



SEM 4 PRACTICAL PARA REVISION



Each Slide has Two Questions

Q1: Identify??

ماتنساش

Q2: A. Parasite Life cycle (DH, IH, RH, Habitat, Stages of life cycle, Infective stage, Diagnostic stage, Mode of infection).

B. Diagnostic specimens or samples.

C. Most important or commonest C/P

D. Most important or commonest Complication

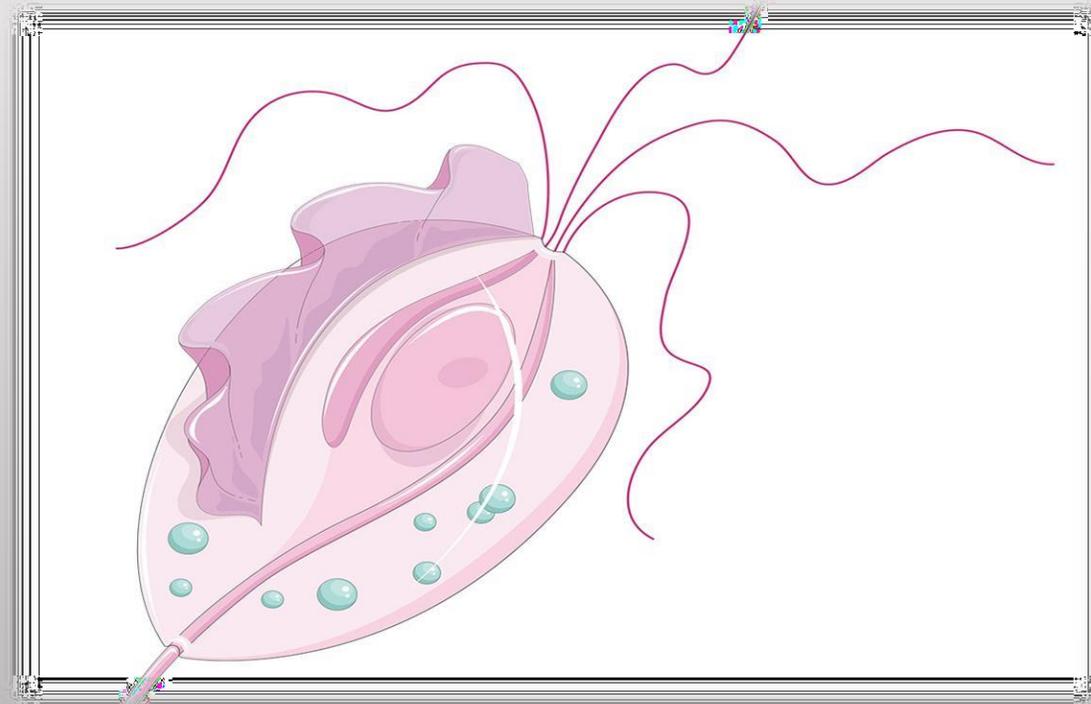
E. Specific treatment



Parasites Affecting The Reproductive System



1) *Trichomonas vaginalis*



Trichomonas vaginalis (Trichomoniasis)

DH: Man

IH: No

RH: No

Habitat: 1) Females → Posterior fornix of vagina, cervix, urethra

2) Males → Urethra, epididymis, seminal vesicles, prostate

Stages of life cycle: Trophozoite only

IS: Trophozoite

DS: Trophozoite

Mode of infection: Sexual, contaminated toilet seats & towels, Vertical transmission during birth

Most C/P: Females → vaginal discharge, dysuria, dyspareunia, cystitis

Most Complications: cervical carcinoma

D.Specimens: Urine, prostatic fluid, vaginal smears

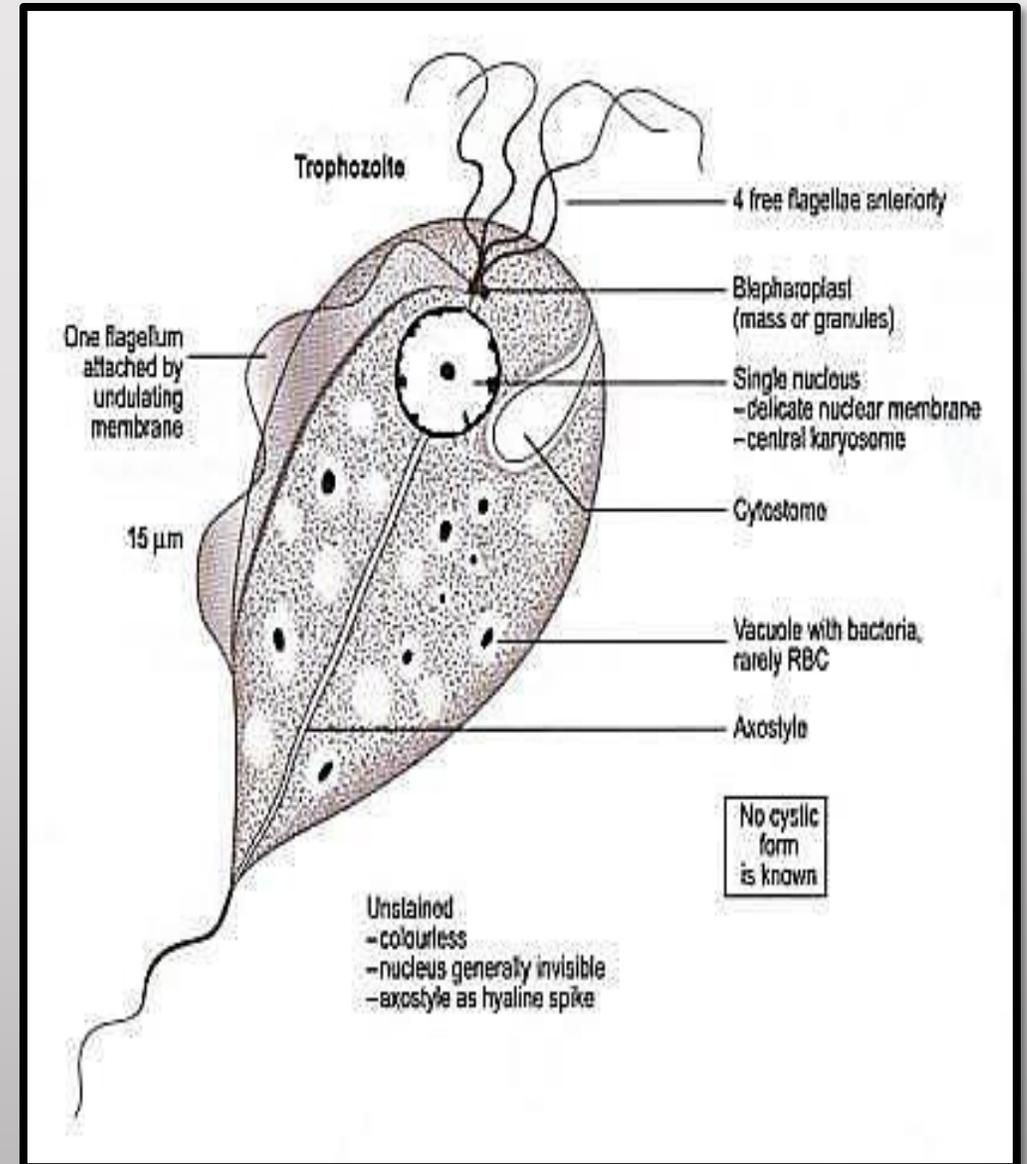
Treatment: Metronidazole (both partners)



Morphology

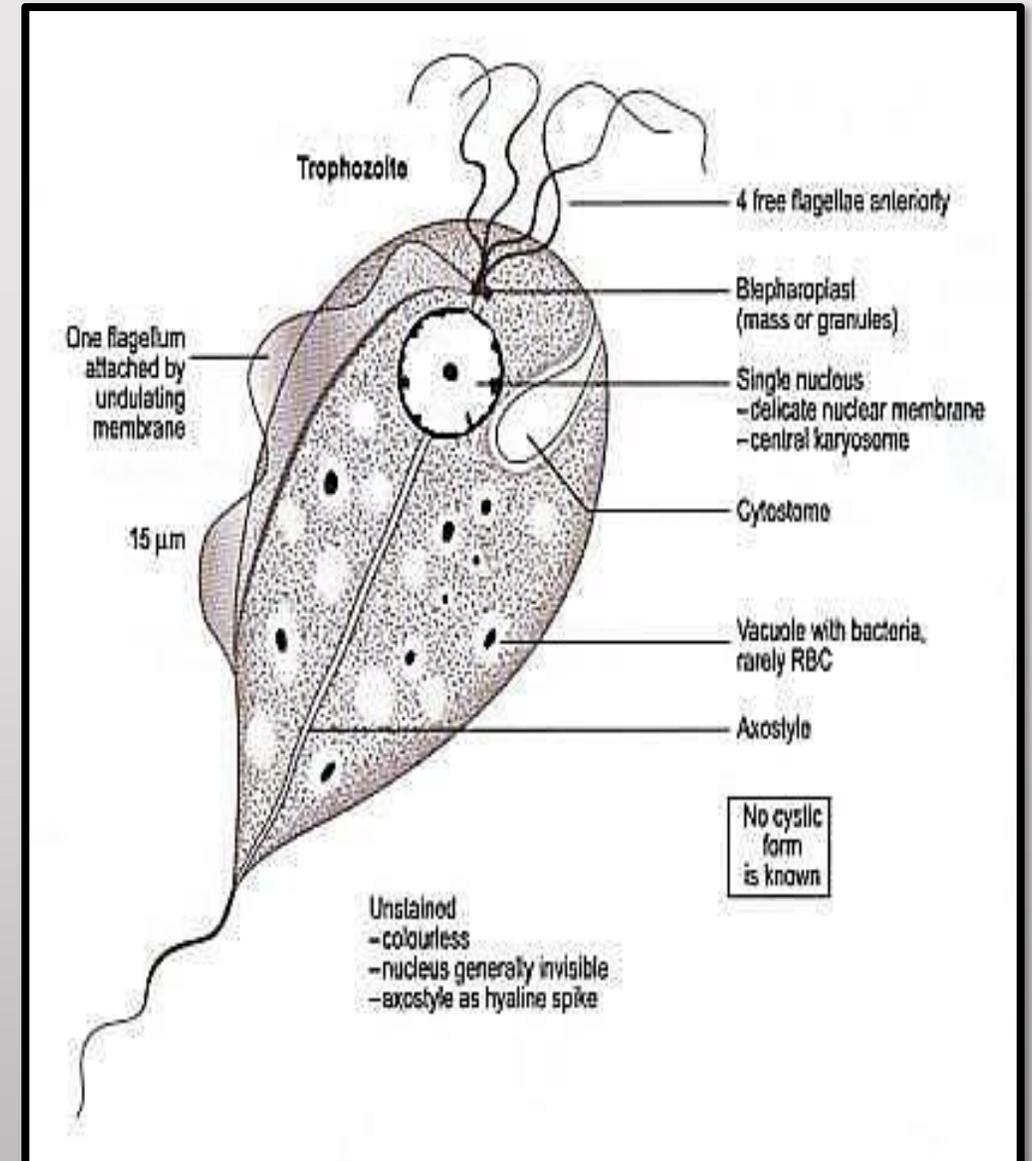
1) Trophozoite:

- pear-shaped
- 17x10 μ ,
- with a rapid jerky movement.
- an antero-lateral cytostome.
- The cytoplasm is granular with a single anterior nucleus

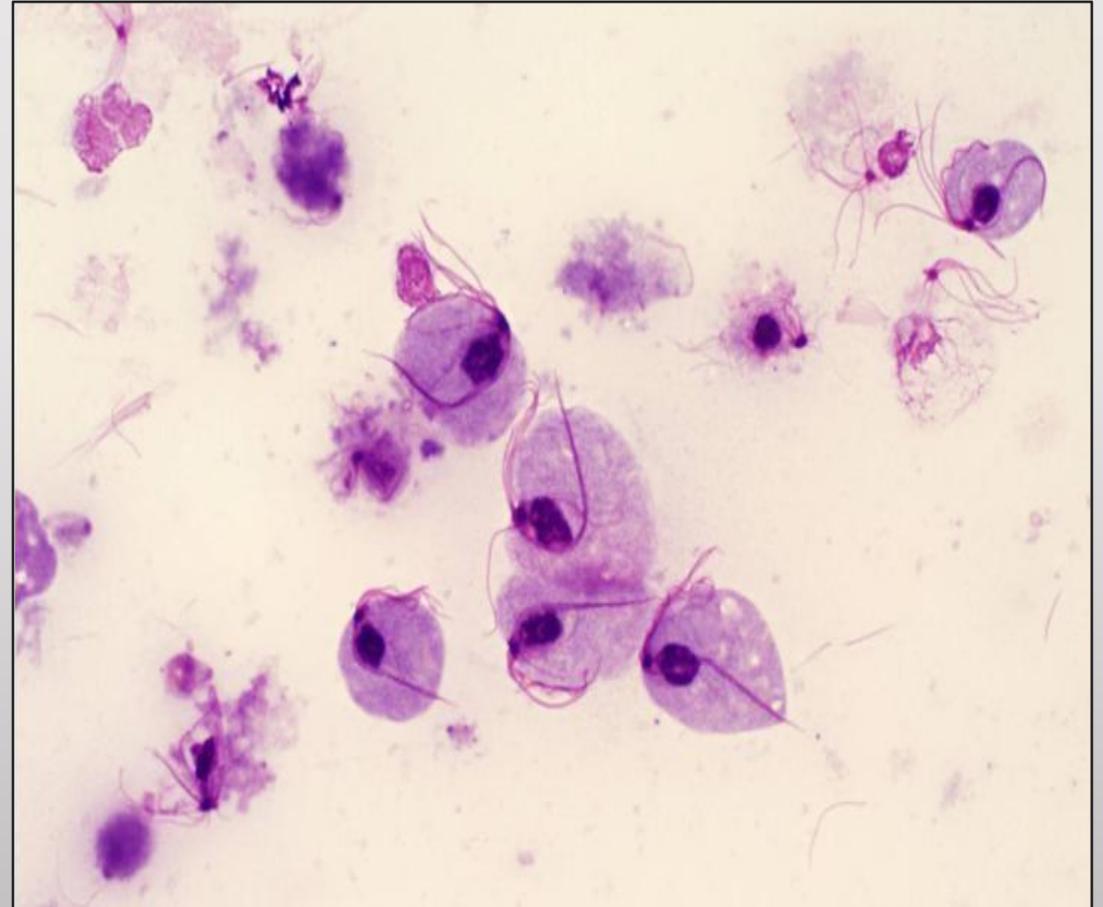


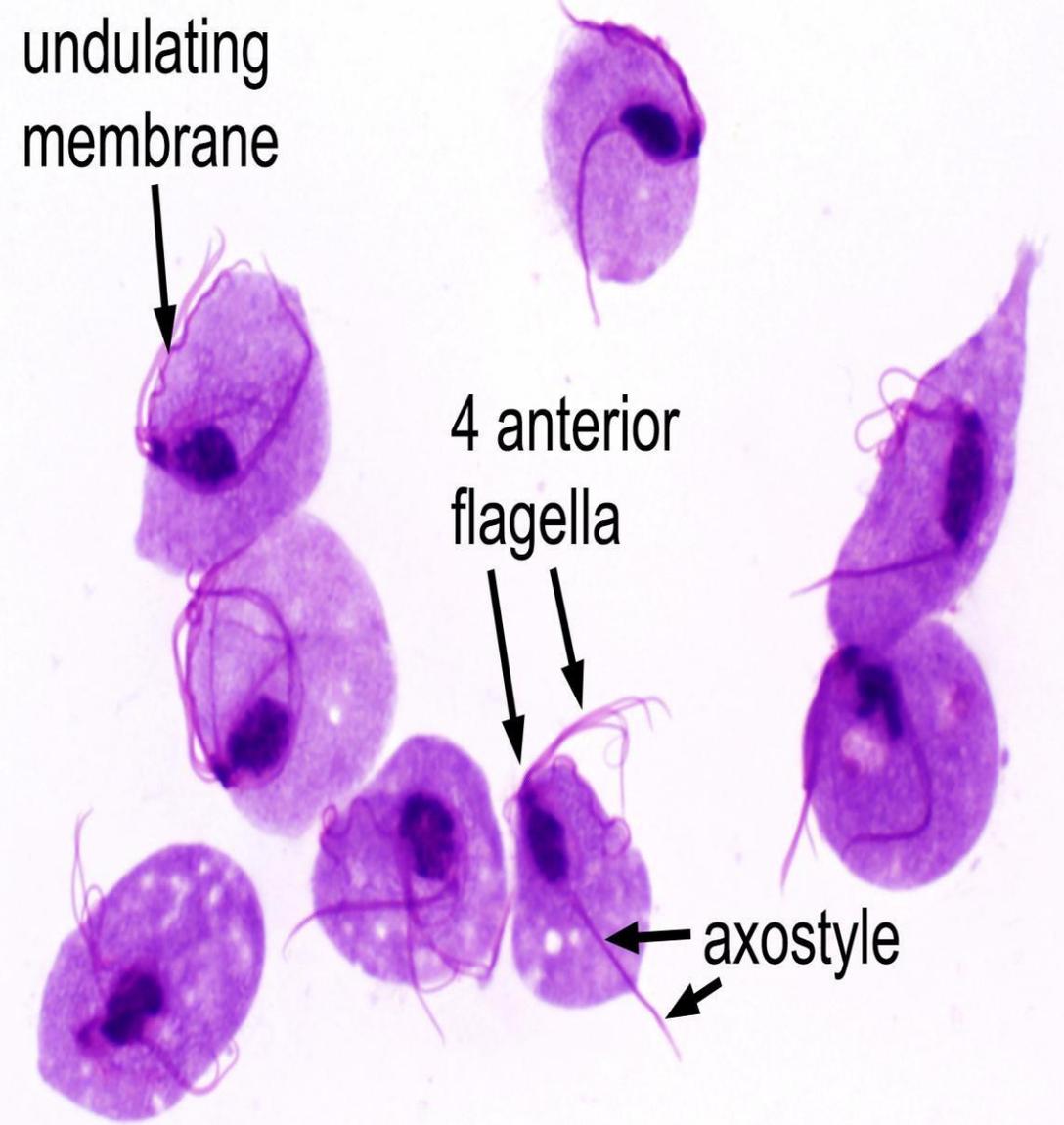
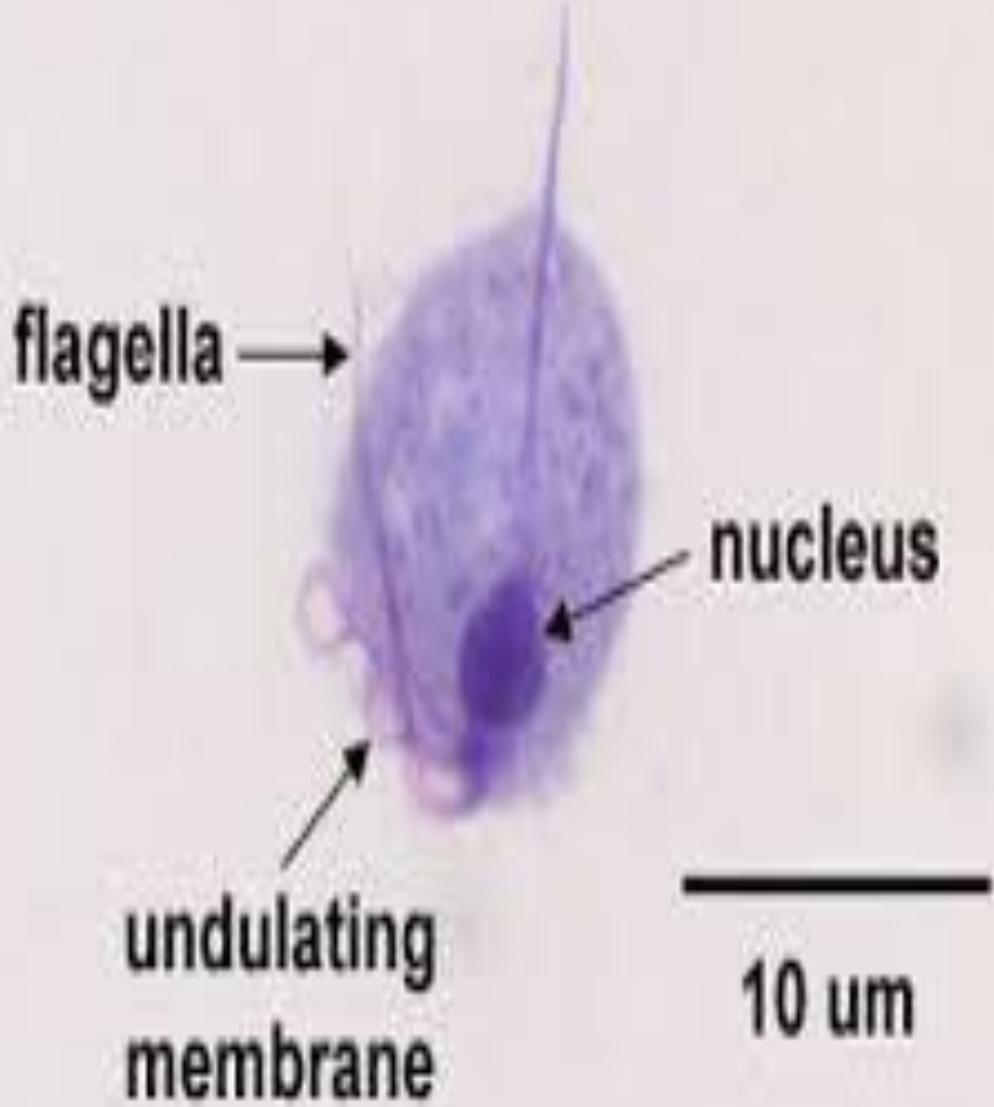
Morphology

- 4 free flagella anteriorly
- 5th flagellum attached to the body by undulating membrane, presents at the anterior 1/3 of body
- 6th flagellum passes through the body as axostyle



Trichomonas vaginalis trophozoites







2) *Toxoplasma gondii*

Toxoplasma gondii (Toxoplasmosis)

DH: Cats

IH: Man and other mammals

RH: Animals

Habitat: Obligate intracellular → RECs, Brain, Sk.Ms & Any nucleated cell

Stages of life cycle: tachyzoites, pseudocysts, true tissue cysts & sporulated oocysts

IS: All stages → tachyzoites, pseudocysts, true tissue cysts & oocysts

DS: Trophozoite, pseudocyst, tissue cyst

Mode of infection: ingestion, Inhalation, Blood transfusion, Organ transplantation, Mucous or skin abrasions, Transplacental, Sexual

Most C/P:

1. Congenital → Retinochoroiditis
2. Acquired → Cervical lymphadenopathy
3. Immunocompromised → Meningoencephalitis

Most Complications: Meningoencephalitis

D. Specimens: Blood, CSF, LN, BM, Spleen, Placenta, Amniotic fluid

Treatment:  مش معانا



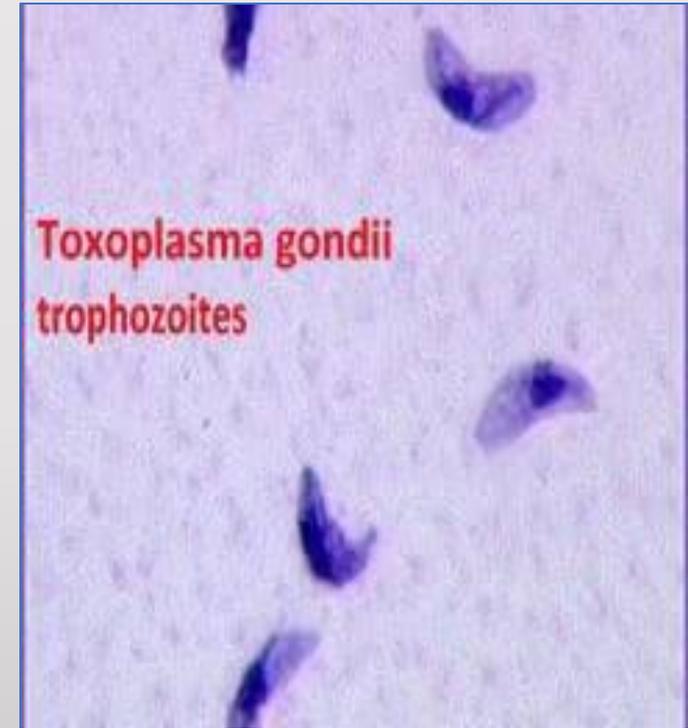
➤ *Toxoplasma gondii* morphological stages:

Toxoplasma gondii occurs in 4 forms:

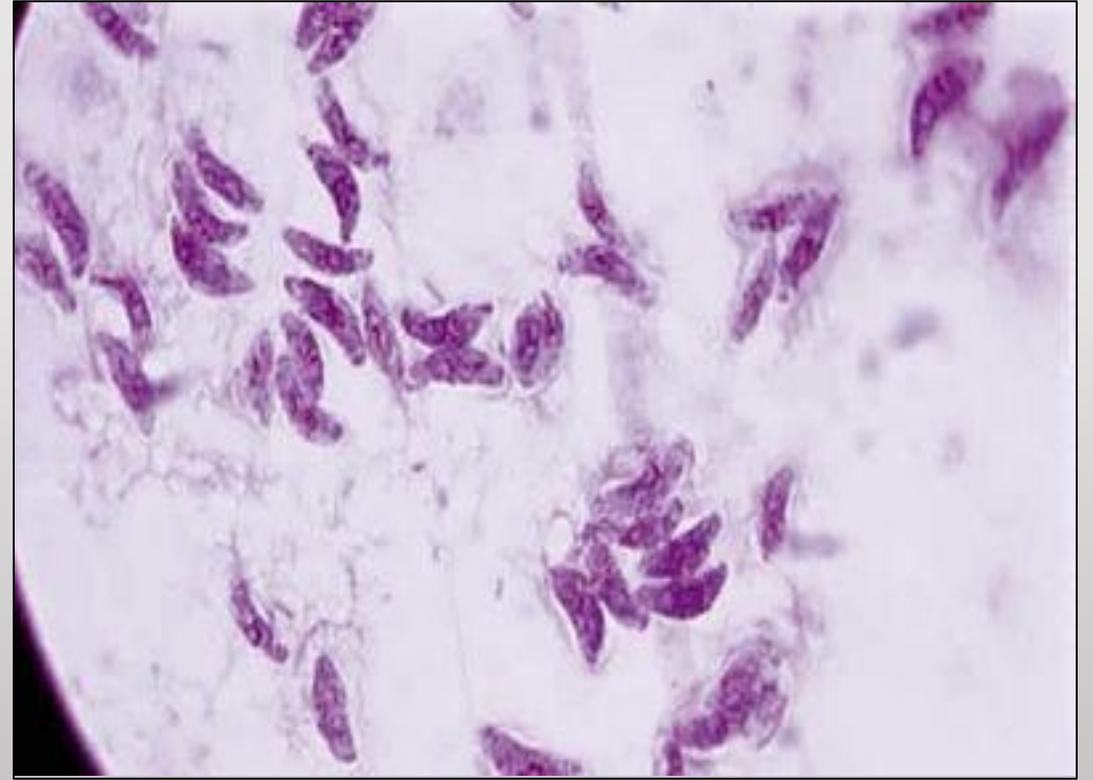
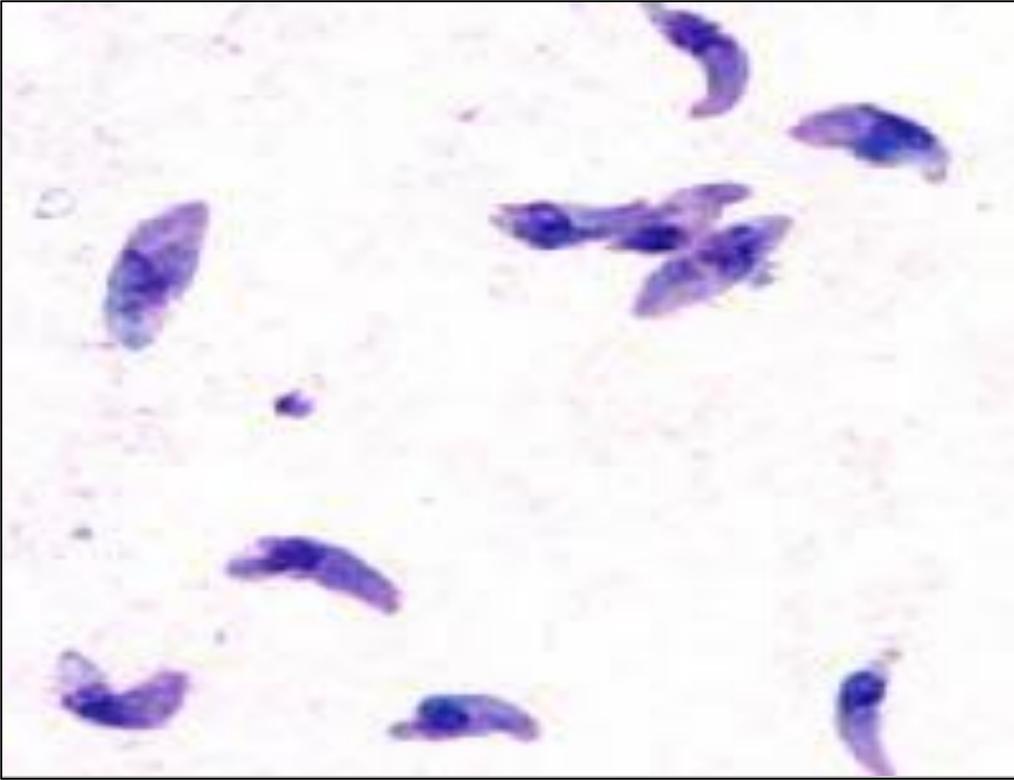
- 1) Trophozoite (Tachyzoite).
- 2) Pseudocyst.
- 3) True tissue cyst.
- 4) Oocyst.

1) Trophozoite (Tachyzoite):

- It is the **active multiplying** stage, found in the **acute stage** of infection.
- *Shape*: crescent, with pointed anterior end and rounded posterior end.
- *Size*: 3x6 μ
- *Content*: has an ovoid posterior nucleus and anterior paranuclear granules.
- *Site*: seen intracellular in various tissues, multiplies within cytoplasmic vacuoles of any **nucleated cell**.



Toxoplasma tachyzoites



2) Pseudocyst:

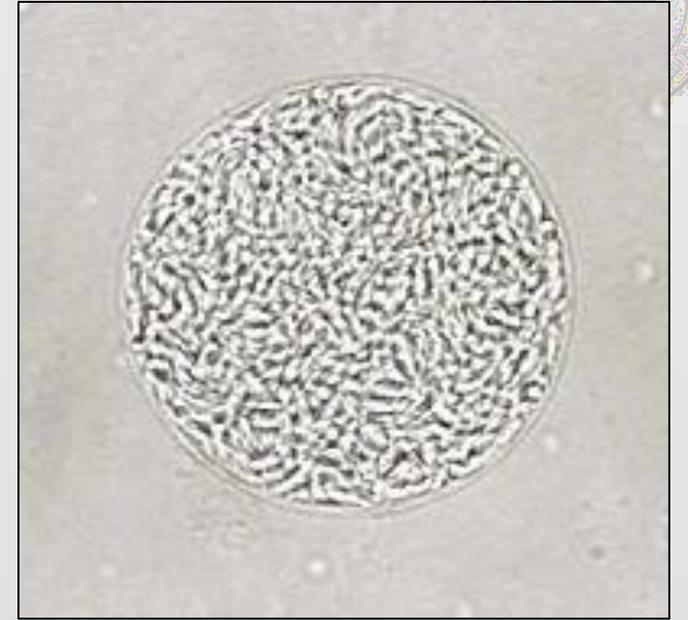
- It is found in the **acute stage** of infection.
- It is full of rapidly multiplying tachyzoites.
- It has **no** cyst wall.
- *Site:* It is localized inside the RECs.



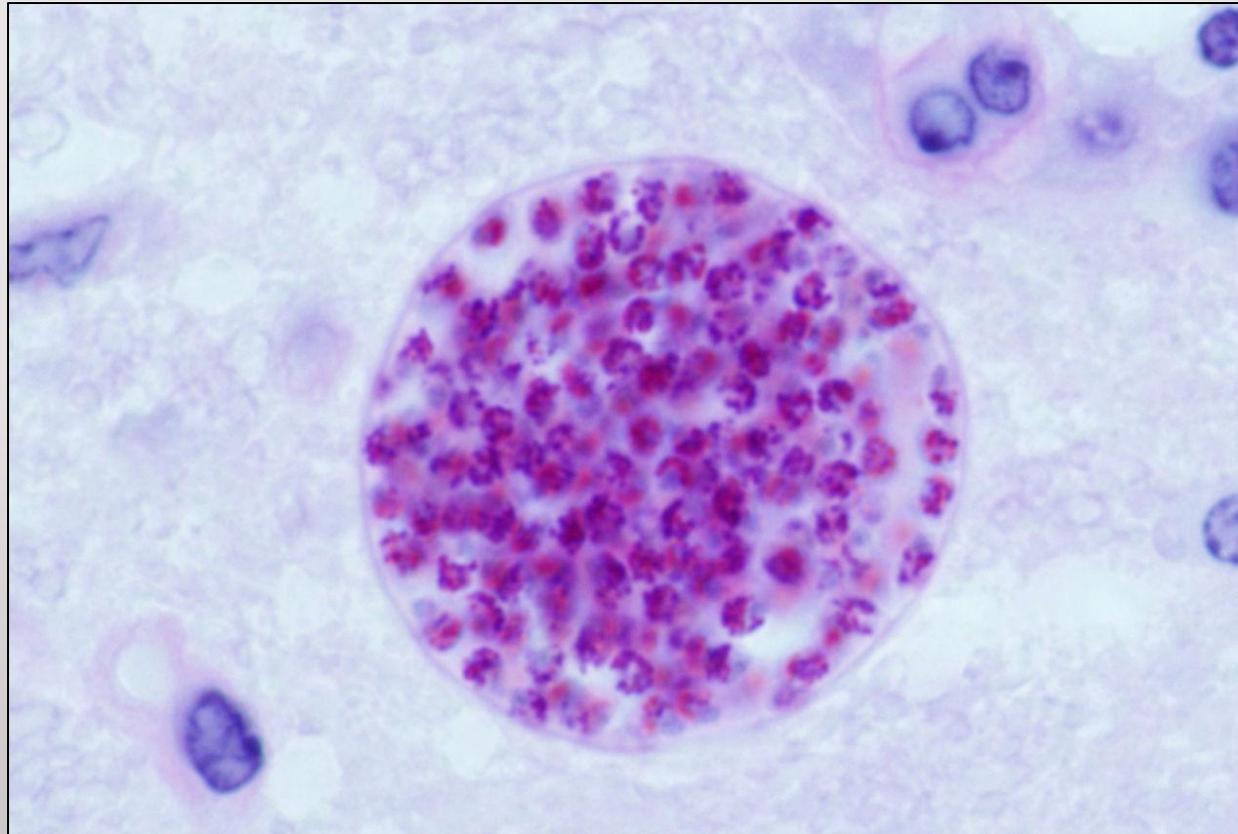
Toxoplasma pseudocyst

3) True tissue cyst:

- It is found in the **chronic stage** of infection.
- *Shape:* The cyst is round or oval
- *Size:* 5-50 μ
- *Content:* contains slowly multiplying bradyzoites.
- It has **cyst wall**.
- *Site:* found in the brain (**most common site**), skeletal and cardiac muscles and various organs.
- It remains viable for years, and immunosuppression causes reactivation of cysts.



Toxoplasma true tissue cyst



3) Oocyst: This stage is only present in **cats** and other felines.

- **Shape:** It is oval, surrounded by a thick resistant wall.
- **Size:** 10x12 μ
- Non-infectious when excreted in unsporulated or immature stage in cat feces.
- It sporulates, by sporogony, within 1-5 days and becomes infectious.
- The **mature** or sporulated oocyst contains 2 sporocysts, each containing 4 sporozoites (**disporocystic tetrazoic oocyst**).
- It may remain viable in moist shaded soil for a year or more.

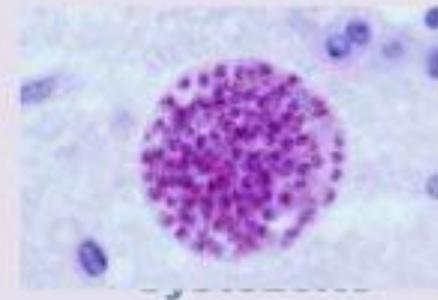




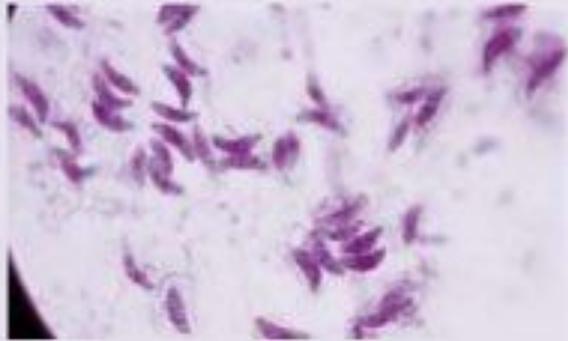
oocyst



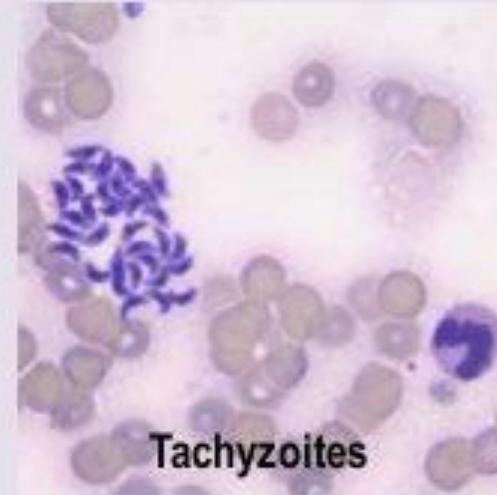
**Sporulated
oocyst**



**Bradyzoites
within
tissue cyst**



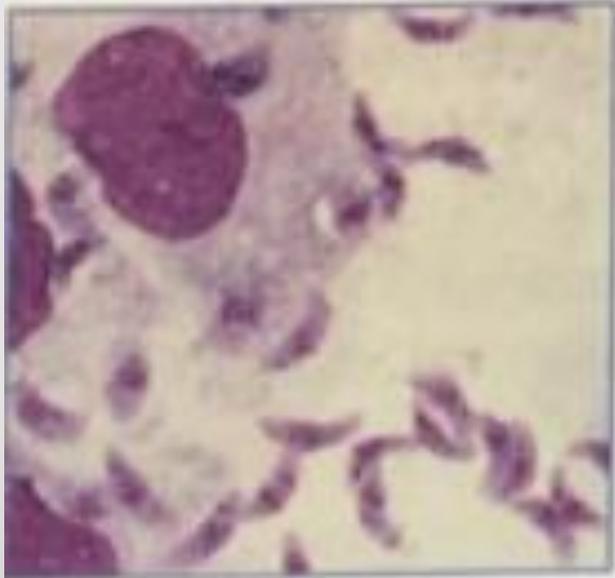
Tachyzoites



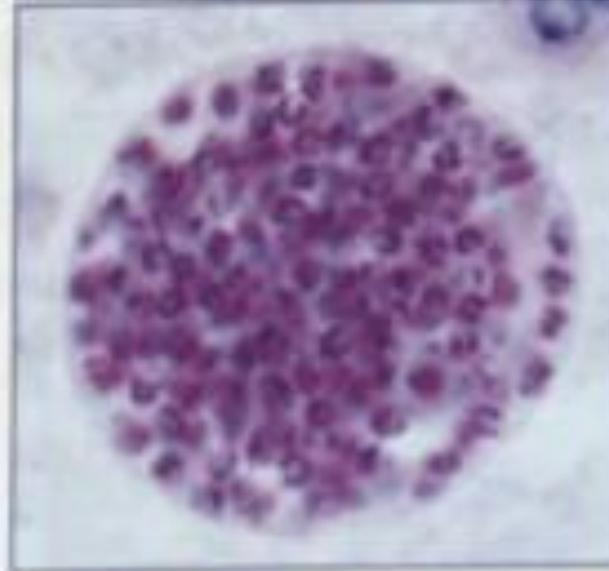
Tachyzoites



Morphology



Trophozoite



Tissue cyst



Oocyst

1. Identify this parasitic stage?

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2. The complication of this parasitic infection is

Answer:

- 1. *Trichomonas vaginalis* trophozoites
- 2. Cervical carcinoma

