

**AL-MA'MOON UNIVERSITY COLLEGE  
DEPARTMENT OF MEDICAL LABORATORY  
TECHNOLOGY**

**PRACTICAL PARASITOLOGY  
(((LECTURE 2 )))  
FOR SECOND YEAR**

**م.م رواء الحسنوي  
2024-2025**

**Phylum :- protozoa**  
**Sub phylum :- Sarcomastigophore**  
**Class :- Rhizopoda**  
**Order :- Lobosa**  
**Genus :- Entamoeba**  
**Species :- histolytica**

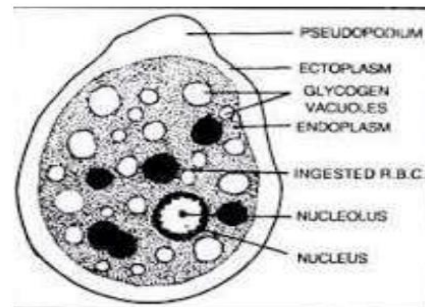
***Entamoeba histolytica.***

**Amebiasis.**

**Transmission:** ingestion of cysts in contaminated water, food.

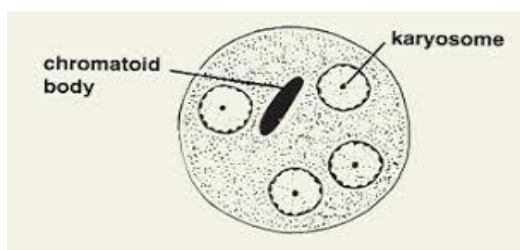
**Clinical disease:** diarrhea, dysentery.

**Laboratory diagnosis:** stool.



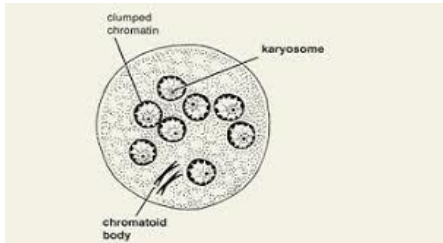
*Entamoeba histolytica*

***Entamoeba-histolytica-Trophozoite***

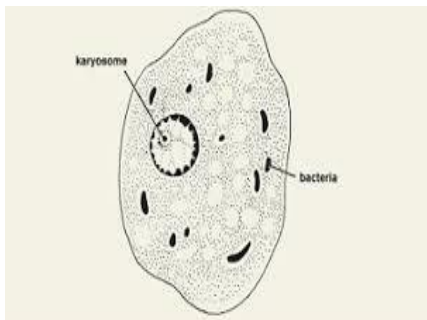


***Entamoeba-histolytica-Cyst (4 nuclei)***

# *Entamoeba coli* (non pathogen)



***Entamoeba coli* Cyst (8 nuclei )**



***Entamoeba coli* Trophozoite**

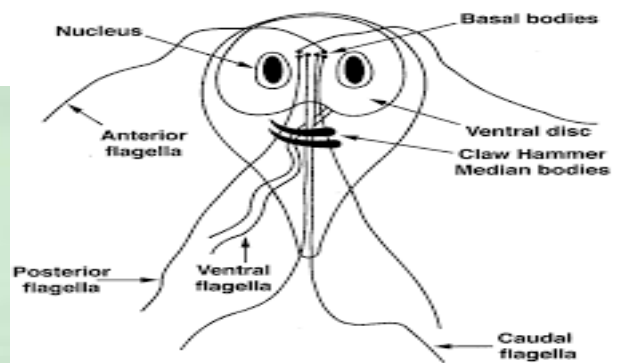
# *Giardia lamblia*

## Giardiasis

**Transmission:** ingestion of cysts in contaminated water, food.

**Clinical disease:** severe diarrhea and malabsorption.

**Laboratory diagnosis:** stool.



## *Giardia lamblia* trophozoite



## *Giardia lamblia* Cyst

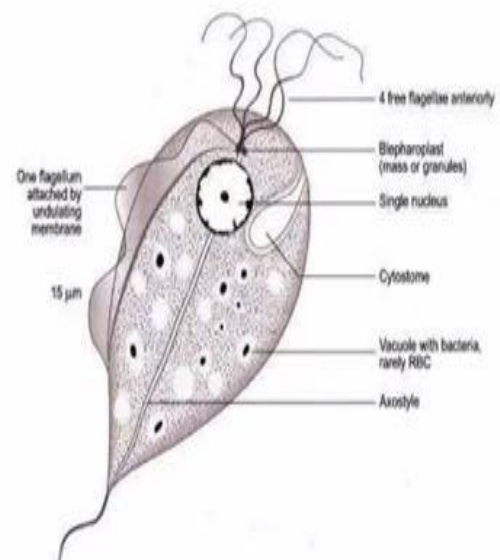
## *Trichomonas Vaginalis*

### Trichomoniasis

Transmission: sexual intercourse.

Clinical disease: Most people who have trich don't have symptoms.

Laboratory diagnosis: urine sediment, vaginal discharge.



***Trichomonas vaginalis*** trophozoite (pear-shaped)

Phylum: *Apicomplexa*

Family: *Sarcocystidae*

Genus: *Toxoplasma*

Species: ***gondii***

## ***Toxoplasma gondii***

### **Toxoplasmosis**

**Transmission:** Eating undercooked meat of animals harboring tissue cysts, Consuming food or water contaminated with cat feces, Blood transfusion or organ transplantation, Transplacentally from mother to fetus.

**Clinical disease:** Most people with healthy immune systems who get toxoplasmosis do not have symptoms. Those with symptoms, swollen lymph nodes, muscle aches, pain and damage to the brain, eyes, or other organs pains.

**Laboratory diagnosis:** 1-Giemsa stain for blood or biopsy.

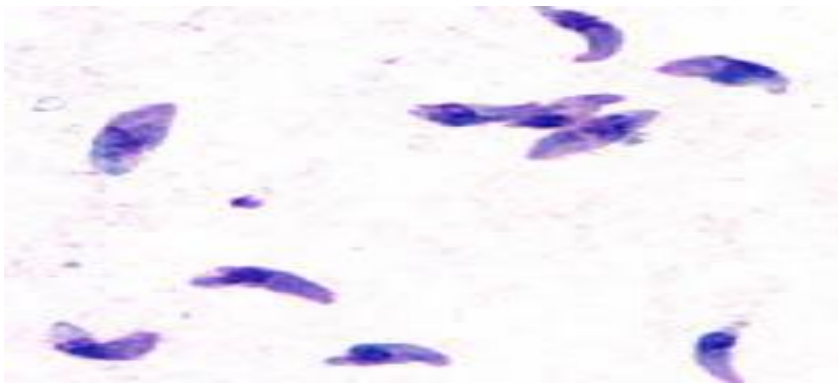
2- Detection of toxoplasma antigen by ELIZA.

3- Serological tests.

4- Molecular diagnosis.

***Toxoplasma gondii*** exists in 4 stages:

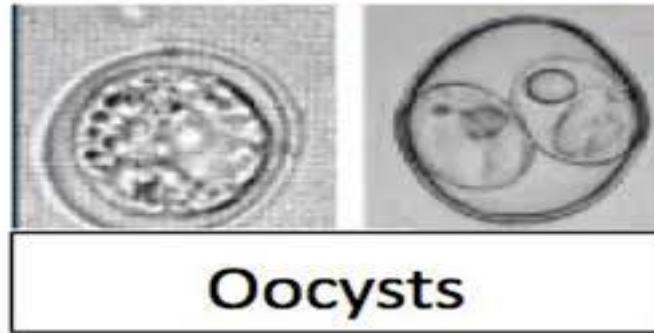
1- Trophozoites form (tachyzoites) (acute infection).



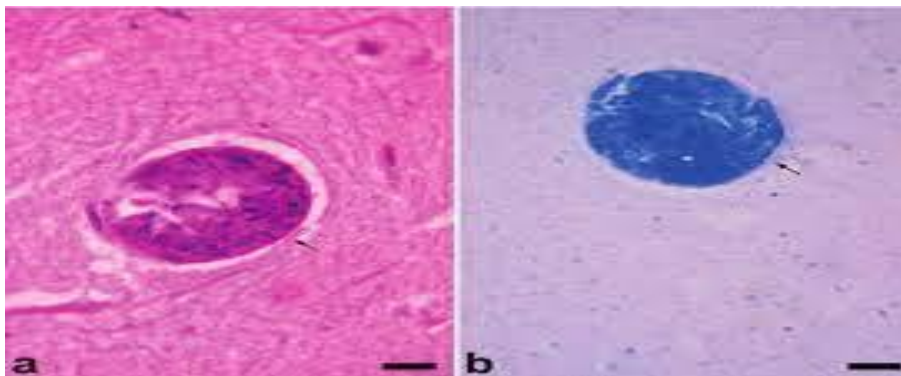
2- The encysted form (bradyzoite)( chronic or latent infection).



3-Oocyst thus contains (2 sporocysts) each with (4 sporozoites ) arranged into two groups.



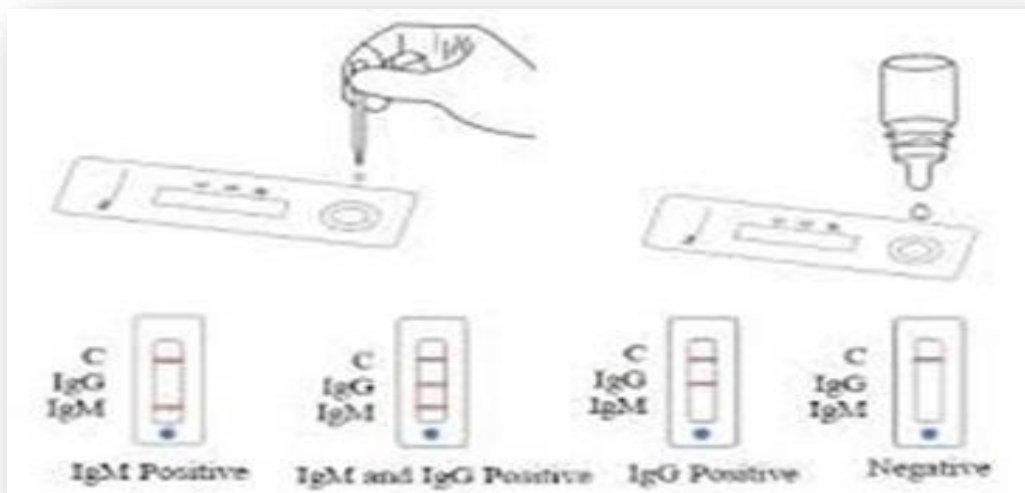
4- Tissue cyst seen in chronic infections.



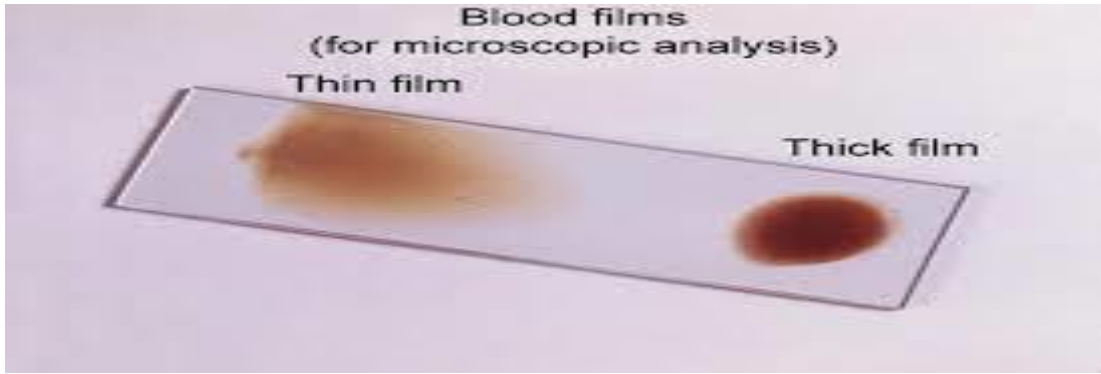
**a- H & E Stain**

**b- Giemsa stain**



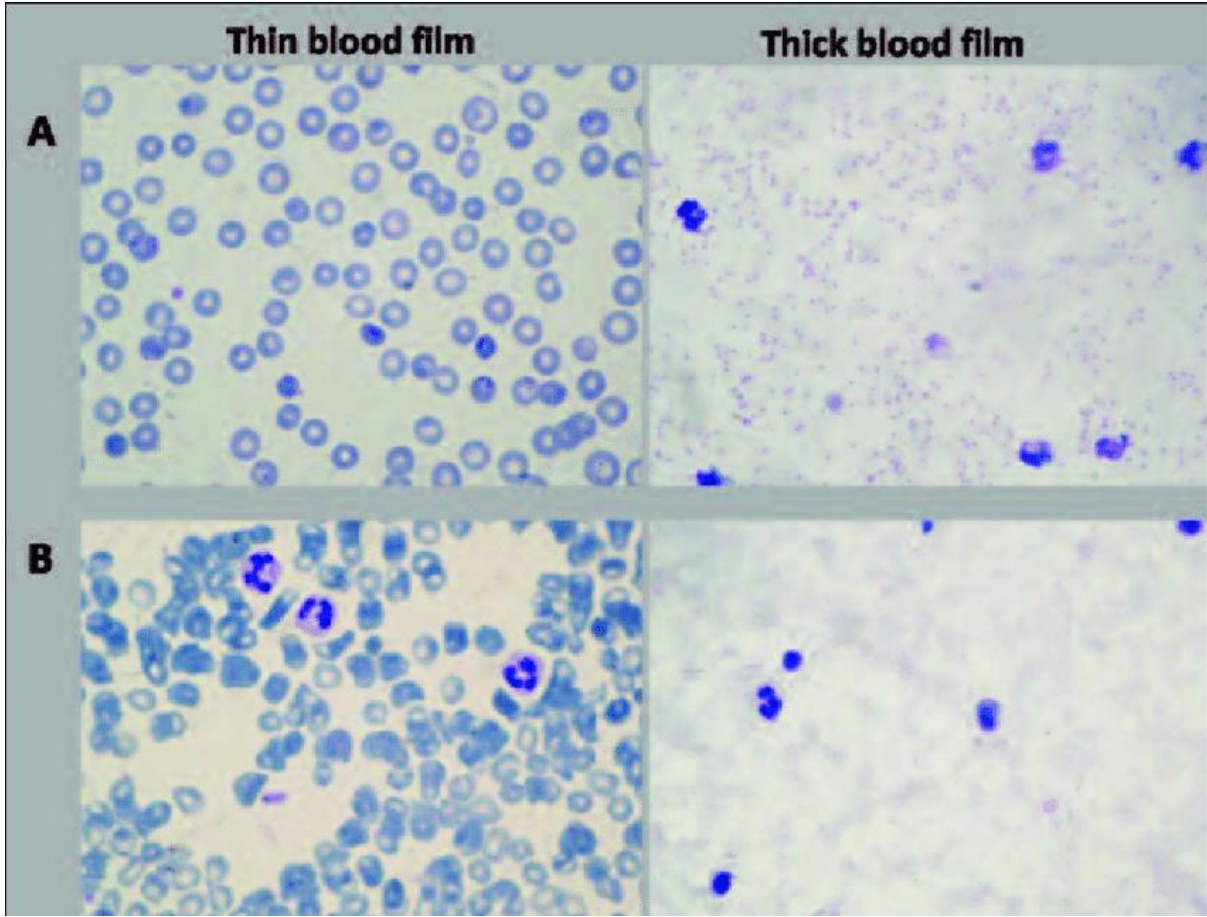


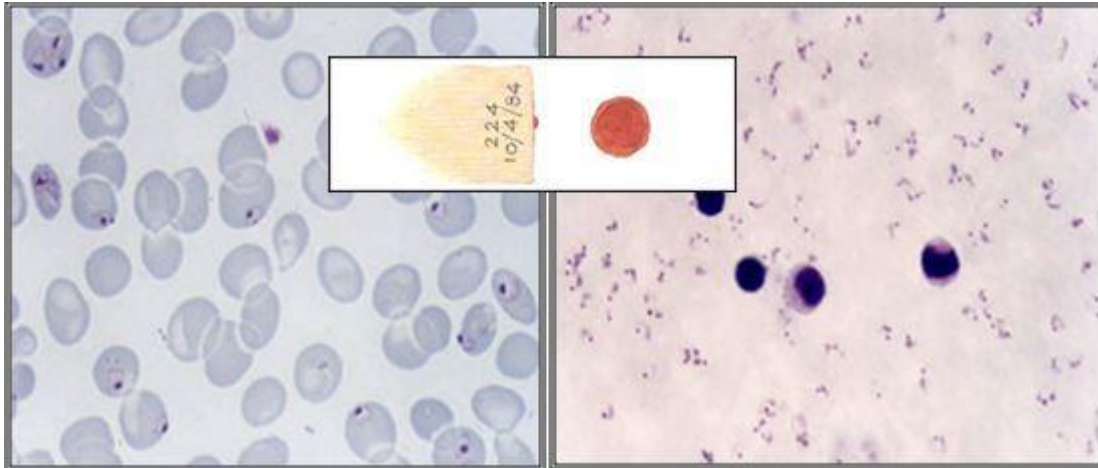
## *Toxoplasma gondii* serological tests



Thin film

Thick film





## Thick and Thin Blood Smear for Malaria Diagnosis