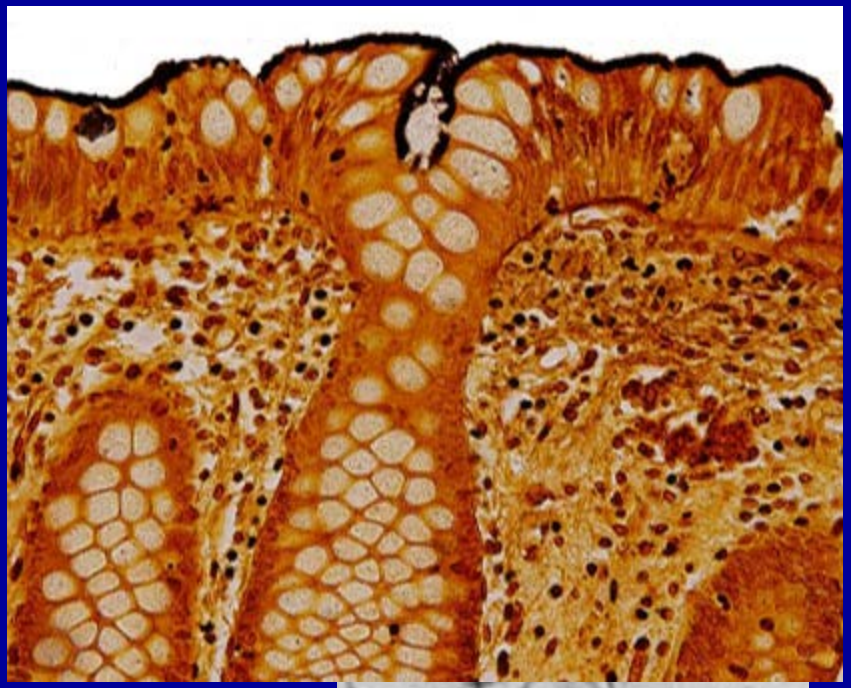
Intestinal spirochetose

- Hyppigst menn, homoseksuell praksis
- Overvekst av spirocheter
- Diarre +/-
- Smerter
- Blødning
- Skopi, funn-
- Diagnose: biopsi

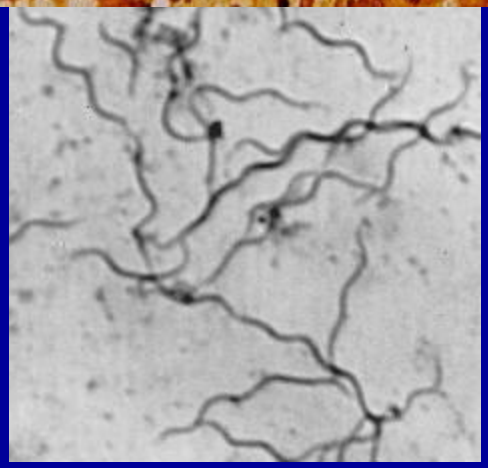




Intestinal spirochetose



2-3 my børstesøm
PAS, Sølvfarve
Ingen betennelsesforandringer



Warthin- Starry)

Tarm

Bakterier

E. coli
Salmonella
Shigella
Campylobakter

Stafylococcer (toksiner)
Vibrio (cholerae)
Yersinia
Tbc
Whipple

Virus

Sopp

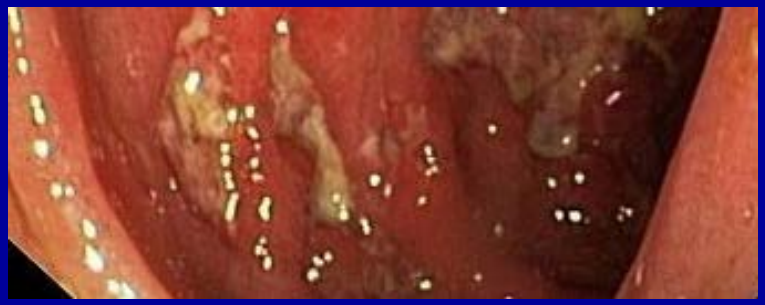
Candida
Histoplasmose

Parasitter

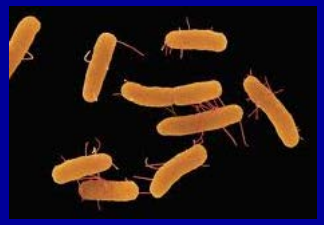
Protozoer (for eksempel giardia, microspora, cryptospora)
Trematoder (for eksempel schistosoma)
Helminter
Cestoder

Infektiøs kolitt

- Ofte minimale forandringer
- Bevart krypt- arkitektur
- Betennelsesceller, ofte granulocytter i øvre del av mucosa
- Kryptitt med destruerte krypter/ kryptabsesser
- Flekkvis inflammasjon|



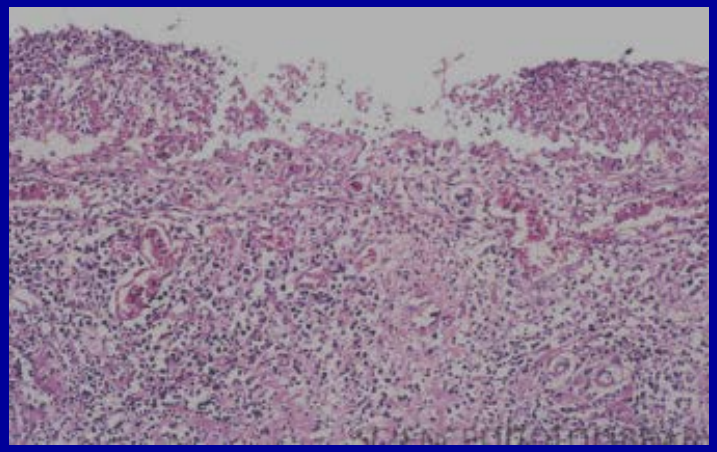
Campylobakter, ulcus



Salmonella

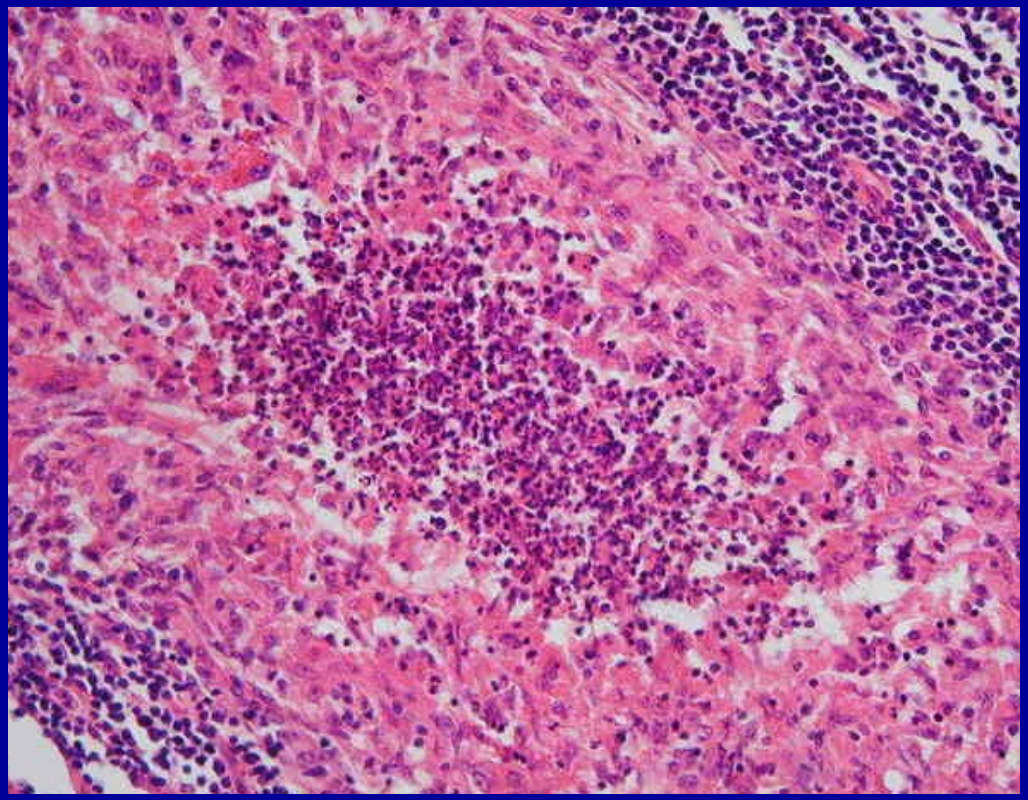
Vibrio cholerae

Shigellose/ Shigilla



Gram negativ (flere typer)
Mat/ vann
Toxin (shigatoxin) Diarre/ ofte blodig
Ofte barn
Pseudomembranos- nekrotiserende betennelse
Tarm kan dilatere- perforere

Yersinia enterocolitica



Granulom, appendix

Bakterie, kjøligere klima
Overlever lenge,
    også kjøleskapstemp.
Matvarer,vann, svinekjøtt (fra tarm)

DD.: Crohn

Clostridium difficile

- Hos 3-5%, normalt i GI- traktus
- Langtidsinstitusjonaliserte
- Antibiotikabruk (for eksempel Ampicillin)
- Kan isoleres fra all slags inventar/ utstyr i institusjonen
- Gram pos. anaerob toksinproduserenede
- Diarre, lett- fulminant
- Pseudomembranøs kolitt

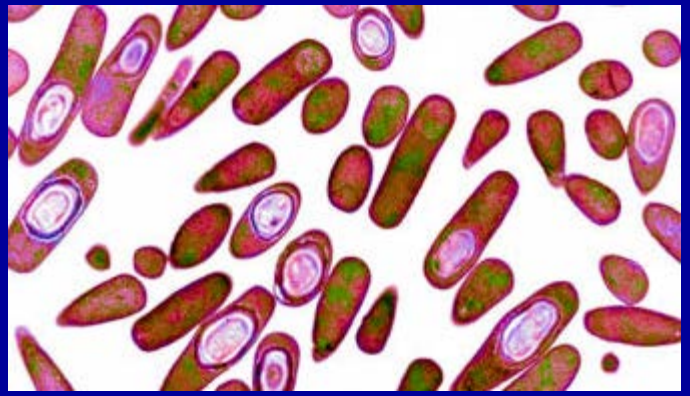
Clostridium

- Latenstid AB-bruk: dager- flere uker
- Makro: gråhvite belegg på slimhinnen
- Mikro: pseudomembraner (”vulkanaktig”)
  fibrin, slim, granulocytter, bakterier

DD: Ischemisk kolitt
Shigella
Colitis ulcerosa

Clostridium difficile infeksjon

Pseudomembraner
”Vulkanaktig”



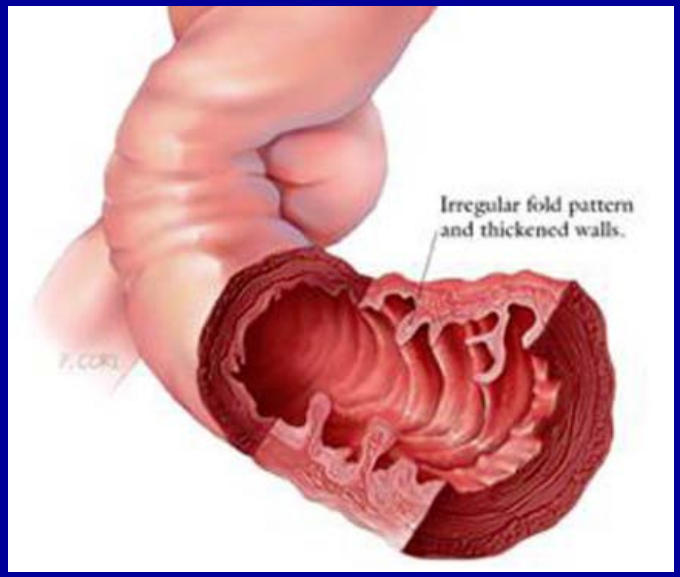
Whipple sykdom

- Meget sjelden
- Menn, 8x
- Mulig defekt i monocyter/ makrofagfunksjonen for denne bakterie
- Arthralgier, diarre, vekttap
- Særlig tynntarm, andre regioner
- PAS- positive bakteriedeler, lipogranulomer
- Tok ca. 85 år før man fant bakterien (T. Whippelii)

George Hoyt Whipple

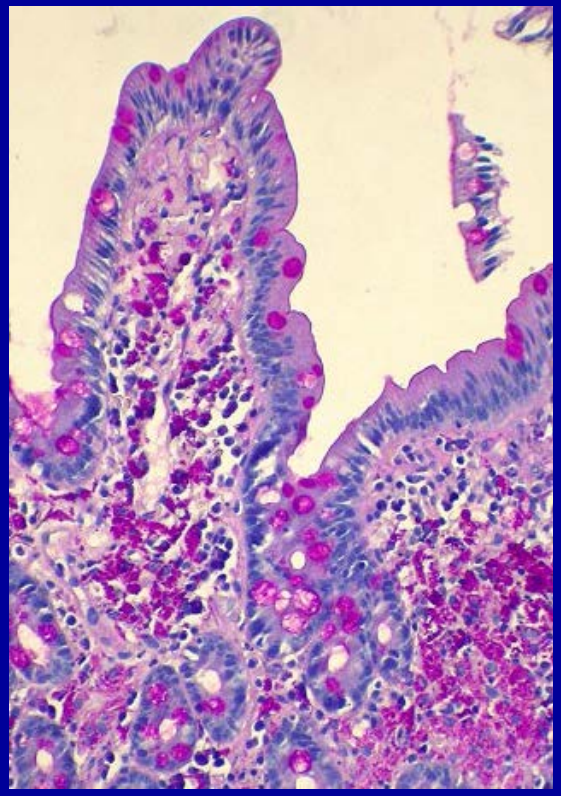
Class of 1896

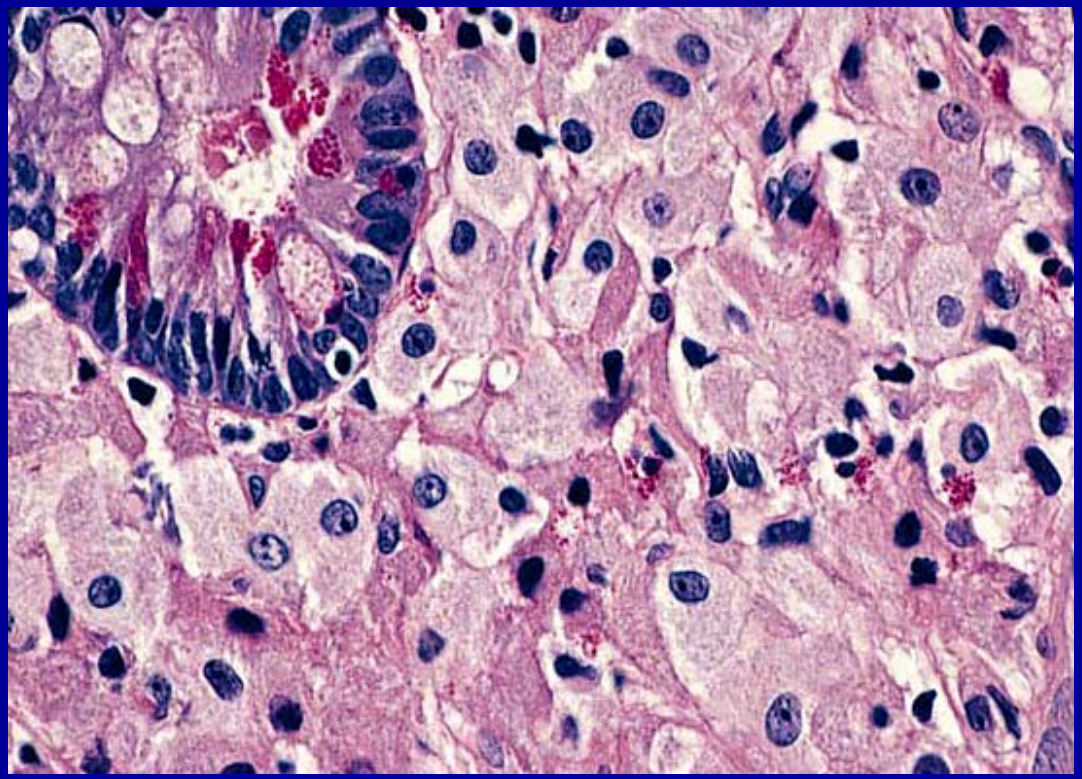
- Pathologist & medical researcher
- Discoverer of lipodystrophia intestinalis [1907], "Whipple's Disease"
- Recipient, Nobel Prize in Medicine [1934] for research leading to a cure for pernicious anemia



Whipples sykdom
Tropheryma infeksjon

- ***Tropheryma whippelii***



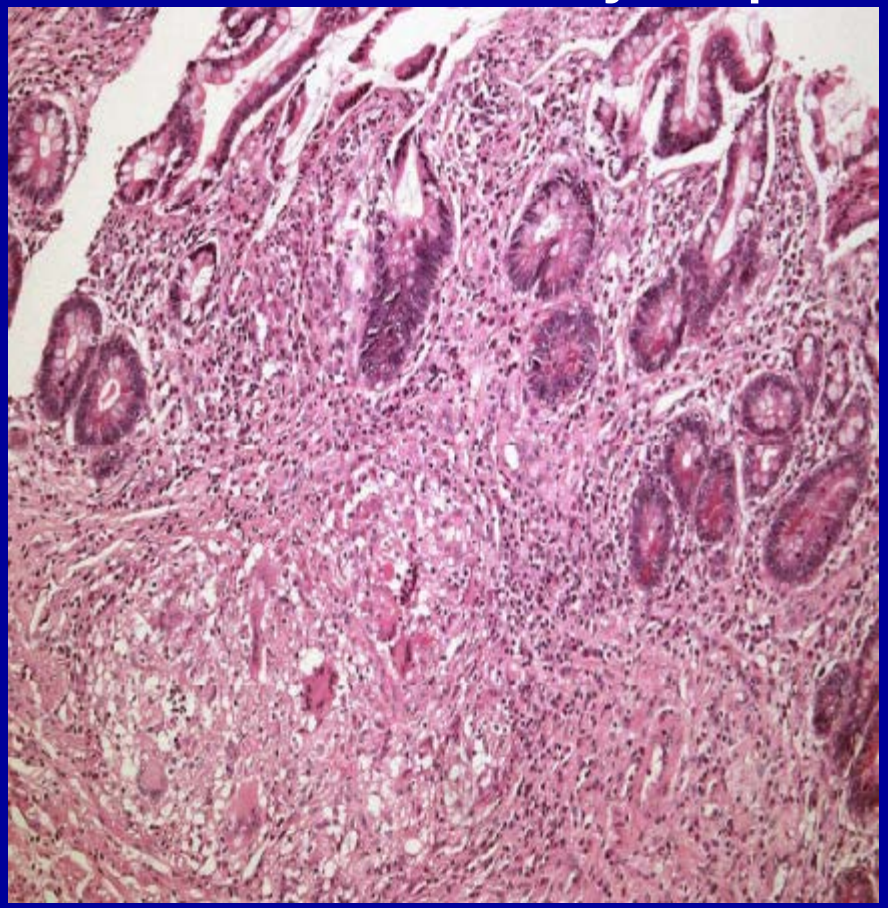


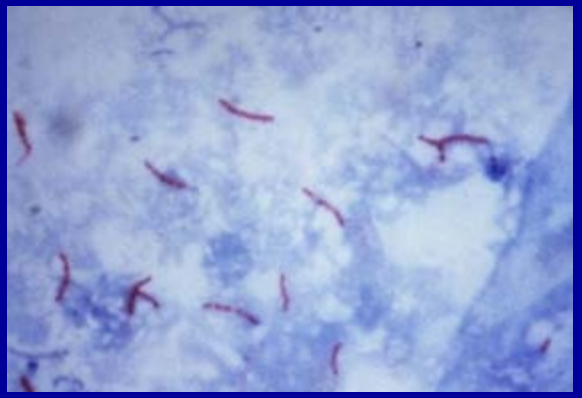
Granulomatøs betennelse

- Crohn
- Yersiniainfeksjon
- TBC
- Sopp
- Schistosomiasis
- Fremmedlegemereaksjon
- Amøbiasis

Intestinal tuberkulose

- Granulomer / Kjempeceller



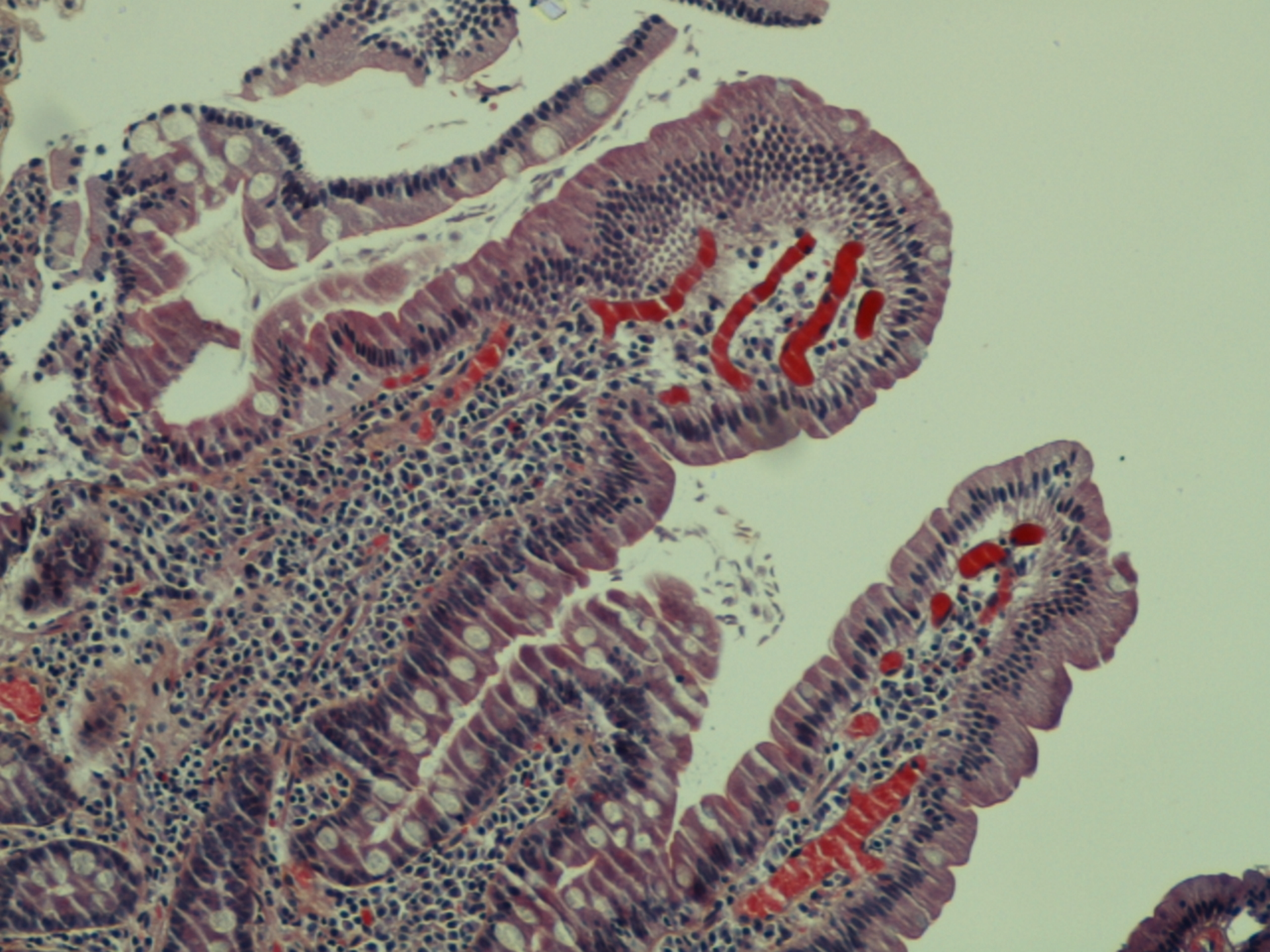


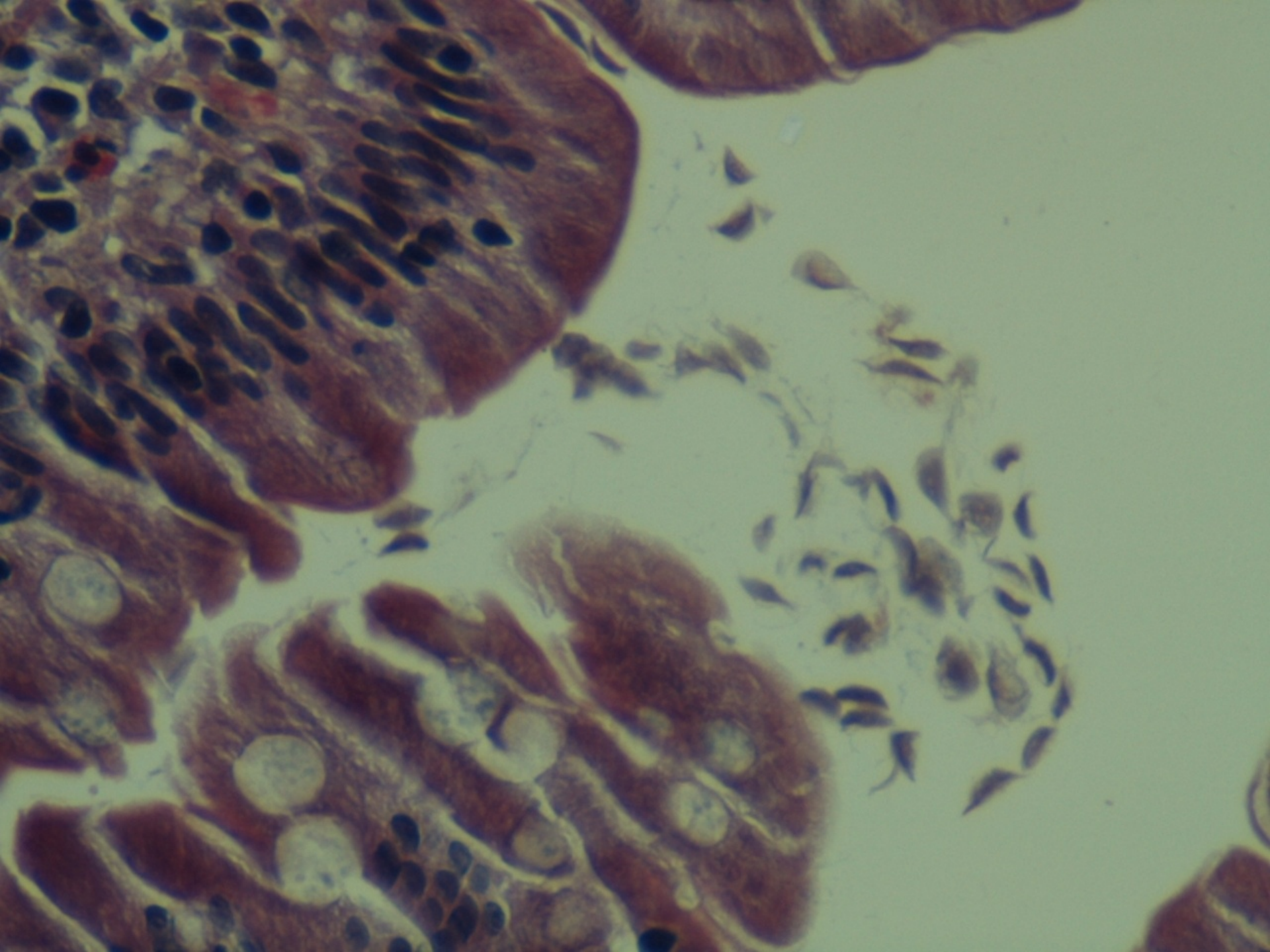
Ziehl- Neelson farve

Syrefaste staver

Kasus

- Mann 40 år
- Diarre 14 dager
- Koloskopi uten påfallende funn
- Biopsi: terminale ileum





Giardiasis
Giardia lamblia

- Hele verden
- Oftest vannbåren, person- person kontakt
- Enkeltilfeller/ epidemier

- I mikr.snitt trophozoitt- formen
- Cysteform: overlever i kalt vann- mnd./
  også ved vanlig klortilsetting
- Asymptomatisk/ diarre/ vekttap

Giardia Lamblia intestinalis

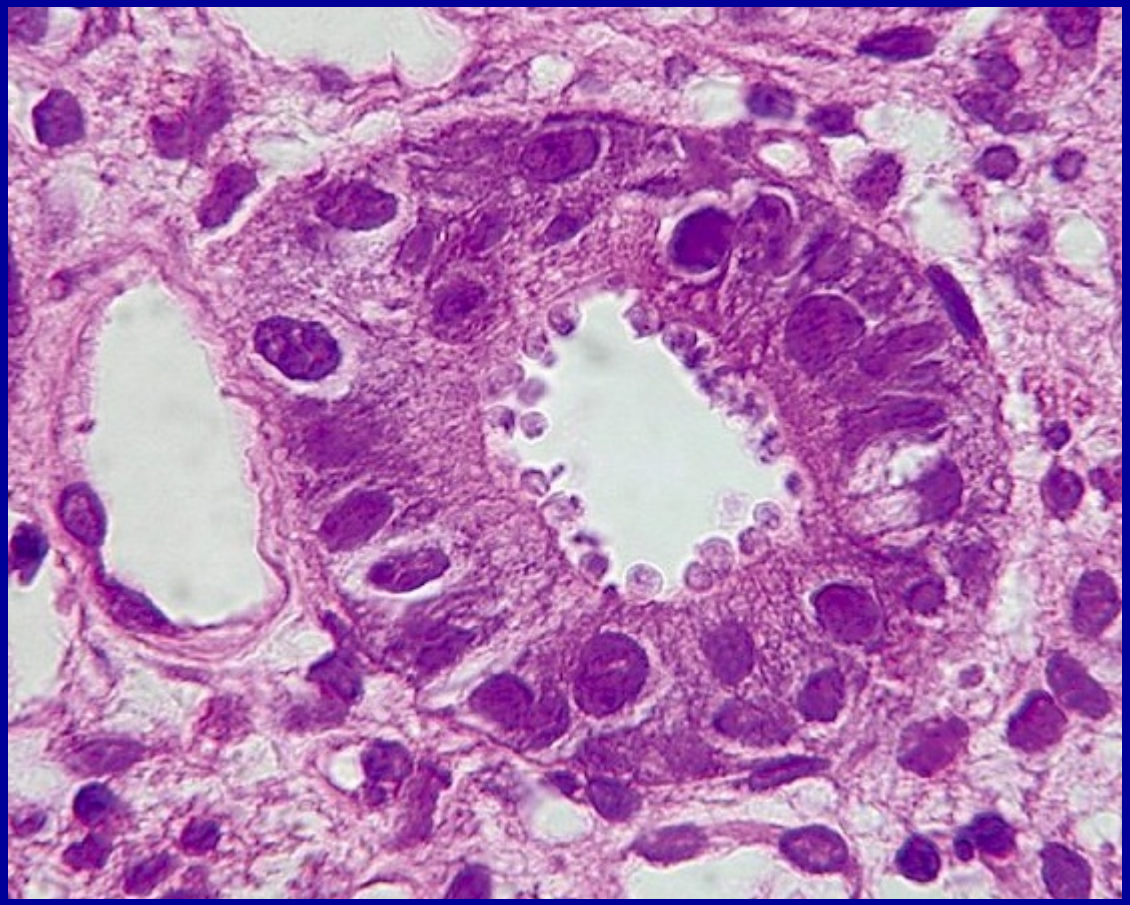
Cyste

Coccidia- infeksjon

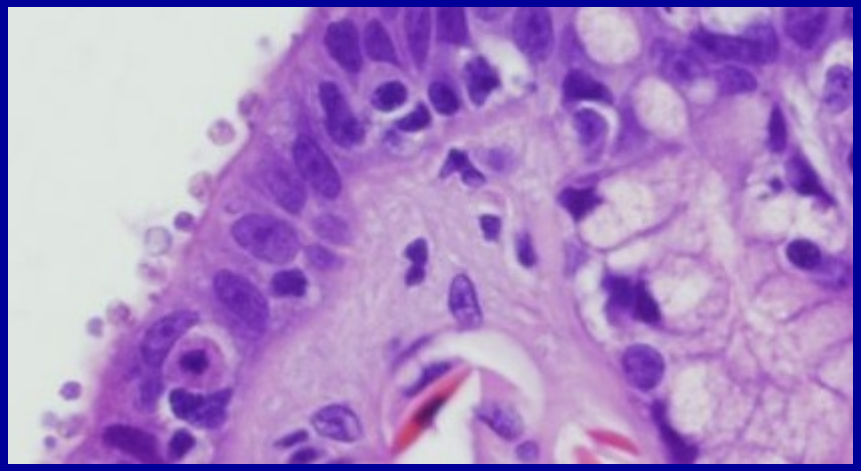
- Særlig hos HIV-smittete
- Feko- oral smitte

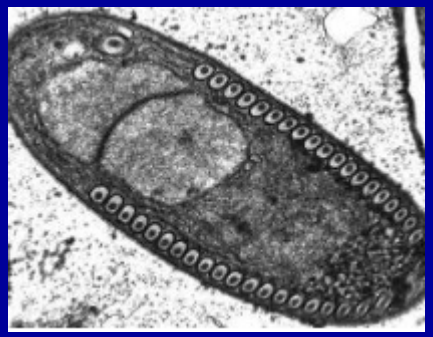
- Cryptosporidiose
- Microsporidiose

Cryptosporidium



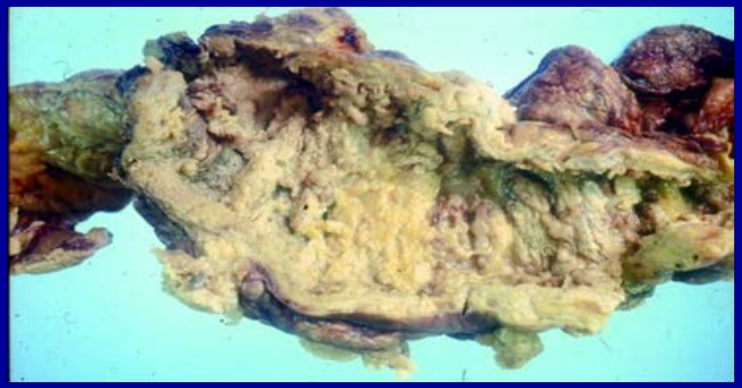
Cryptosporidium



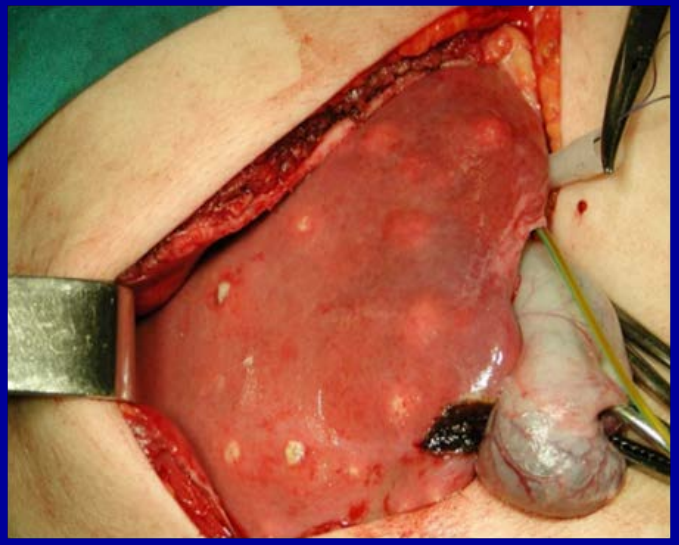


Mikrosporidiose

Amøbe



Amøbe ulcerasjon



Amøbe lever absess

Amøbe-kolitt

- Hele verden, mest subtropisk/ tropisk strøk
- Symptomgivende:

Alltid Entamoeba histolytica

Feco-oral smitte: vann, mat, dårlig hygiene

2 former: Trophozoitt; i biopsi, 12-60 my

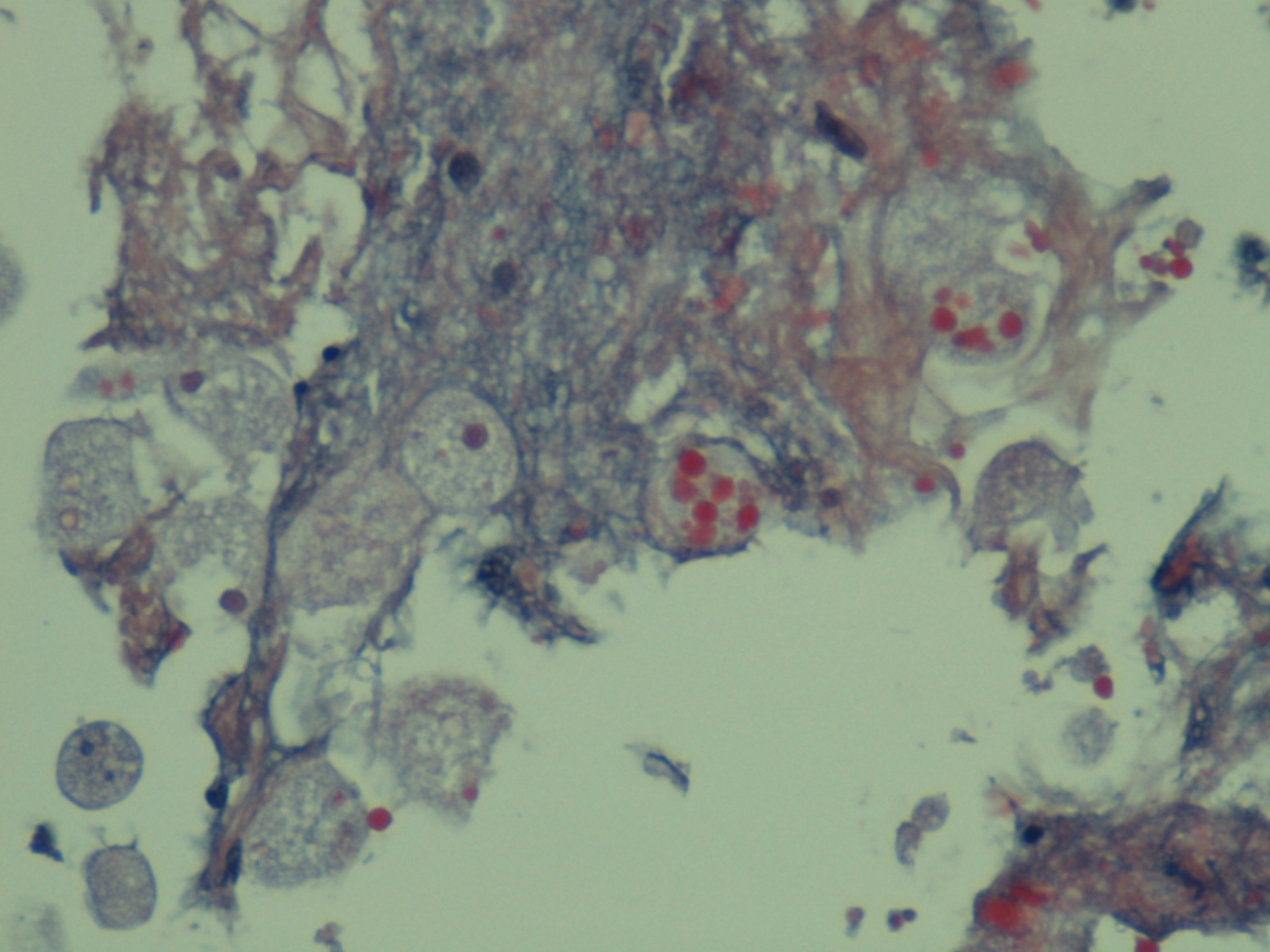
(med fagocytterte erytrocytter)

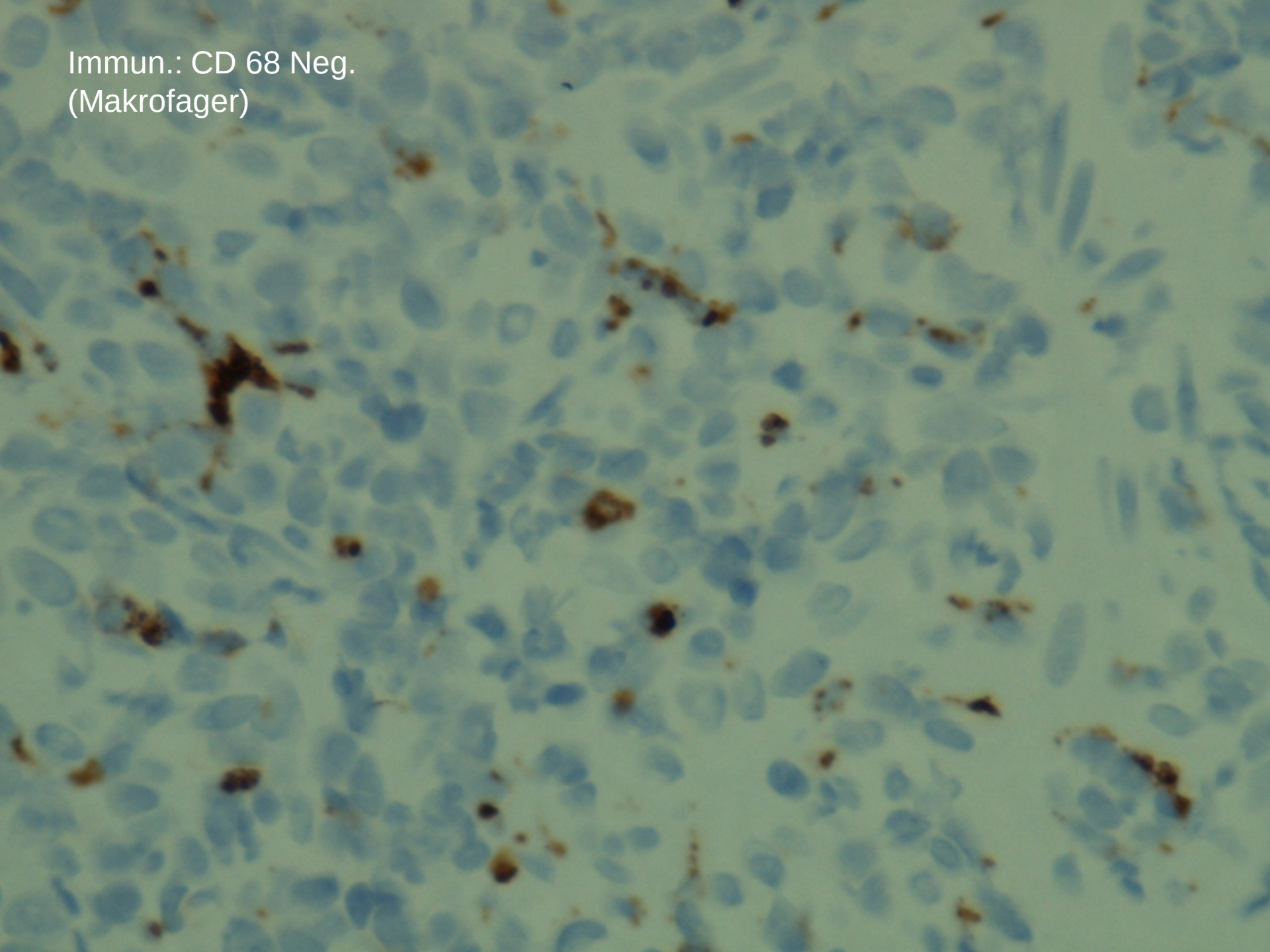
Cysteform

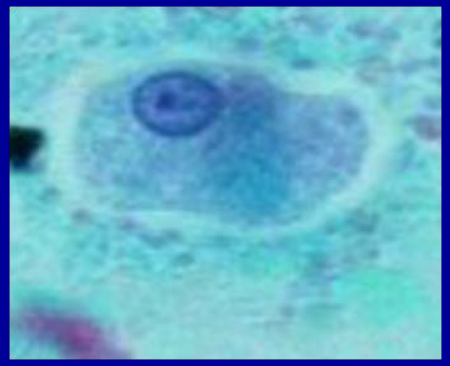
Amøbe

- Cysteform motstår magesyre/ klorering
- Ligger i ileo- cøkalregionen og omdannes der til invasiv trophozoitt
- Lett diarre til ulcererende fulminant kolitt
- Leveramøbeabsess
- PAS farve +

DD.: Ulcerøs colitt, Crohn

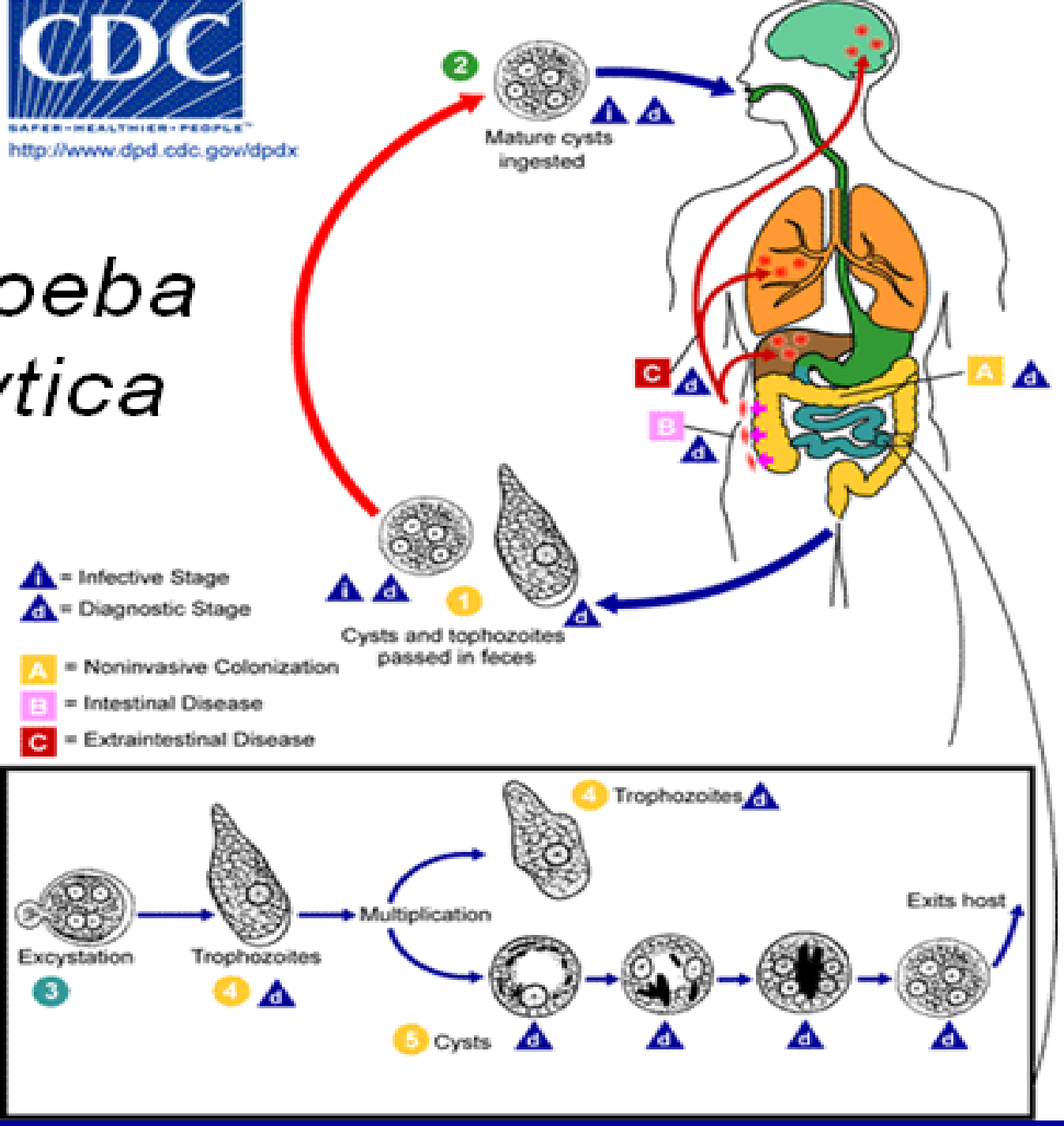



Immun.: CD 68 Neg.
(Makrofager)



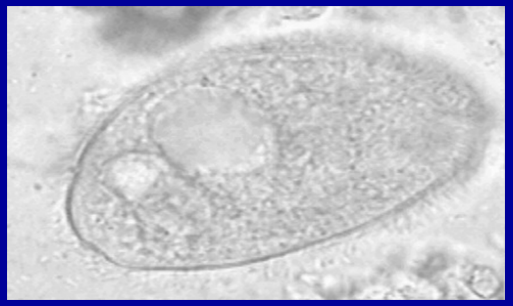
Cyste

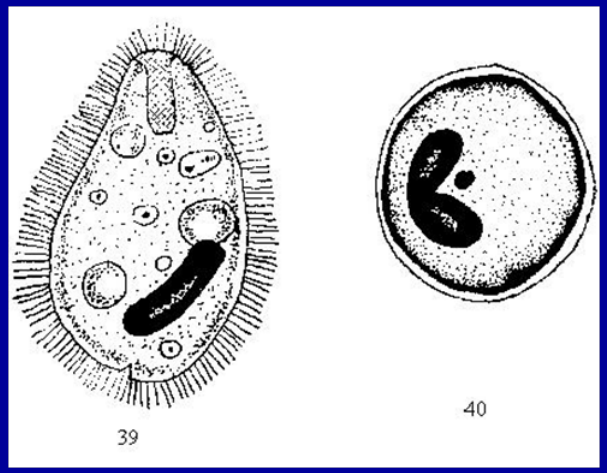
Entamoeba histolytica



Balantidium coli
Reservoar er gris

Eneste protozo med cilier som gir sykdom hos mennesker

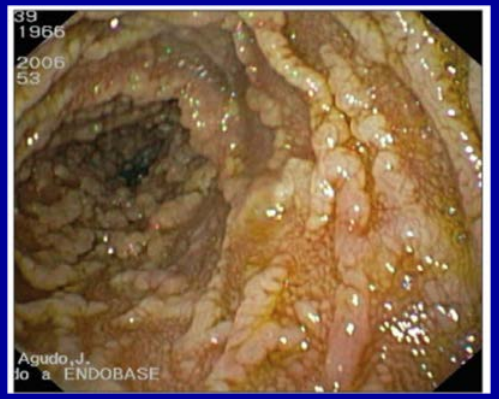




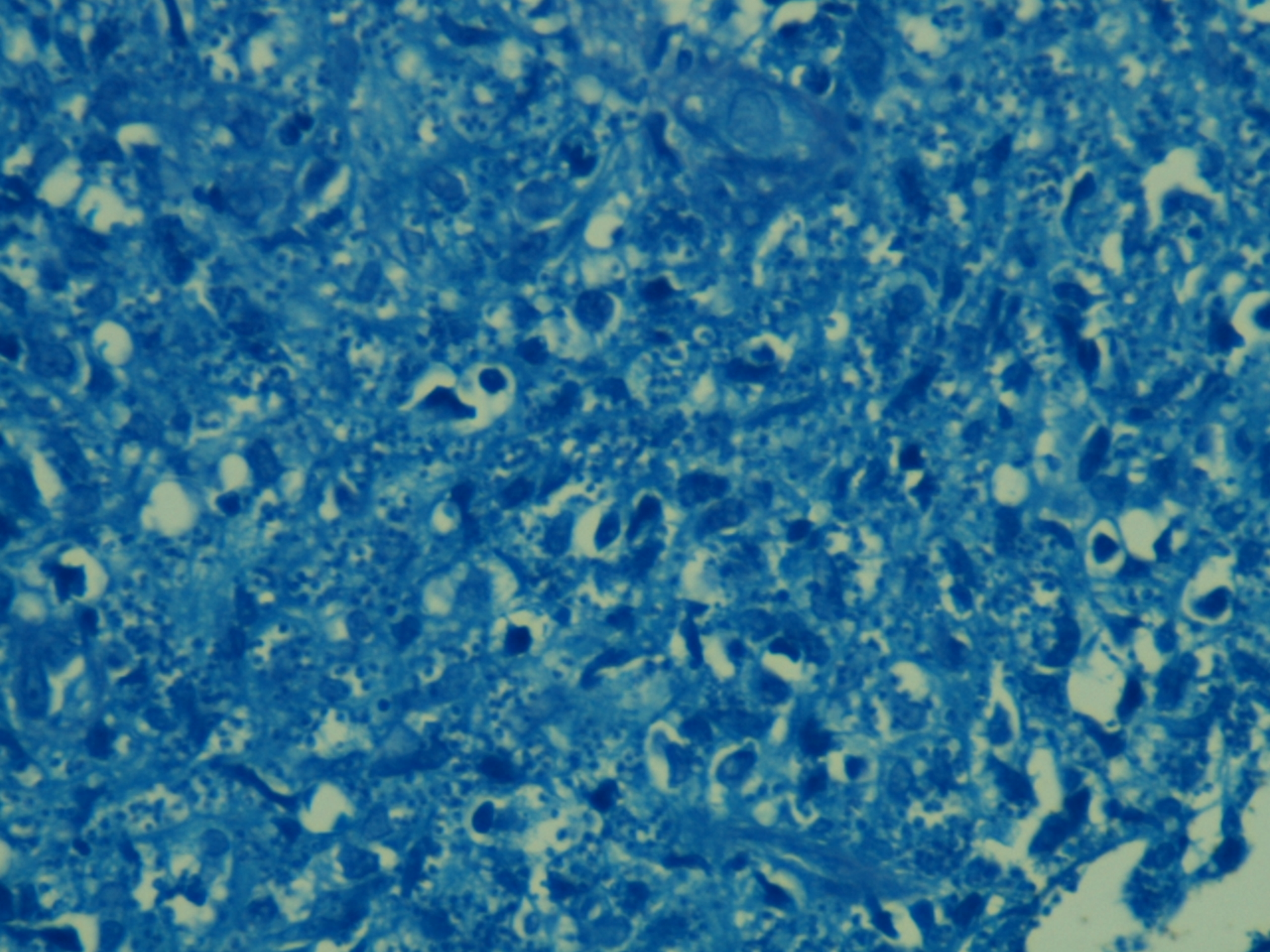
Leishmaniasis

– 3 former for Leishmaniasis:
– Cutan
– Mucocutaneus
– Visceral

Kala Azar



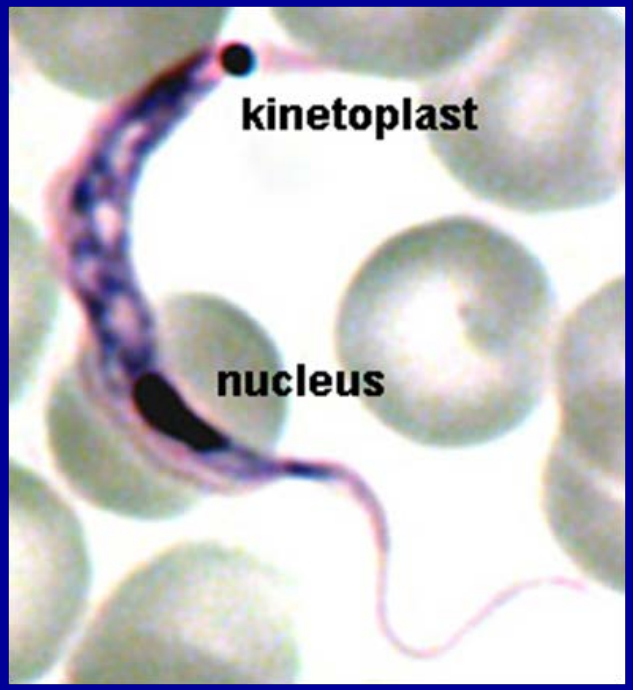
Duodenum



Leishmania donovani
Sandflue overfører

Mastigote = flagella
Promastigote: har enkel flagella
Amastigote: har ikke flagella

Kinetoplast: rund masse av sirkulær DNA

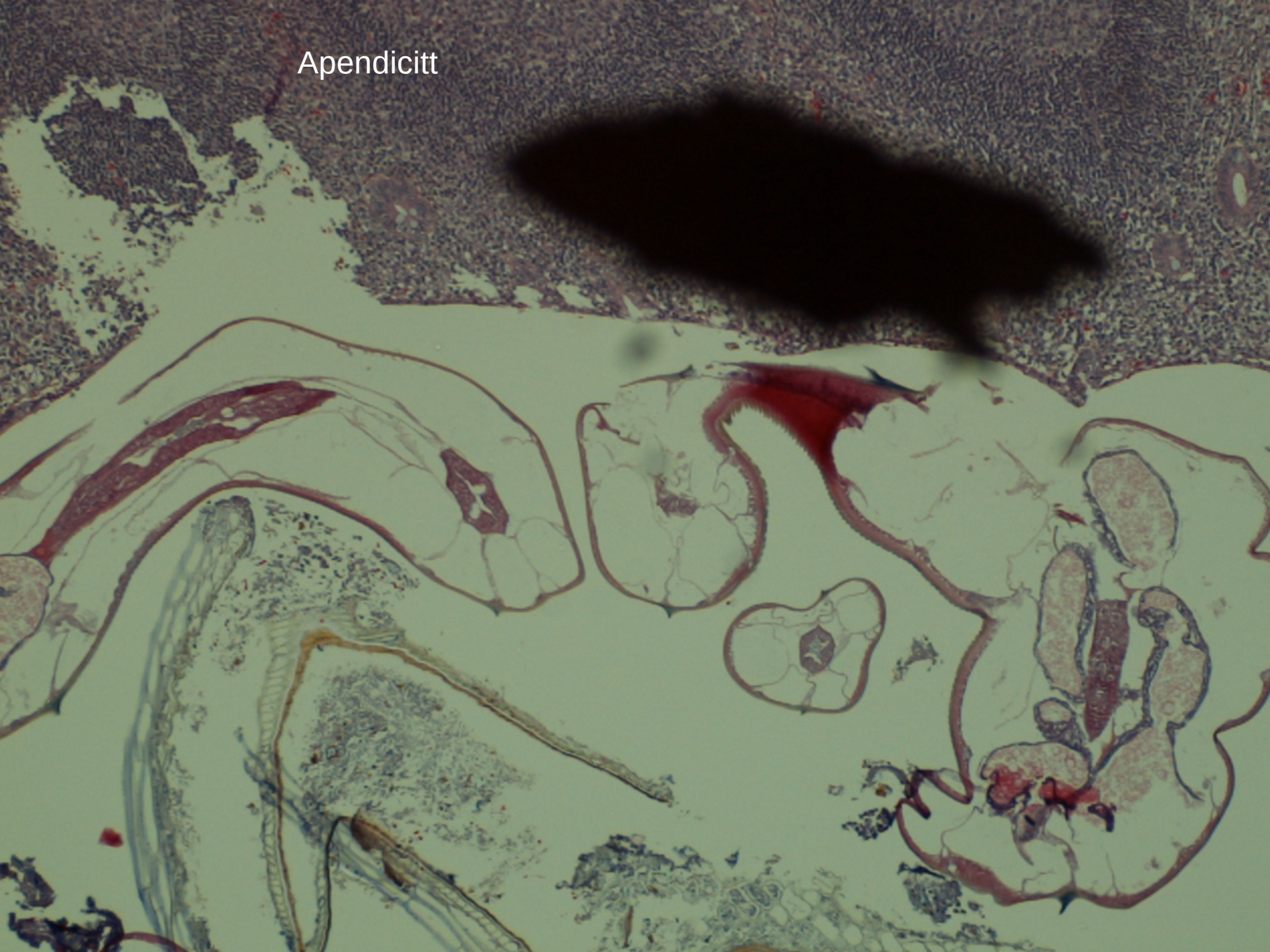


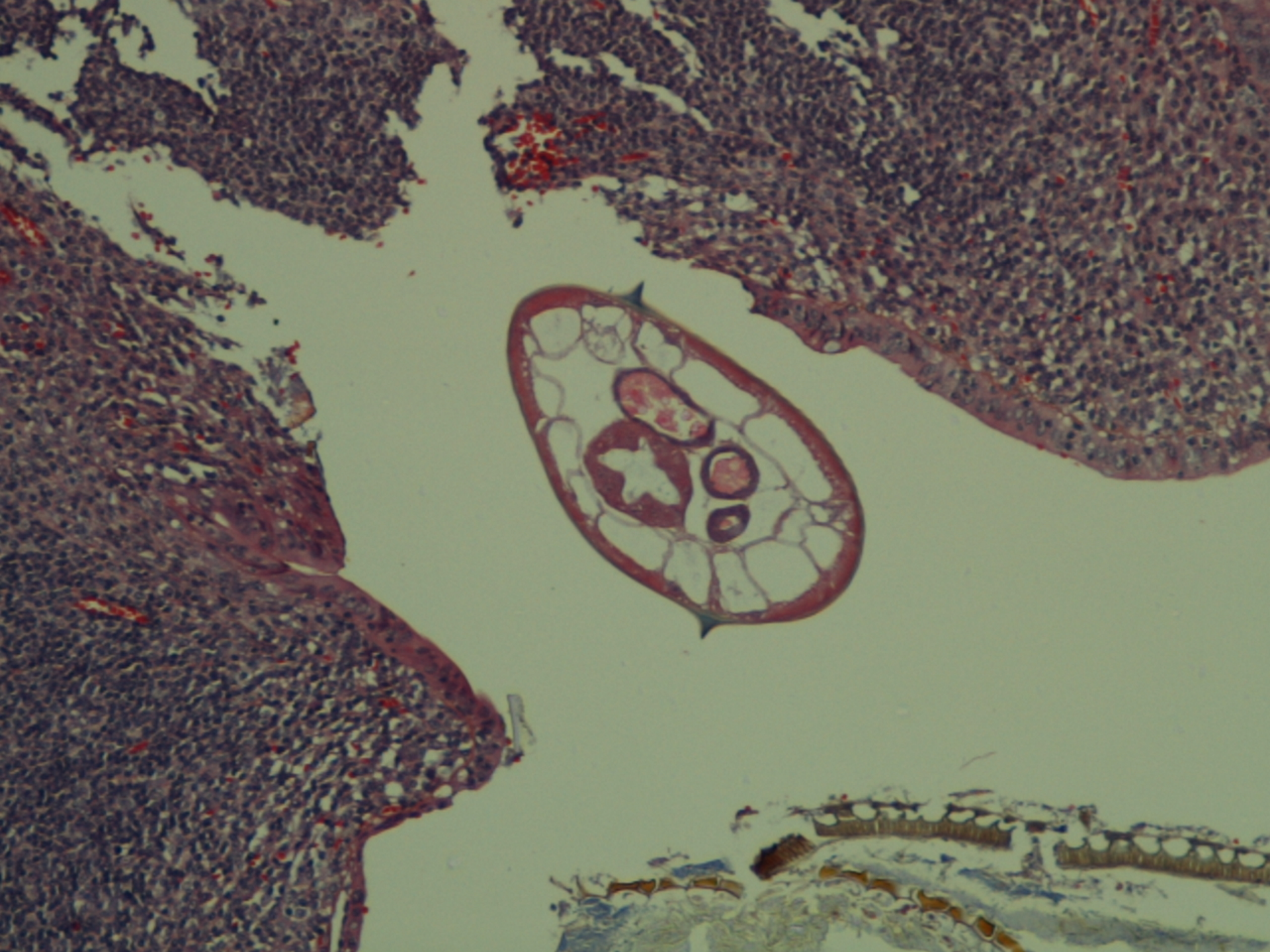
Ormer

Parasitt ormer (Helminter)

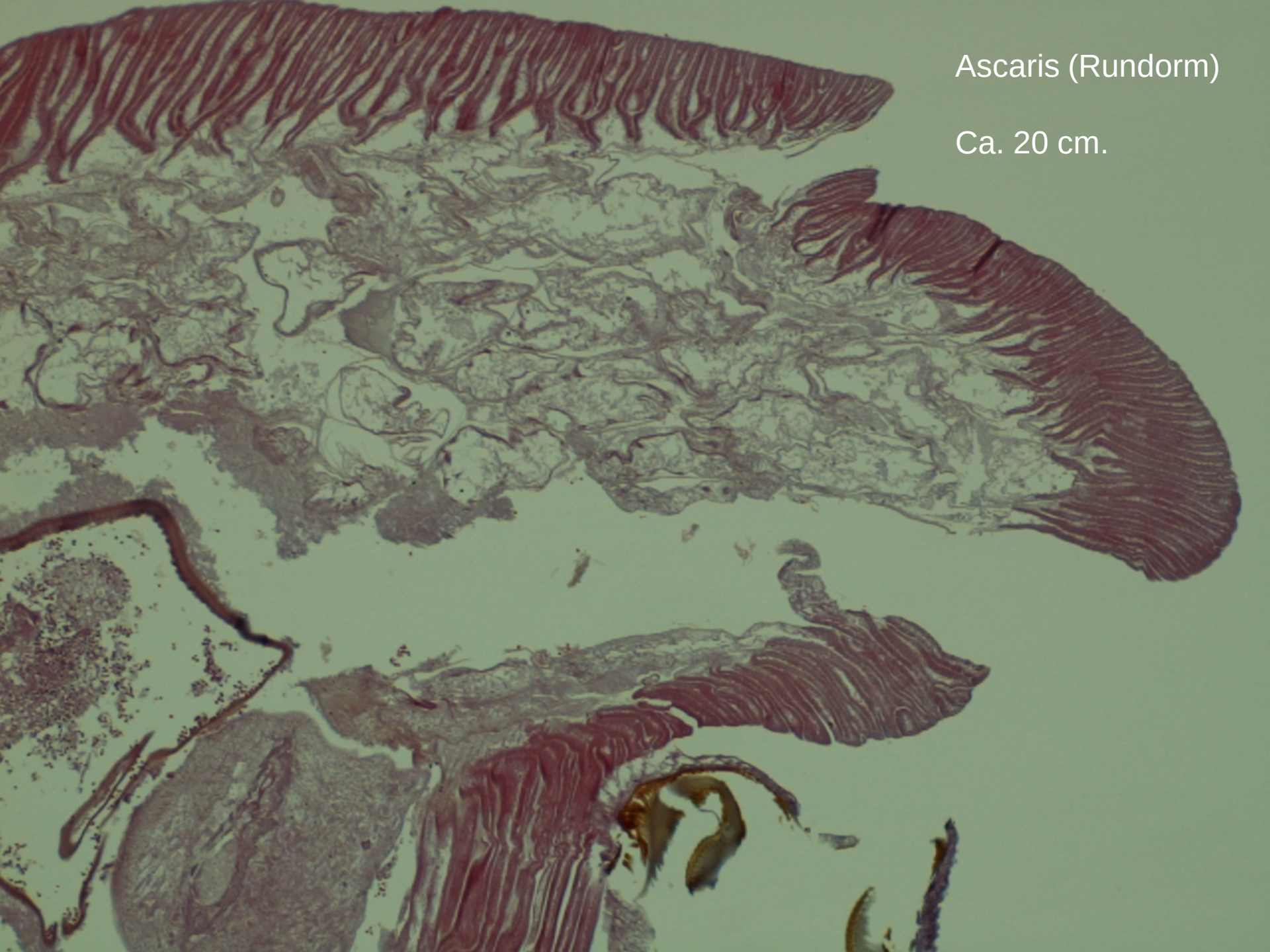
- 1. Nematoder (Rundorm), (mulig 1 mill. typer, 16 000 parasittyper)
  (digestivsystem åpen i begge ender)
  F. eks. Ascariasis, enterobiasis (barnemark), richinose
- 2. Trematoder (Sugeskåler/ heftorganer) (For eks.
  Schistosomiasis/ Bilharziasis)
- 3. Cestoder >1000 typer, tagger,
  Kan bli 30 m. lange, scolex (hode)

- Mikro.:
  Mulig ved bl. a.
  Lokalisert eosinofili, fibrose, granulomer


Apendicitt

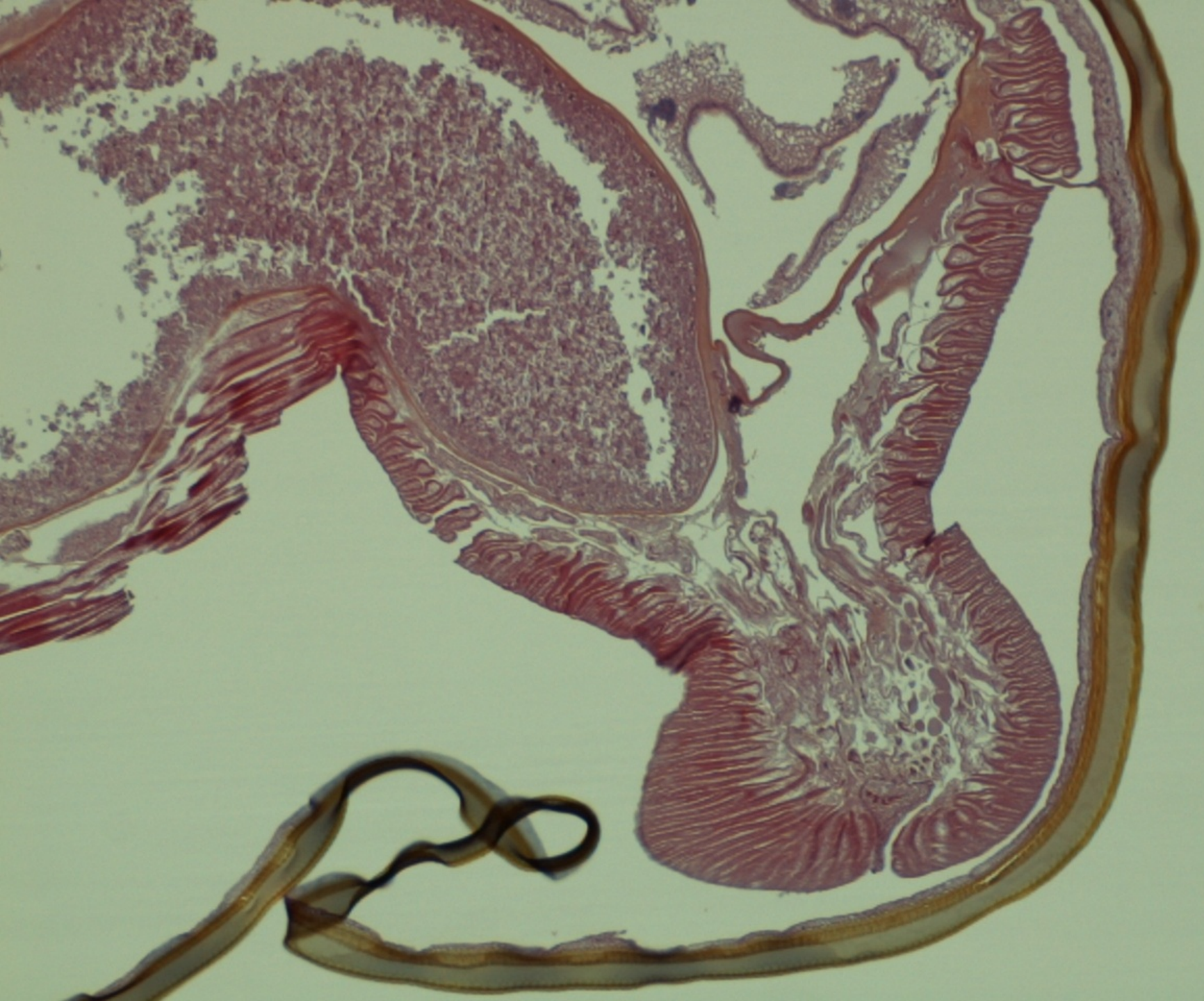



EGG
CUTICULA



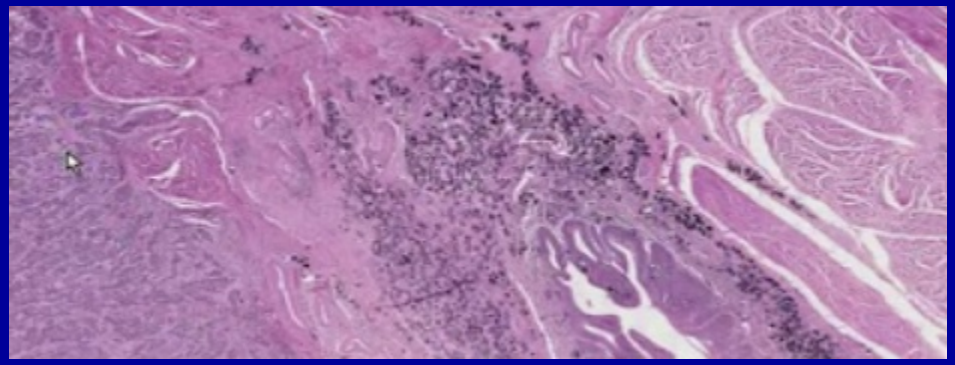
Ascaris (Rundorm)

Ca. 20 cm.

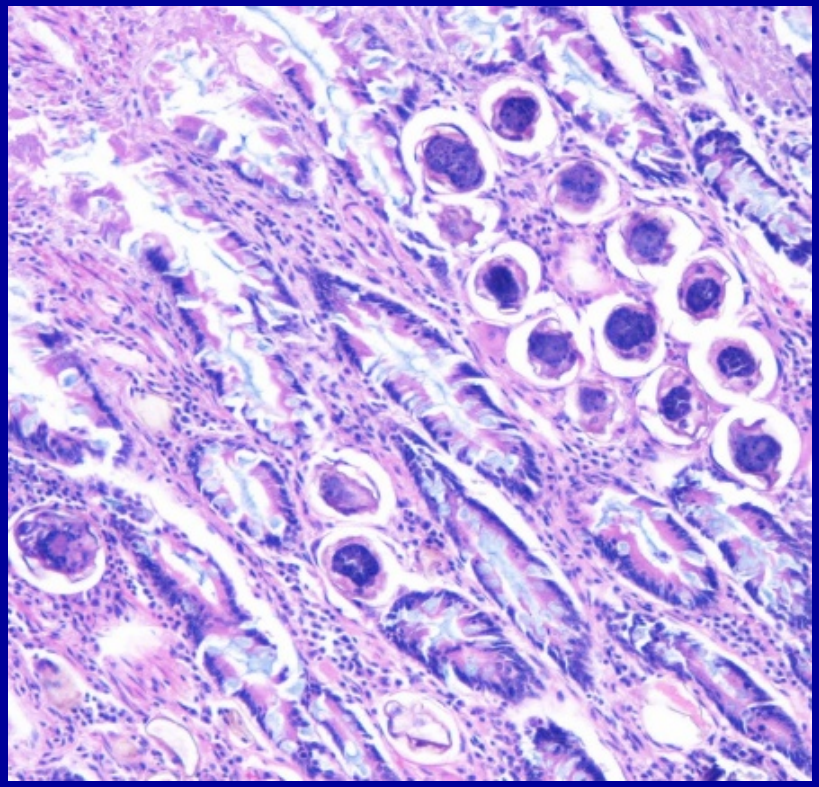


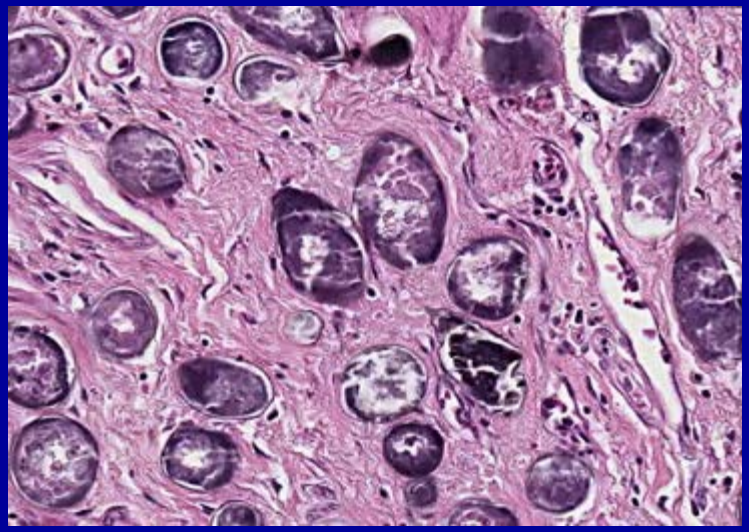
Schistosomiasis

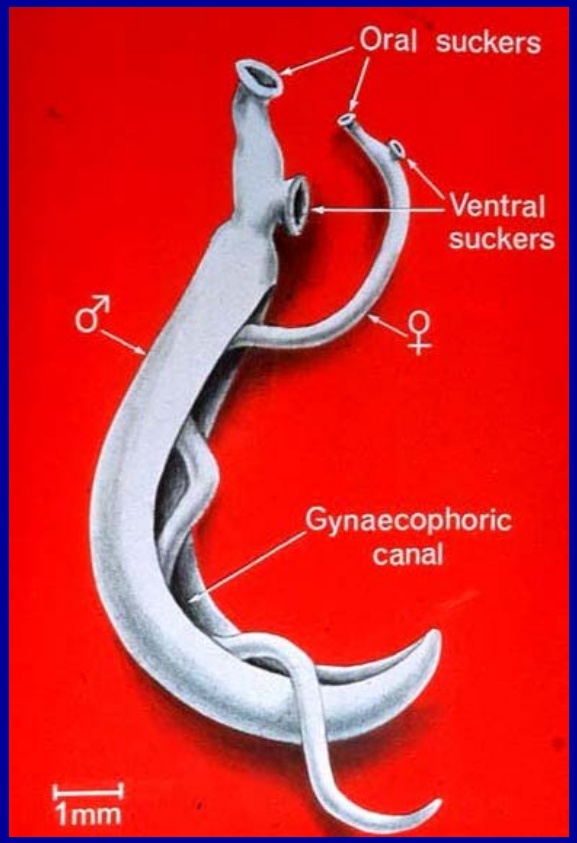
- Trematode av genus Schistosoma
- Særlig 3 typer gir humane infeksjoner
- Ofte Afrika
- Lett til alvorlig klinikk
- Smerter/ diarre
- Urinblære: kan gi plateepitelkarsinom
- Skopi: betennelse, ulcerasjon, ”polypper”
- Mikro: betennelse/ granulomer/ egg



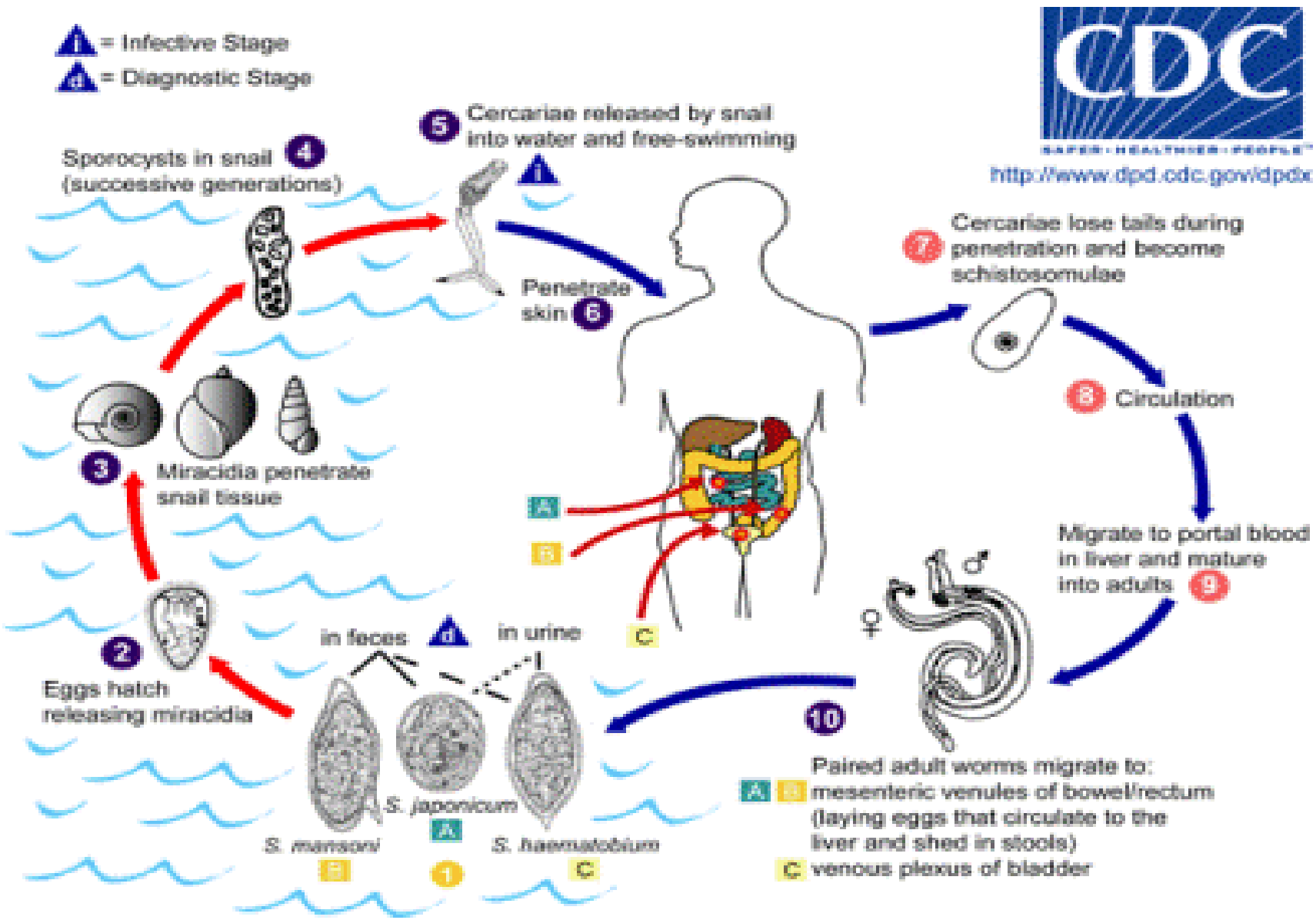
Schistosomiasis, colon







Unike egg !
”Hake”



Life cycle of schistosomiasis

Cestoder
F. eks. Tapeworms

Viktig: Det mikroskopiske blikk !