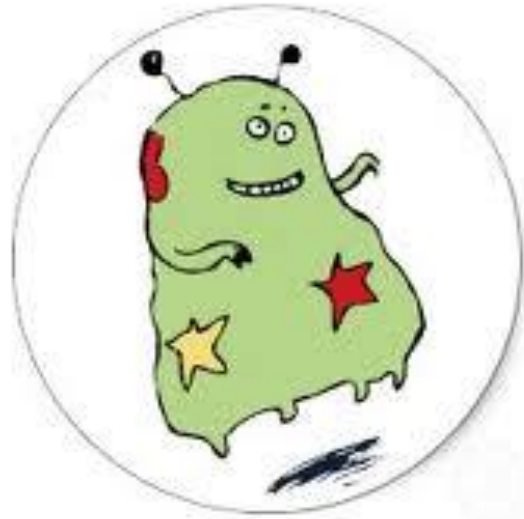


常見原蟲卵之鑑定



新住民健康篩檢現場取樣作業

- 混合後的MF試劑與Lugol reagent只能放**24小時**，所以交給各地立即保存新鮮的stool時，MF試劑與Lugol reagent就不先混合
- 現場可採樣時，當場收到檢體或收集後在1小時內送達。
- **水便時**，直接將檢體倒入瓶內，量為**花生米大小或約1mL**。
- 寄生蟲檢體前處理：
 - 拉高S-Y糞便採集容器採便棒約0.5 cm。
 - 將內含MF分注瓶之出口尖頭從橡膠環體與塑膠接觸處插入，加入已配好之MF試劑**6~10 ml**。
 - **檢體與MF之比為1:10**，一顆花生米大小的糞便為0.2g，分注瓶壓兩次打入6mL，兩顆花生米大小以上的糞便，分注瓶壓三次共打入9mL



MIF染色、固定及濃縮法

1



檢體與MF之比為1:10

MIF 染色、固定及濃縮法

2



3



MIF 染色、固定及濃縮法

4



乙醚

糞層

MIF

沉澱物

原蟲卵鑑定

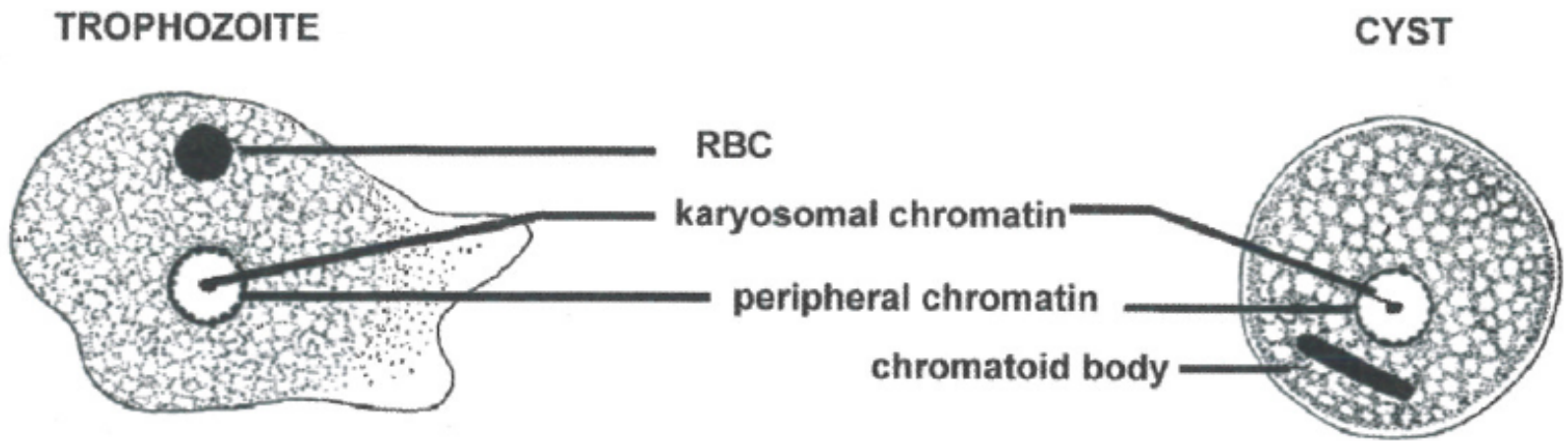


- 原蟲
- *Entamoeba histolytica* 痢疾阿米巴
- *Entamoeba hartmanni* 哈門氏阿米巴
- *Entamoeba coli* 大腸阿米巴
- *Iodamoeba butschlii* 嗜碘阿米巴
- *Endolimax nana* 微小阿米巴
- *Blastocystis hominis* 人芽囊原蟲
- *Giardia lamblia* 梨形鞭毛蟲
- *Chilomastix mesnili* 唇形鞭毛蟲



原蟲-Trophozoite/Cyst

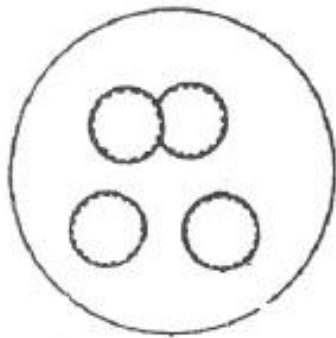
Stage (Trophozoite/Cyst)



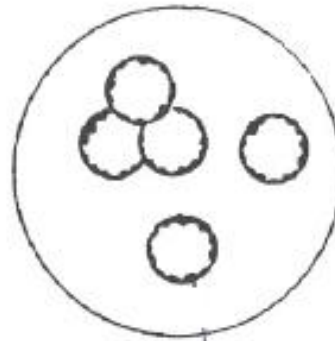
(From CDC, US)

原蟲-PC 核膜染色質

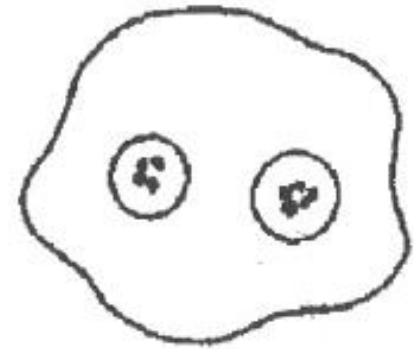
Peripheral Chromatin (PC) (核膜染色質)



Fine and evenly
dispersed
小粒、均勻分布



coarse and
irregular
粗粒、不規則分布

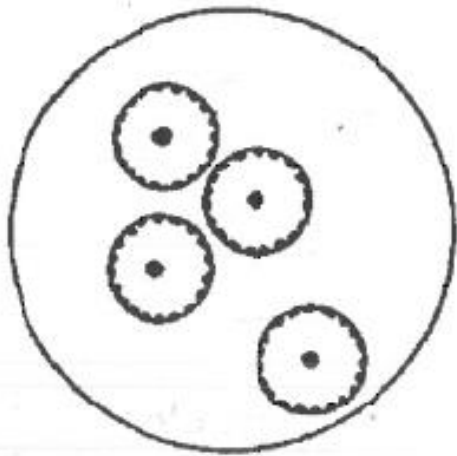


Missing
無

原蟲-KC 核仁染色質

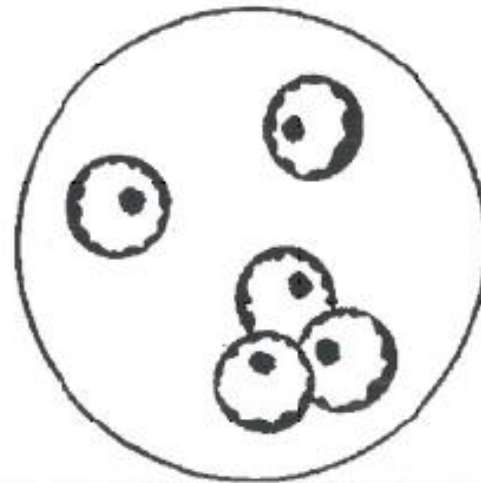
Karyosomal Chromatin (KC)

(核仁染色質)



Small and centric

小、位於中心



Large and eccentric

大、偏離中心

原蟲-類染色體

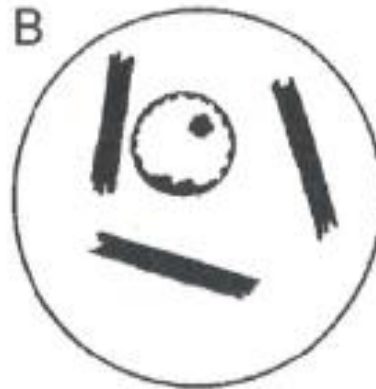
Some cysts may have Chromatoid bodies

(類染色體)



Rod-shaped w/ round ends

棒狀、圓形端



Splintered ends

分岔端

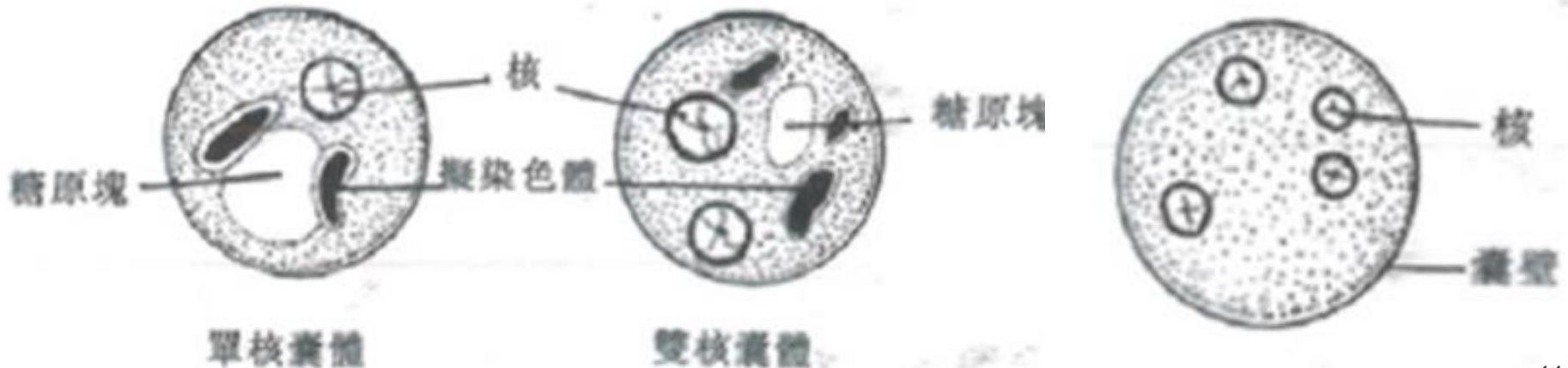


Angular ends

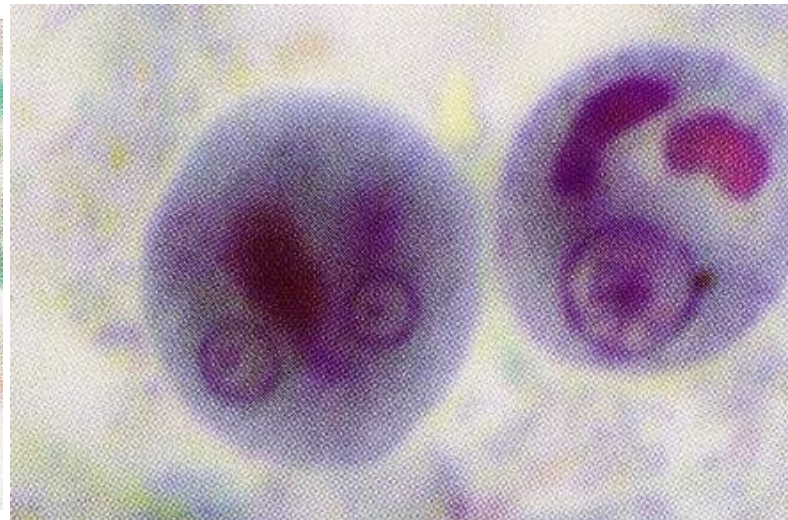
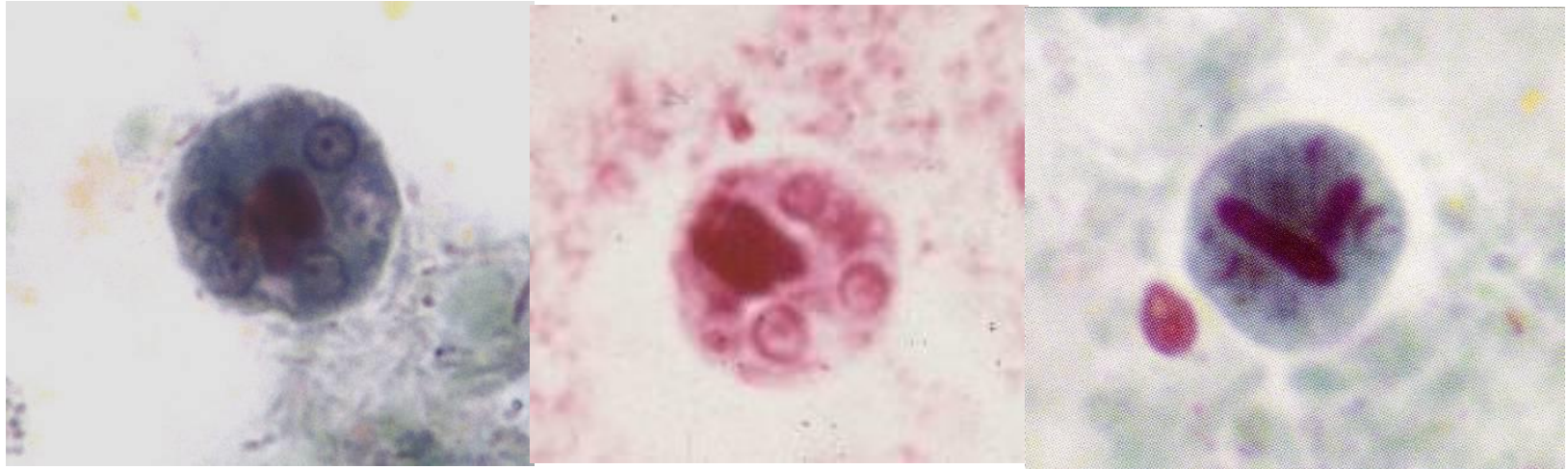
角狀端

痢疾阿米巴/迪斯帕阿米巴- *Entamoeba histolytica/dispar* Cyst

- 10-20 μm (常見12-15 μm)
- 外形呈圓球狀
- 1-4核
- 核膜(PC)顆粒細緻，通常大小一致且分布均勻
- 核仁(KC)小，通常居中，偶而偏心
- 類染色體呈長棒形，邊緣圓鈍
- 醣原塊成散佈狀，年輕囊體呈塊狀

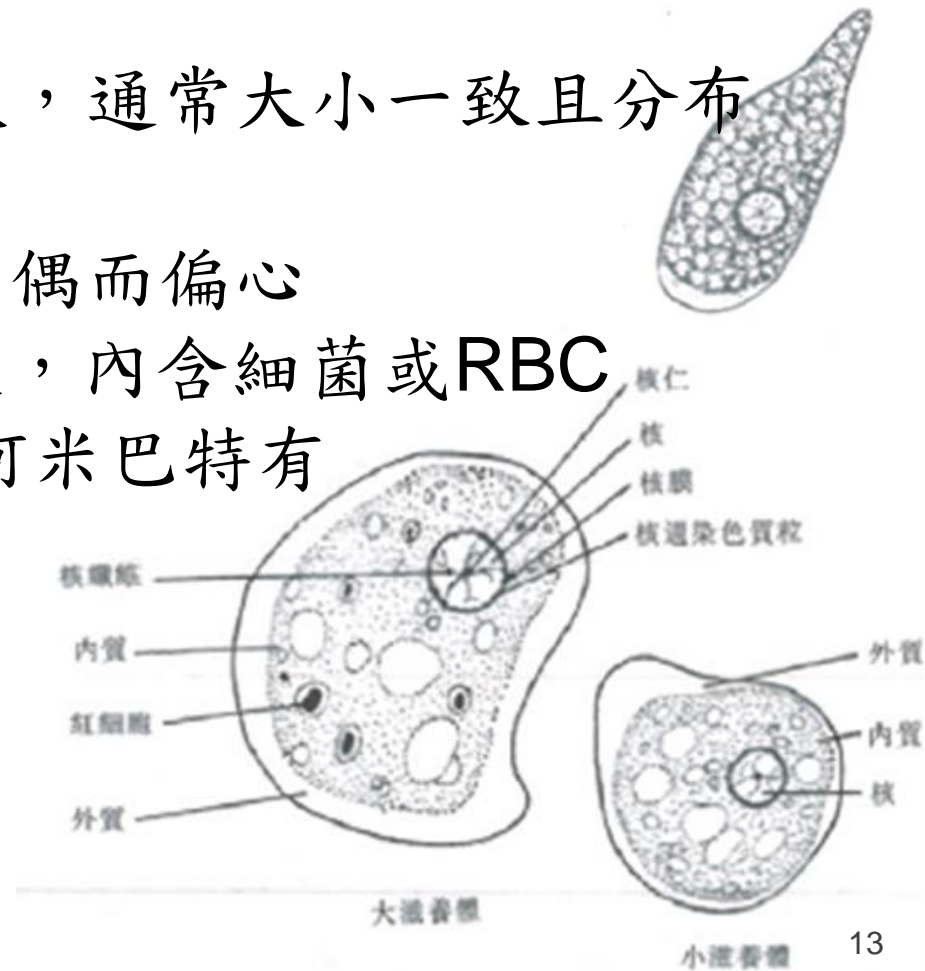


痢疾阿米巴/迪斯帕阿米巴- *Entamoeba histolytica/dispar* Cyst

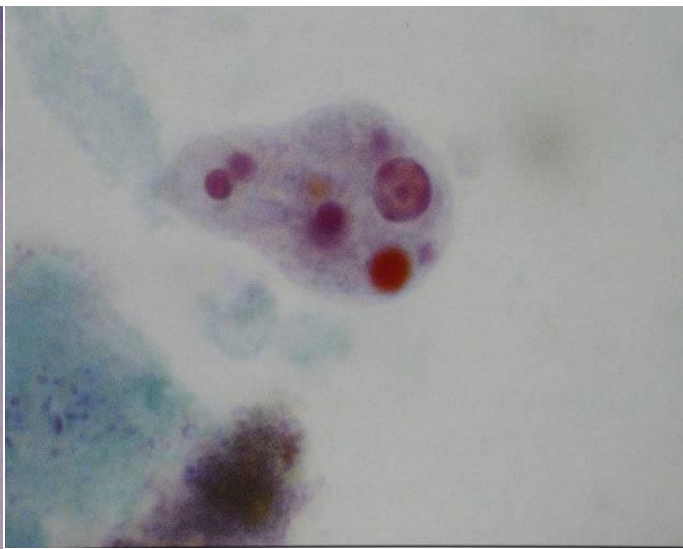
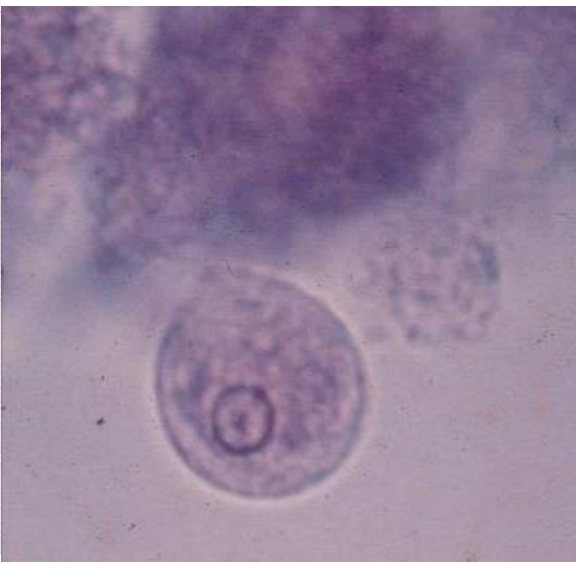
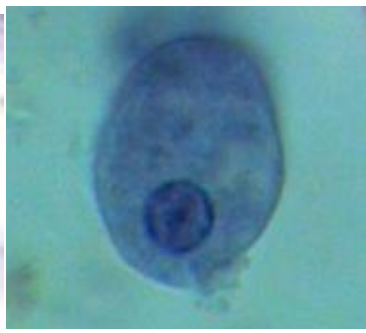
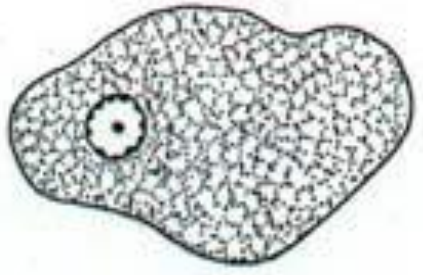


痢疾阿米巴/迪斯帕阿米巴- *Entamoeba histolytica/dispar* Trophozoite

- 10-60 μm (常見15-20 μm)
- 單核
- 核周染色質(PC)顆粒細緻，通常大小一致且分布均勻
- 核仁(KC)小，通常居中，偶而偏心
- 細胞質外觀呈細緻顆粒狀，內含細菌或RBC
- Hematophagous為痢疾阿米巴特有



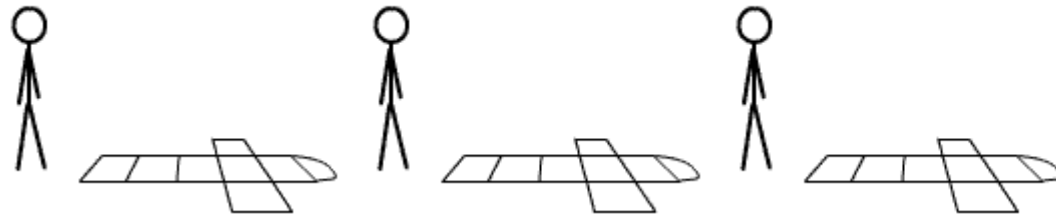
痢疾阿米巴/迪斯帕阿米巴- *Entamoeba histolytica/dispar* Trophozoite



痢疾/迪斯帕阿米巴VS哈氏阿米巴

E.histolytica/dispa VS. **E.harmanni**

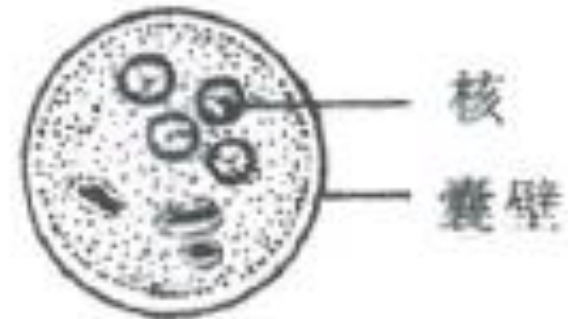
- 細胞學型態極為相似
- E.harmanni 不會吞噬紅血球
- 僅size可區分兩者
 - 10 μm 為 **cyst** 之界線
 - 12 μm 為 **trophozoite** 之界線



哈氏阿米巴-

Entamoeba hartmanni Cyst

- 5-10 μm (常見6-8 μm)
- 外形呈圓球狀
- 1-4核，未成熟1-2核亦常見
- PC顆粒細緻，通常大小一致且分布均勻
- 核仁(KC)小，通常居中，偶而偏心
- 類染色體成長棒形，邊緣圓鈍

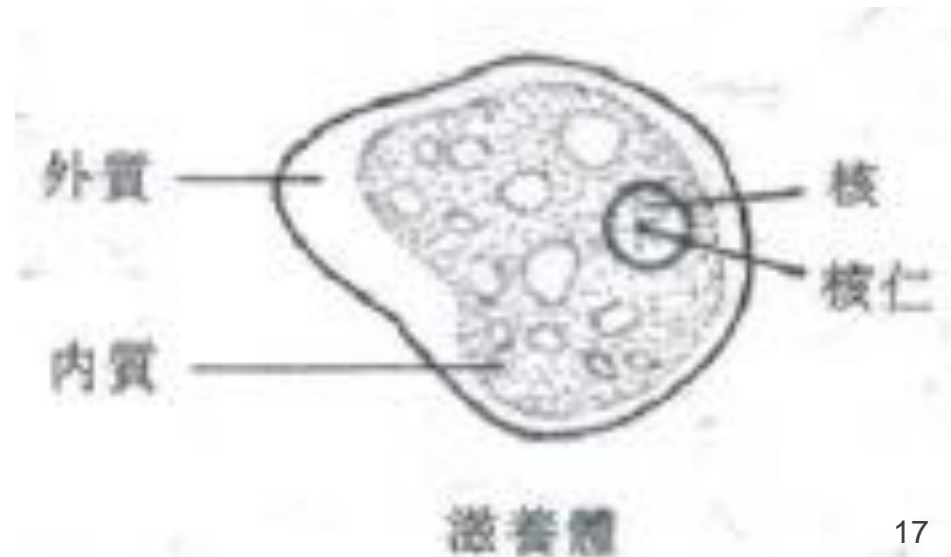


成熟囊體(4核)

哈氏阿米巴-

Entamoeba hartmanni Trophozoite

- 5-12 μm (常見8-10 μm)
- 單核
- PC顆粒細緻，通常大小一致且分布均勻
- 核仁(KC)小，通常居中，偶而偏心
- 細胞質呈細緻顆粒狀內含細菌



大腸阿米巴- *Entamoeba coli* Cyst

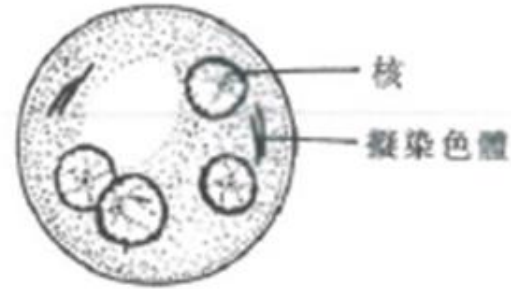
- 10-35 μm (常見15-25 μm)
- 通常呈圓形
- 1-16核，8核常見
- PC顆粒粗，大小不一且分布不均勻
- KC大，通常偏心，偶而居中
- 類染色體較不常出現，通常呈裂片狀，尖形末端
- 醣原塊通常呈散佈狀，未成熟囊體有清楚之質塊



成熟囊體(8核)

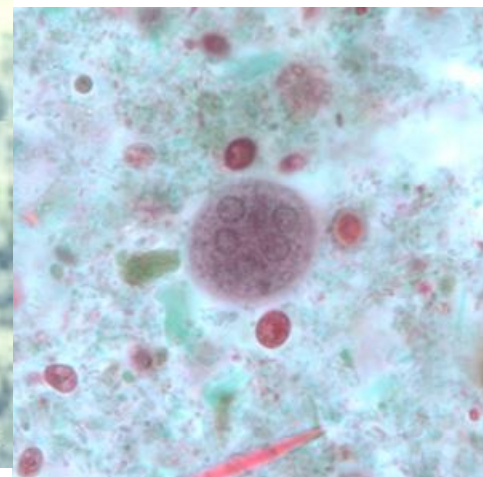
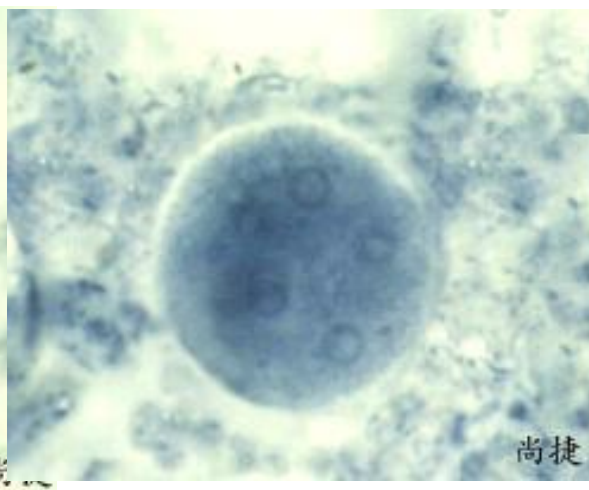
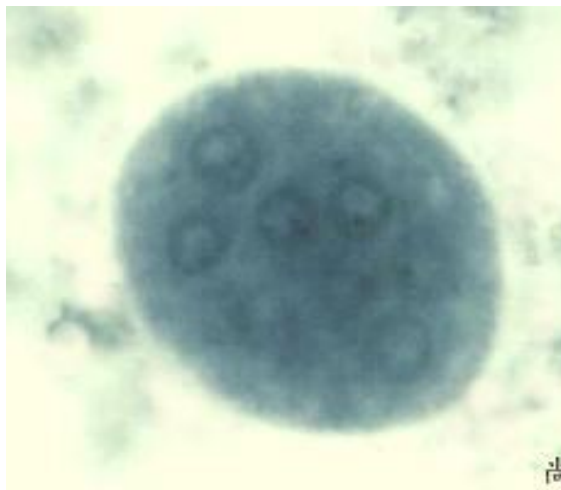


未成熟囊體(雙核)



未成熟囊體(4核)

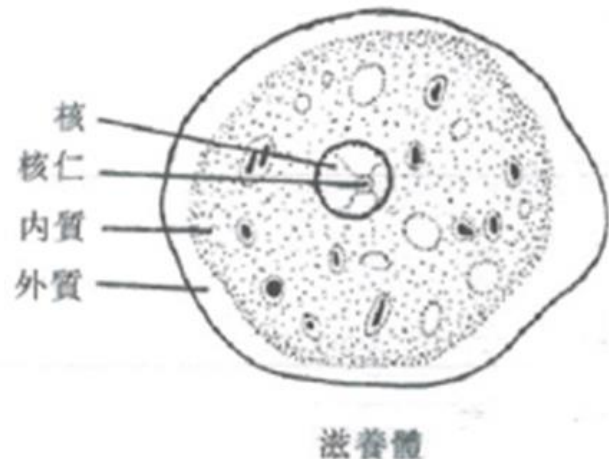
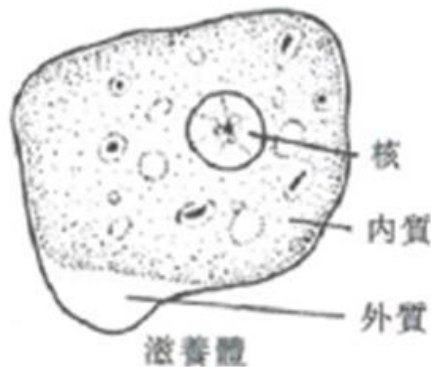
大腸阿米巴- *Entamoeba coli* Cyst



大腸阿米巴-

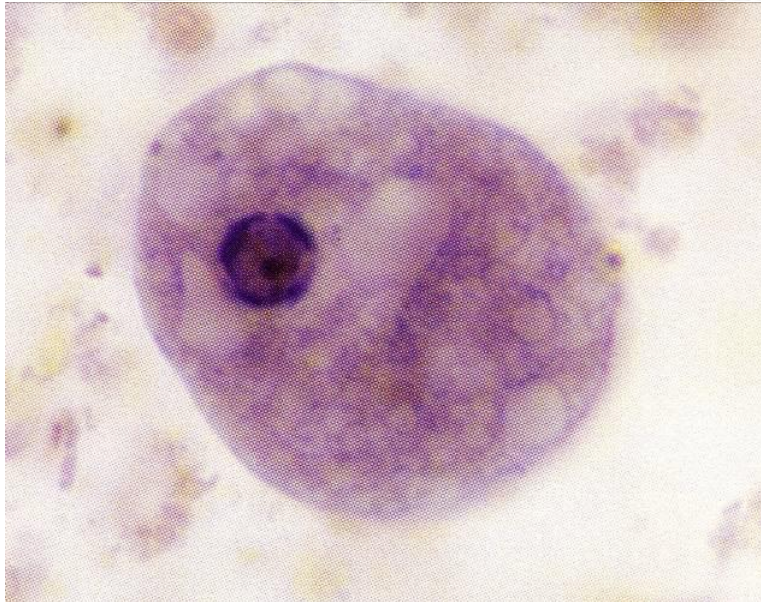
Entamoeba coli Trophozoite

- 15-50 μm (常見20-25 μm)
- 單核
- PC顆粒粗，大小不一且分布不均勻，或形成粗黑環
- KC大，通常偏心，偶爾居中
- 細胞質呈粗顆粒狀內含細菌，酵母菌，常具空泡



大腸阿米巴-

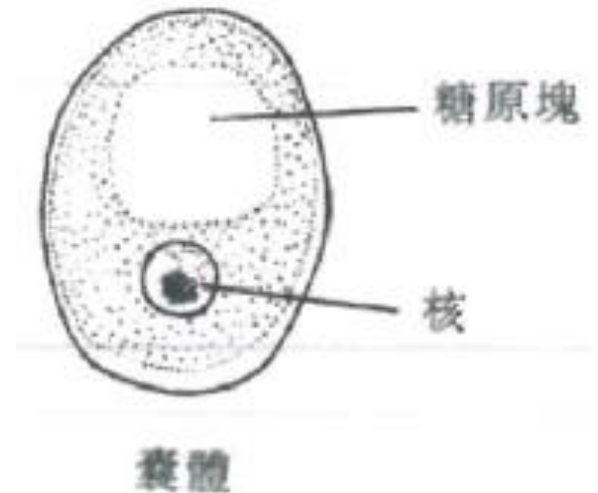
Entamoeba coli Trophozoite



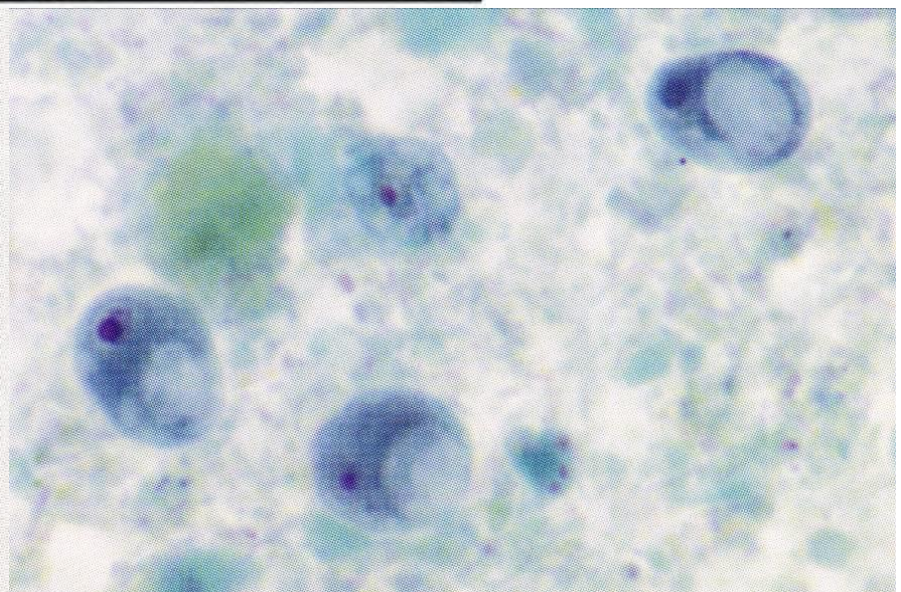
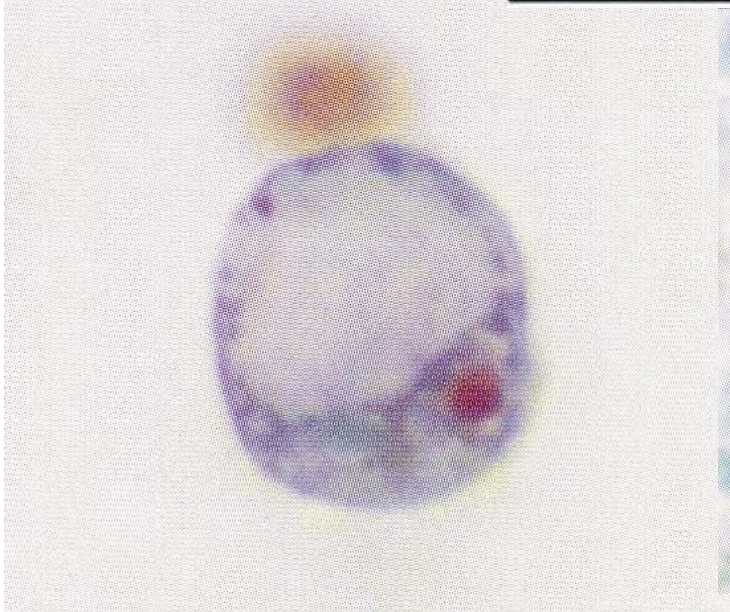
嗜碘阿米巴-

Iodamoeba butschlii Cyst

- 5-20 μm (常見12-15 μm)
- 單核
- 呈卵型，長橢圓形，三角形或其它形狀
- 沒有PC
- KC大，通常居中，有時周邊圍繞著會區光之非染色質顆粒
- 沒有明顯之類染色體構造
- 糖原塊通常呈清楚之密實質塊



嗜碘阿米巴- *Iodamoeba butschlii* Cyst



嗜碘阿米巴-

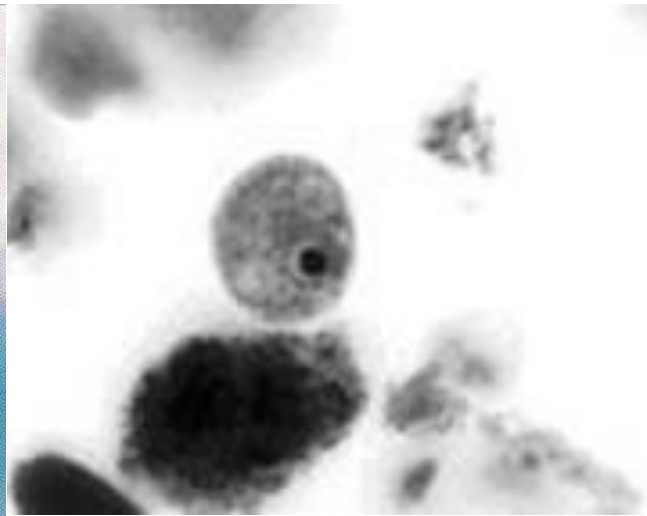
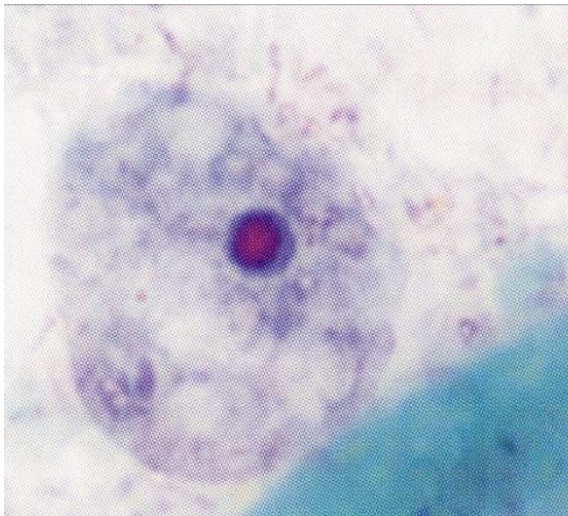
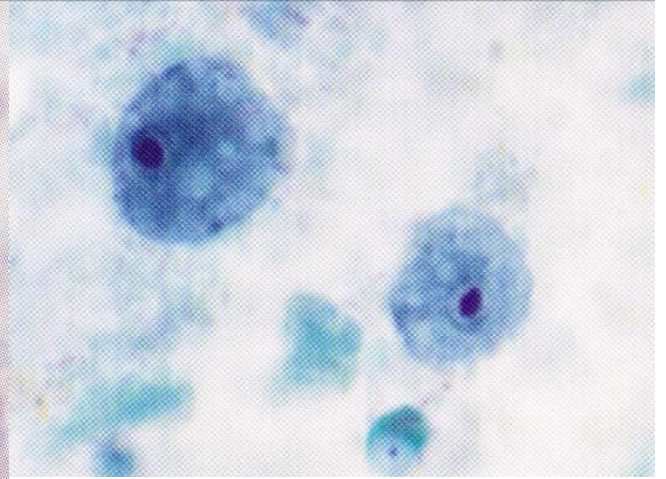
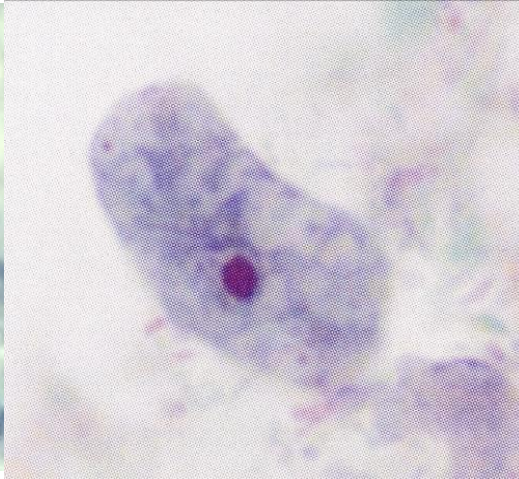
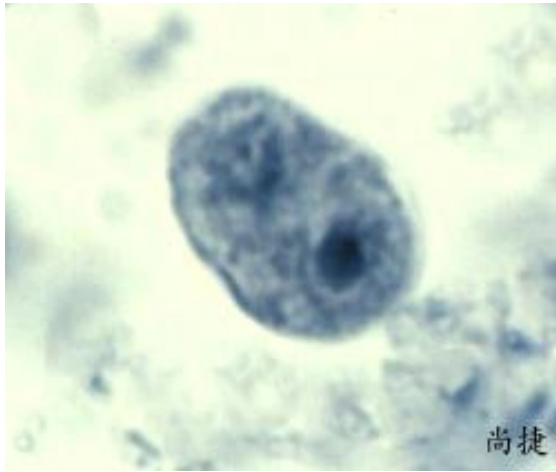
Iodamoeba butschlii Trophozoite

- 8-20 μm (常見12-15 μm)
- 單核
- 沒有PC
- KC 大，通常居中，有時周邊圍繞著會區光之非染色質顆粒
- 細胞質呈粗顆粒狀內含細菌，酵母菌，可見空泡



嗜碘阿米巴-

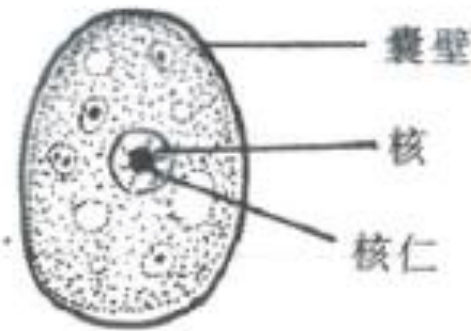
Iodamoeba butschlii Trophozoite



微小阿米巴-

Endolimax nana Cyst

- 5-10 μm (常見6-8 μm)
- 呈圓形，卵型，長橢圓形
- 1~4核，少於四個核之不成熟囊體少見
- 沒有PC
- KC 大，呈不規則之墨點狀，通常居中
- 沒有明顯之類染色體構造
- 醣原塊通常呈散佈狀

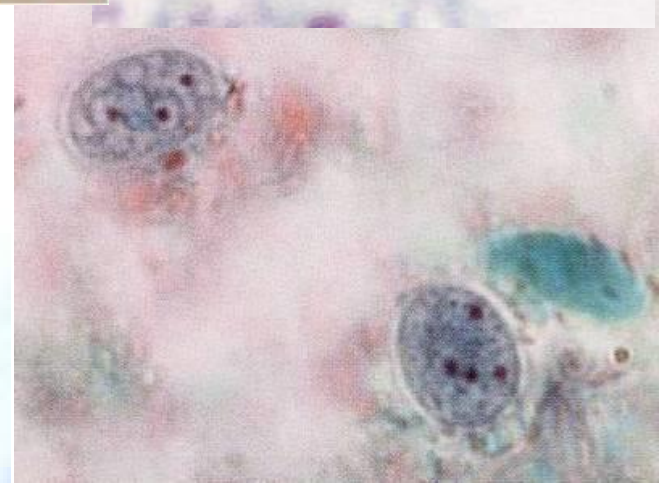
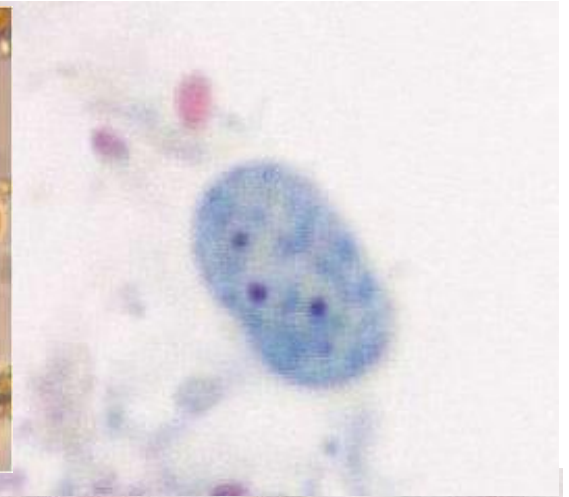
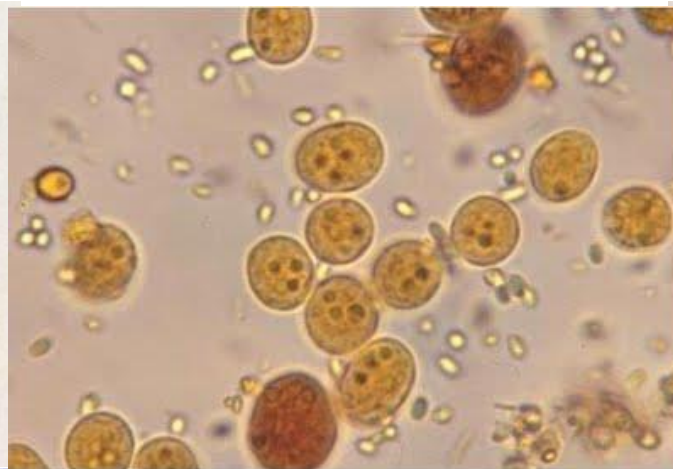


囊體(單核)



成熟包整(4核)

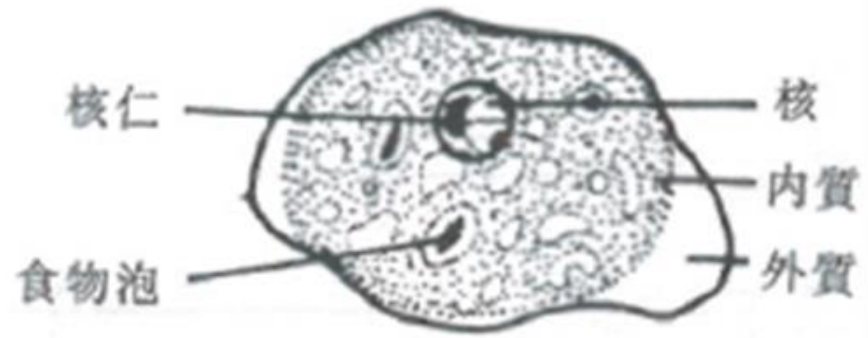
微小阿米巴- *Endolimax nana* Cyst



微小阿米巴-

Endolimax nana Trophozoite

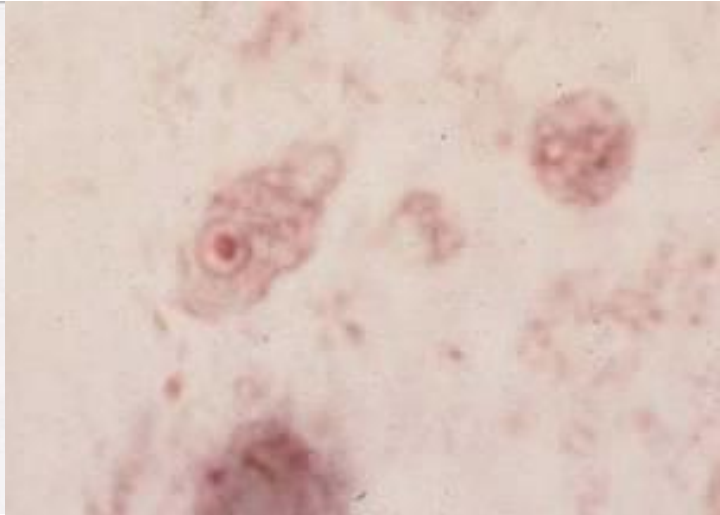
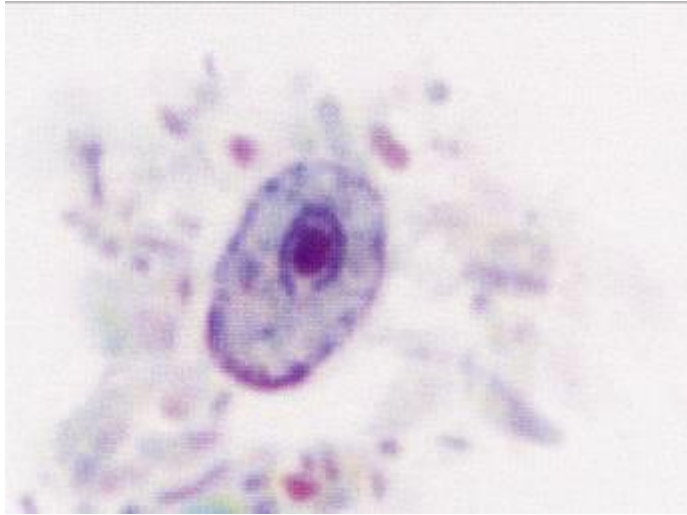
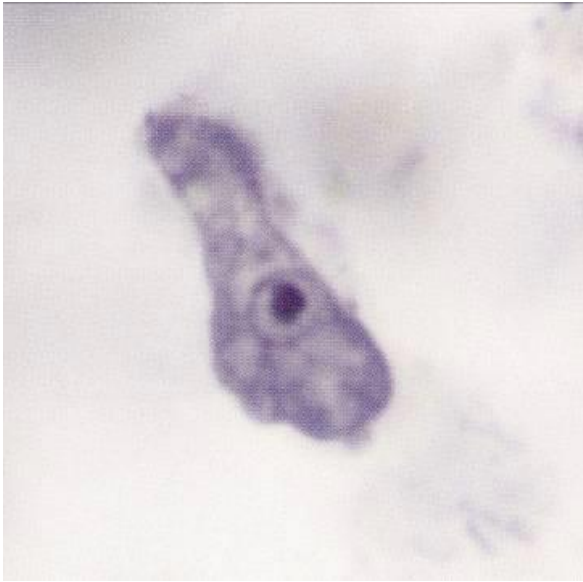
- 6-12 μm (常見8-10 μm)
- 單核
- 沒有PC
- KC 大，呈不規則之墨點狀
- 細胞質呈顆粒狀內含細菌可見空泡



滋養體

微小阿米巴-

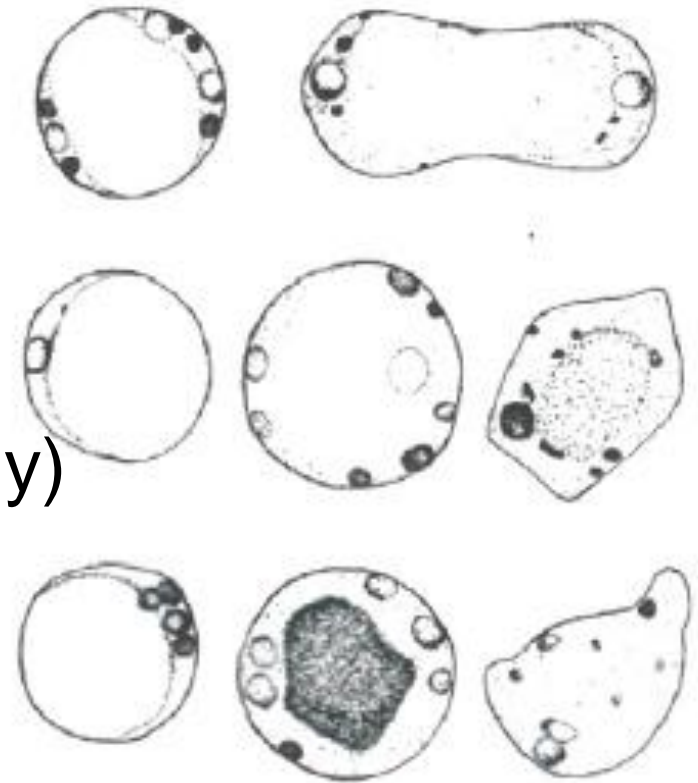
Endolimax nana Trophozoite



人芽囊原蟲

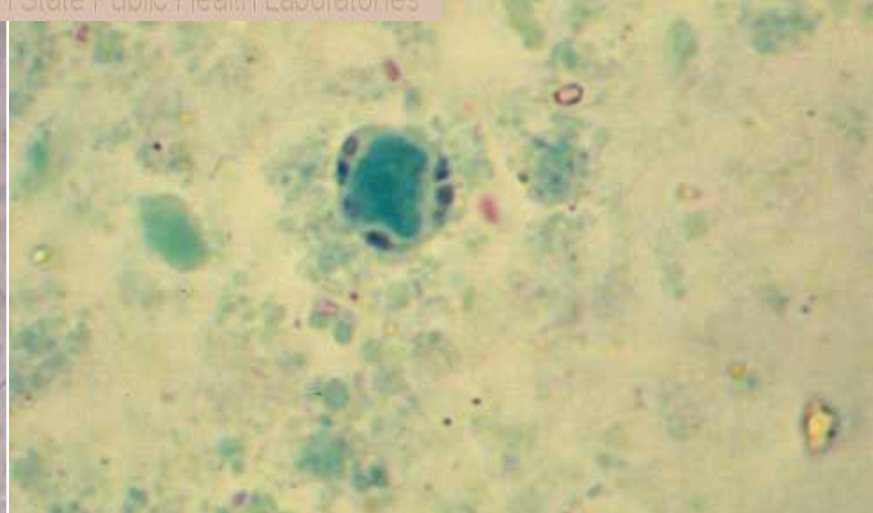
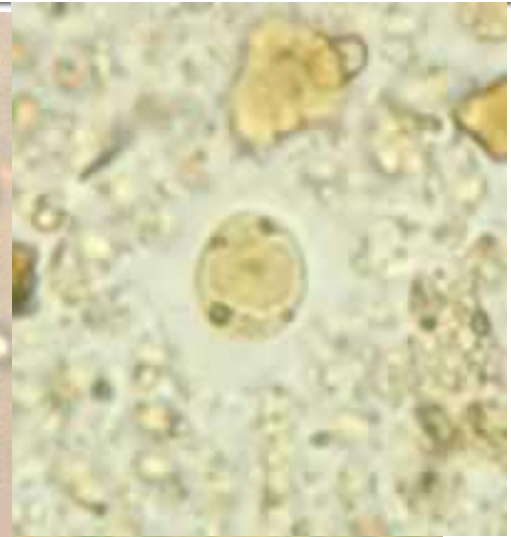
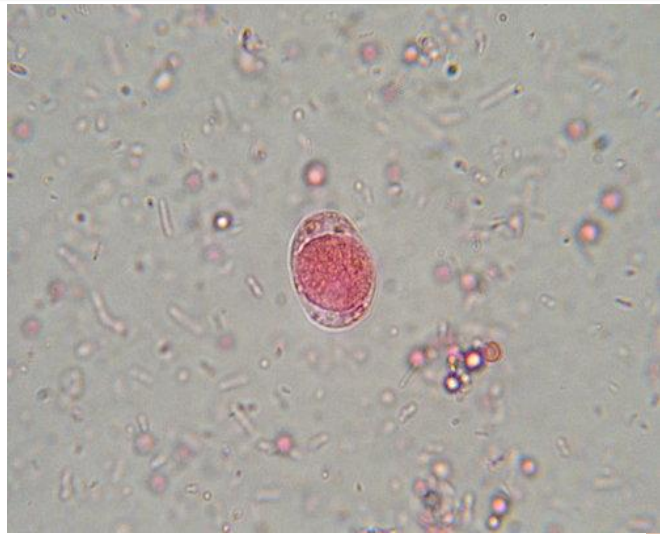
Blastocystis hominis

- 生活史仍不清楚
- 5-30 μm (常見8-10 μm)
- 呈圓形、卵型或長橢圓形
- 核位於細胞質邊緣，1~4核，常見單核，2-4核次之
- 細胞中央有一大空泡(central body)
將核及顆粒擠到邊緣形成環狀



人芽囊原蟲

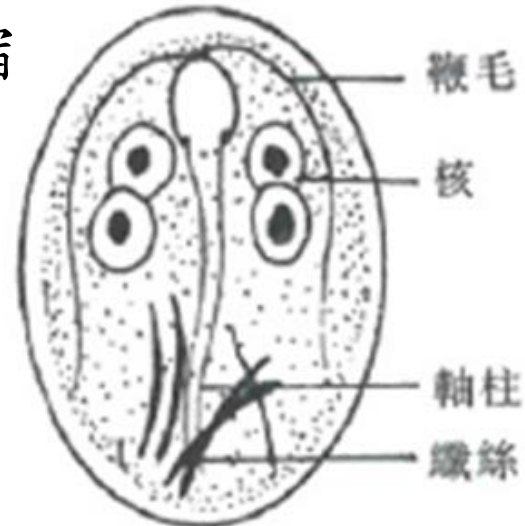
Blastocystis hominis



梨形鞭毛蟲-

Giardia lamblia Cyst

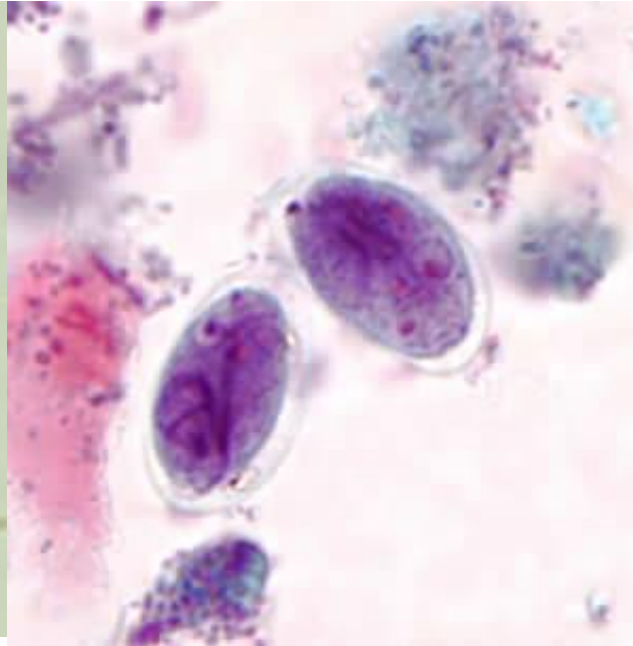
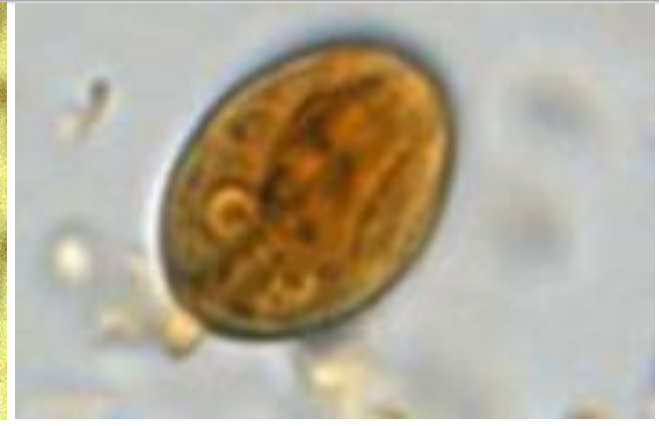
- 8-19 μm (常見11-12 μm)
- 呈卵型或長橢圓形
- 4個核，通常位於一側
- 鞭毛縱向位於囊體中
- 纖毛常側向或斜向交叉置於囊體較低部位
- 細胞質經常從細胞壁處往內縮



成熟囊體(4核)

梨形鞭毛蟲-

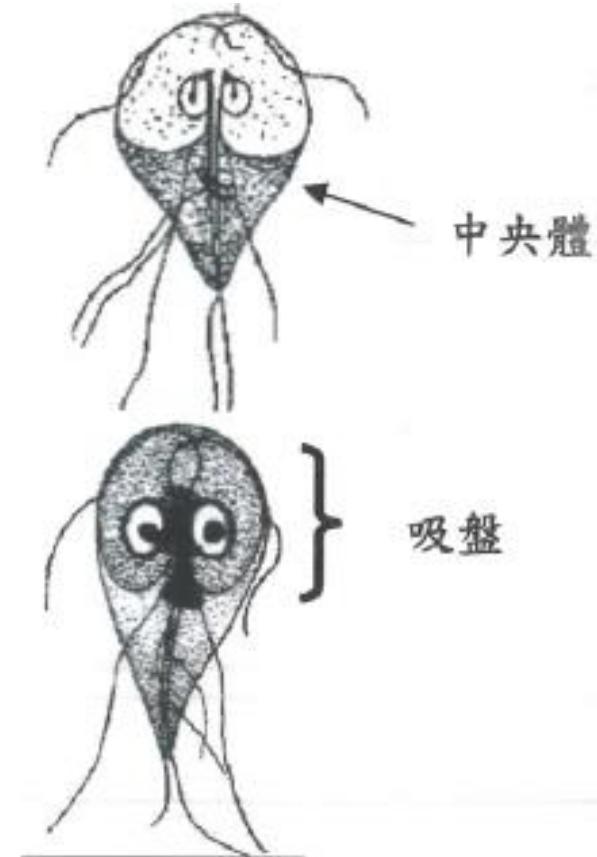
Giardia lamblia Cyst



梨形鞭毛蟲-

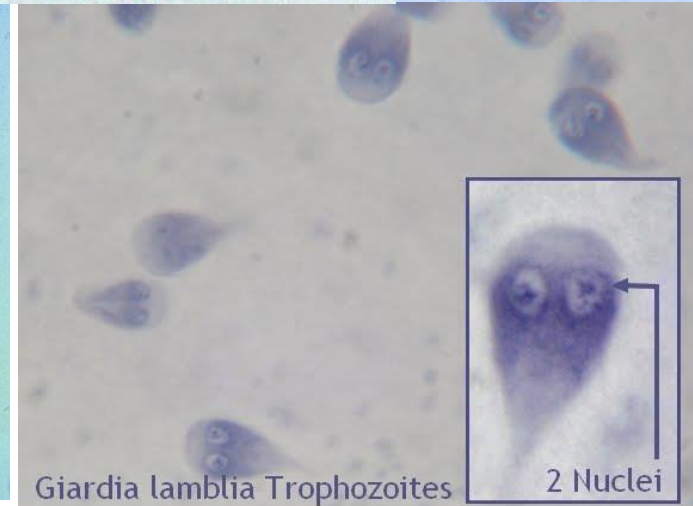
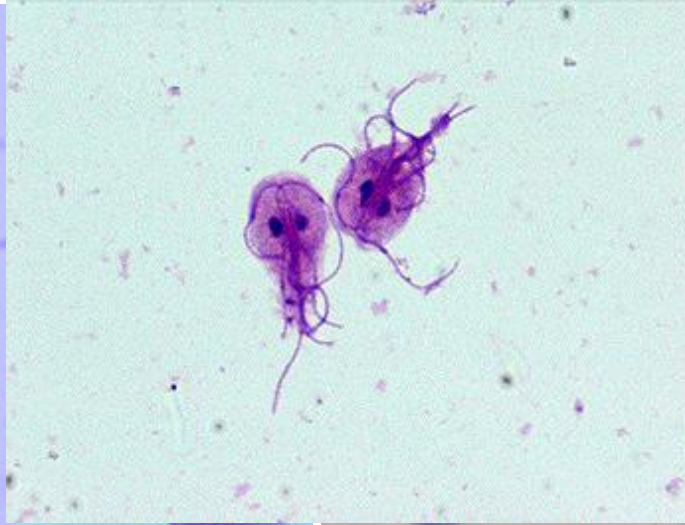
Giardia lamblia Trophozoite

- 10-12 μm (常見12-15 μm)
- 呈梨型
- 雙核
- 鞭毛-側鞭毛4根
 - 軸鞭毛2根
 - 尾鞭毛2根
- 吸盤占腹部表面積1/2~3/4
- 中央體水平或斜向地置於吸盤下方



梨形鞭毛蟲-

Giardia lamblia Trophozoite



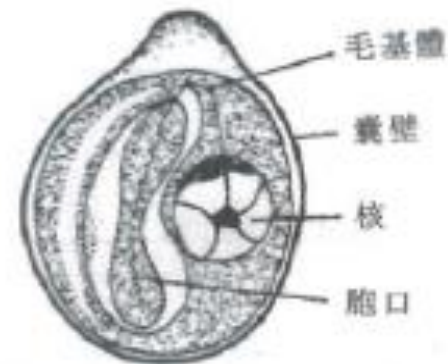
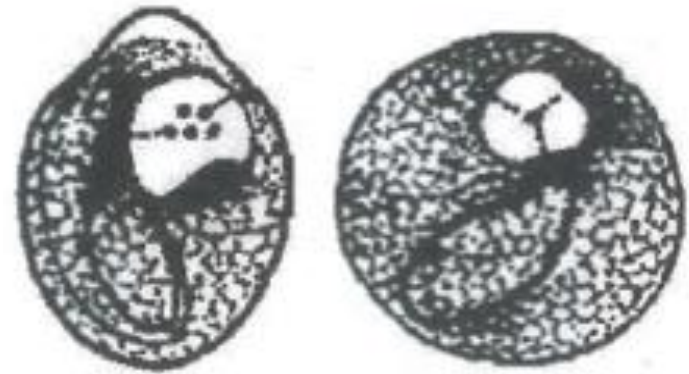
Giardia lamblia Trophozoites

2 Nuclei

唇形鞭毛蟲-

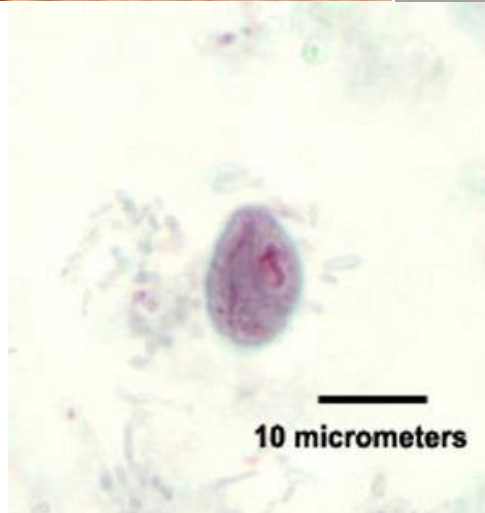
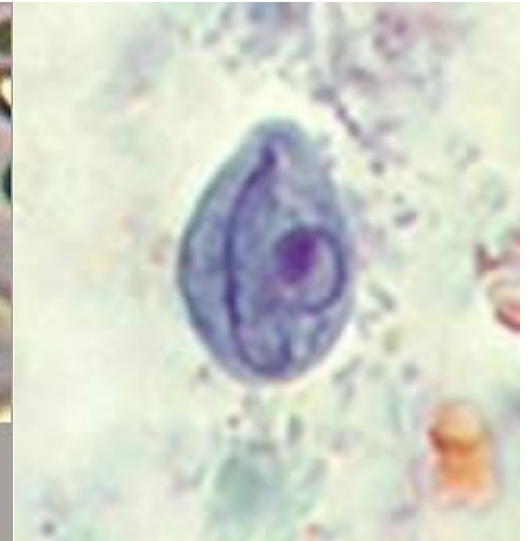
Chilomastix mesnili Cyst

- 6-10 μm (常見8-9 μm)
- 呈檸檬型，前端帶有透明球形突出物
- 單核
- 胞體帶有支持纖毛



唇形鞭毛蟲-

Chilomastix mesnili Cyst



唇形鞭毛蟲-

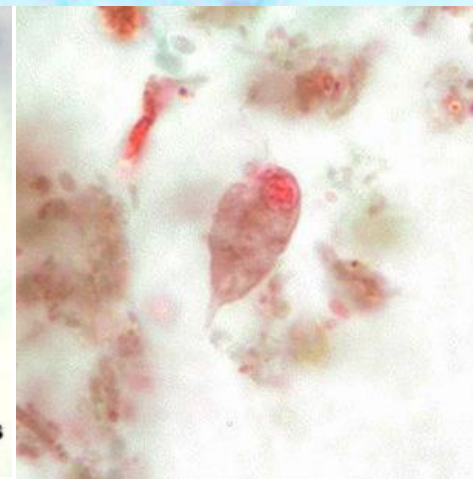
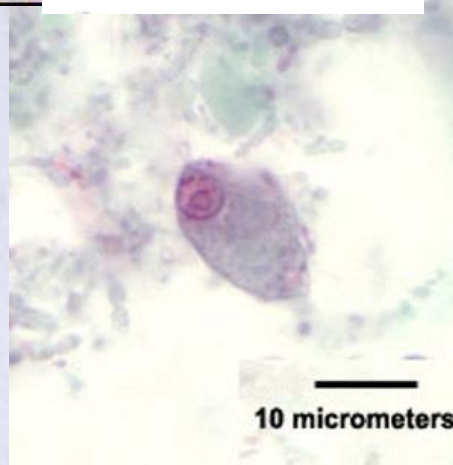
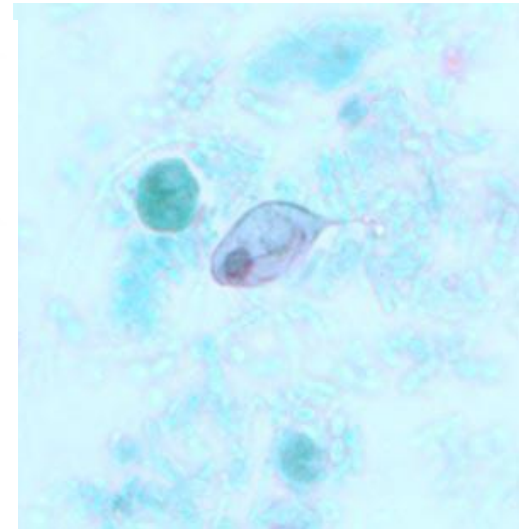
Chilomastix mesnili Trophozoite

- 6-24 μm (常見10-15 μm)
- 呈梨型
- 單核
- 鞭毛-側鞭毛3根
-胞體鞭毛1根
- 胞體突出物向下延伸1/2~1/3胞體長
- 螺旋型溝紋橫越腹部表面



唇形鞭毛蟲-

Chilomastix mesnili Trophozoite

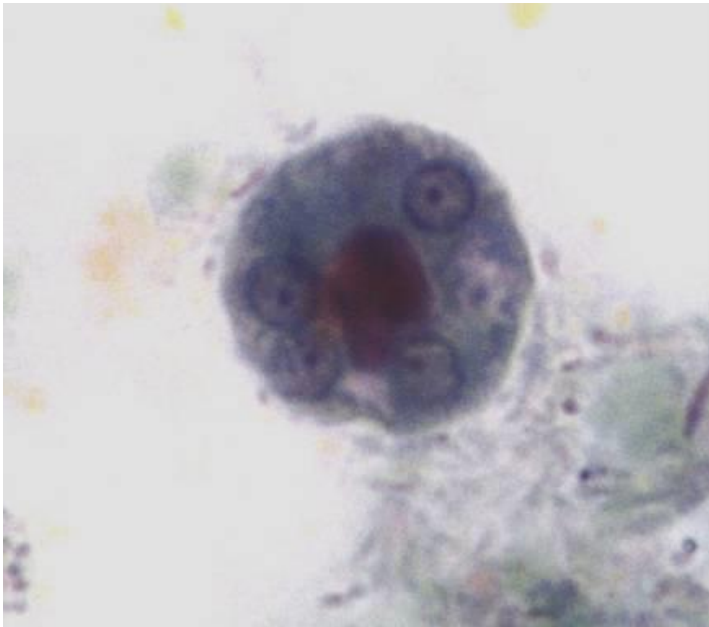


Thanks for your attention



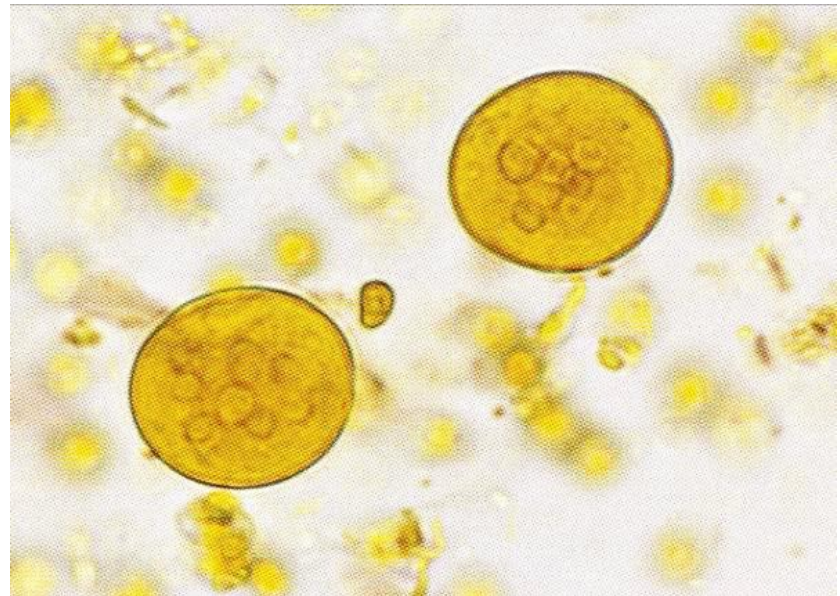
TEST

1



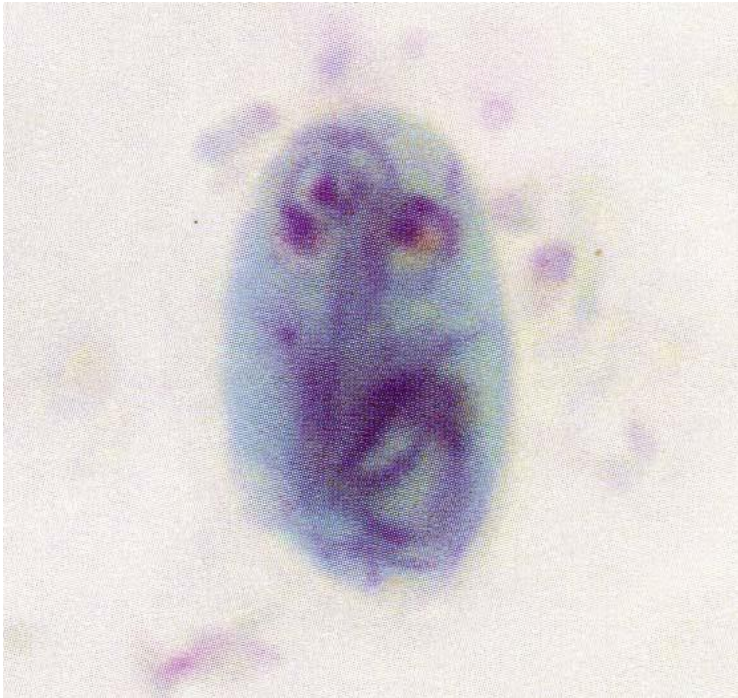
18 μm

2

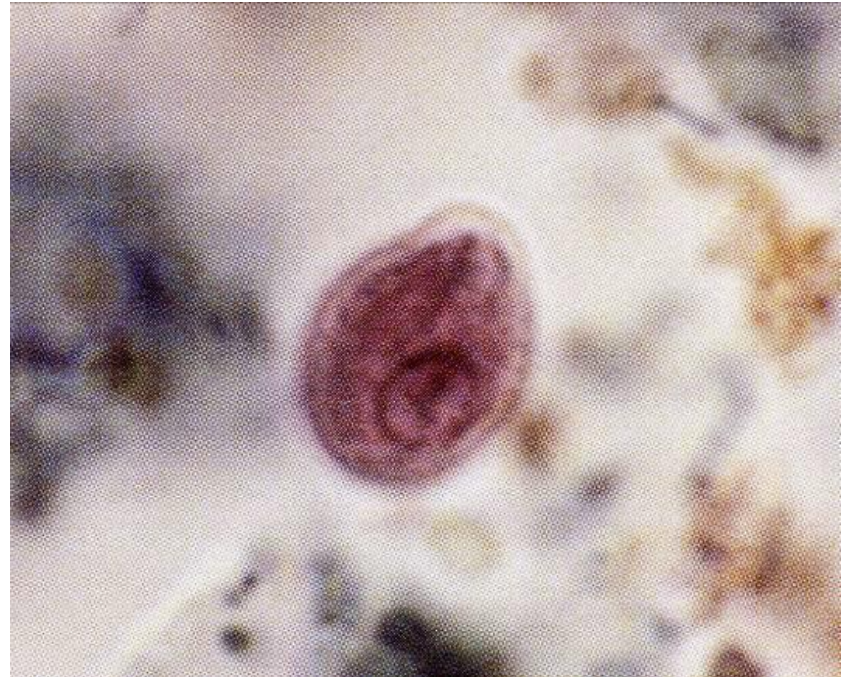


TEST

3



4



TEST

5

