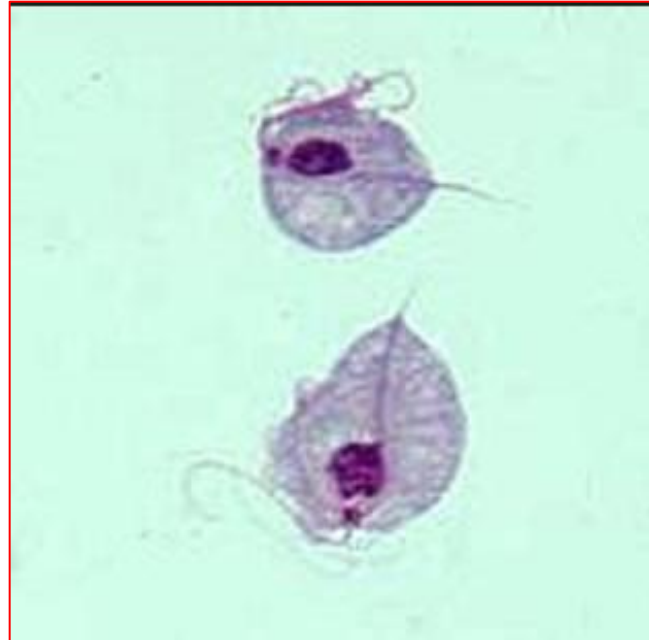


# Genital Infections



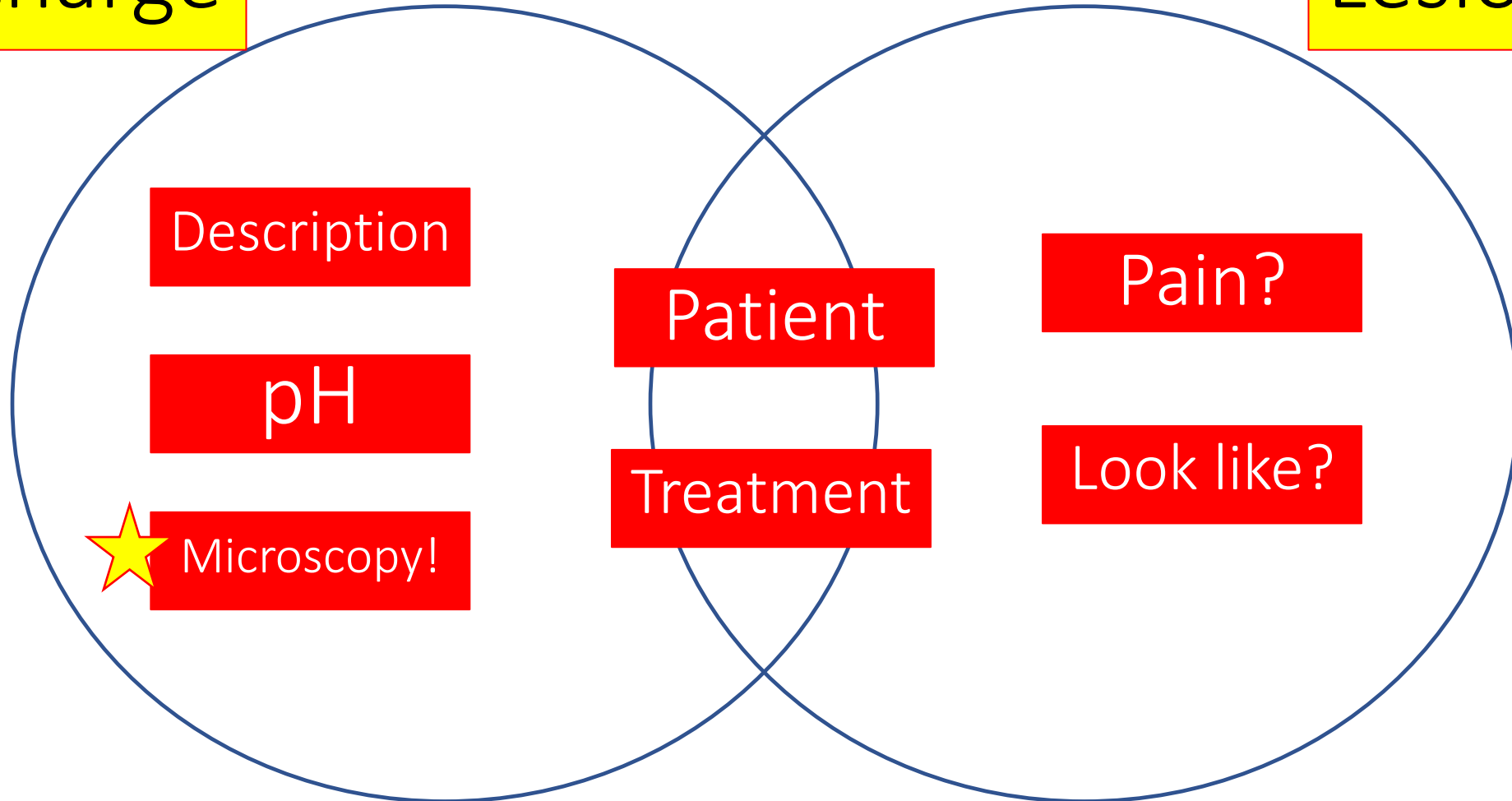
Kelsey T. Mantoni, Medical Student C/O 2018

[www.12daysinmarch.com](http://www.12daysinmarch.com)

# Genital Infections

Discharge

Lesions



Description

pH

★ Microscopy!

Patient

Treatment

Pain?

Look like?

# Genital Infections

## Discharge

Bacterial Vaginosis

Trichomoniasis

Candidiasis

Neisseria gonorrhoeae

Chlamydia trachomatis

## Lesions

Treponema pallidum

Genital herpes

Condyloma acuminata

Haemophilus ducreyi

Lymphogranuloma venereum

Granuloma inguinale

## Discharge

College age female presents with blah blah  
blah complaint discharge looks like blah blah  
blah with pH such and such. **MICROSCOPY  
SHOWS...**

Diagnosis?  
Treatment?

# Discharge

Bacterial Vaginosis

Trichomoniasis

Candidiasis

Neisseria gonorrhoeae

Chlamydia trachomatis

# Discharge

## Bacterial Vaginosis- Gardnerella vaginalis

Description

Watery/thin, grey/white, **FISHY ODOR**

pH

>4.5

 Microscopy!

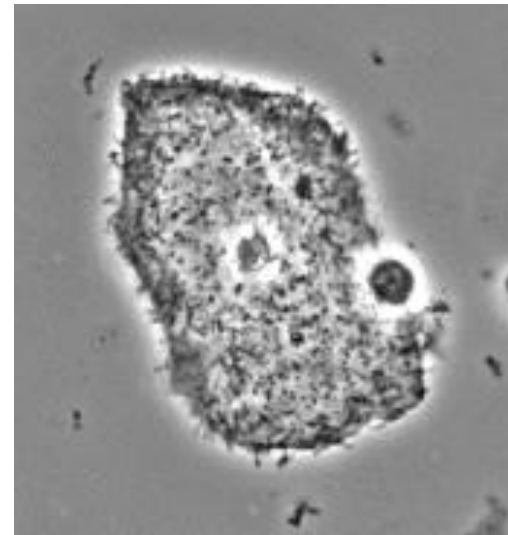
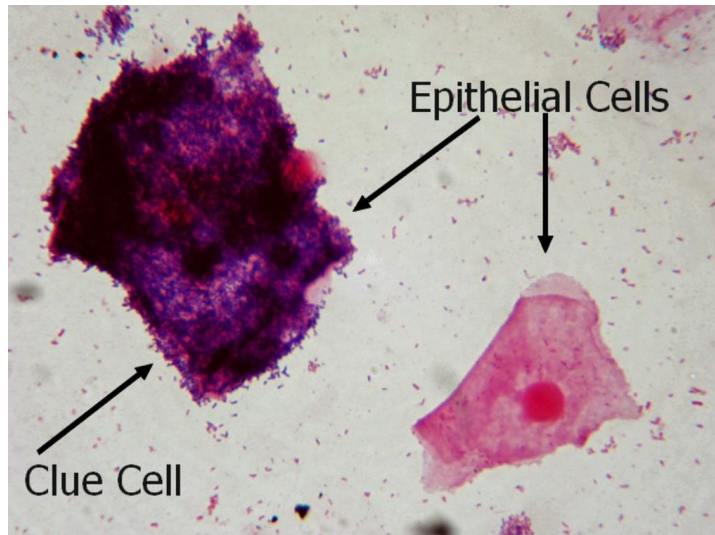
Clue cells = epithelial cells covered in bacteria, blue or purple coating

Treatment

Metronidazole

# Discharge

## Bacterial Vaginosis- Gardnerella vaginalis



Microscopy!

Clue cells = epithelial cells covered in bacteria, blue or purple coating

# Discharge

## Bacterial Vaginosis- Gardnerella vaginalis

### Description

Watery/thin, grey/white, **FISHY ODOR**

### pH

>4.5



### Microscopy!

Clue cells = epithelial cells covered in bacteria, blue or purple coating

### Treatment

Metronidazole



# Discharge

## Trichomoniasis (STD)

Description

Green, frothy discharge

pH

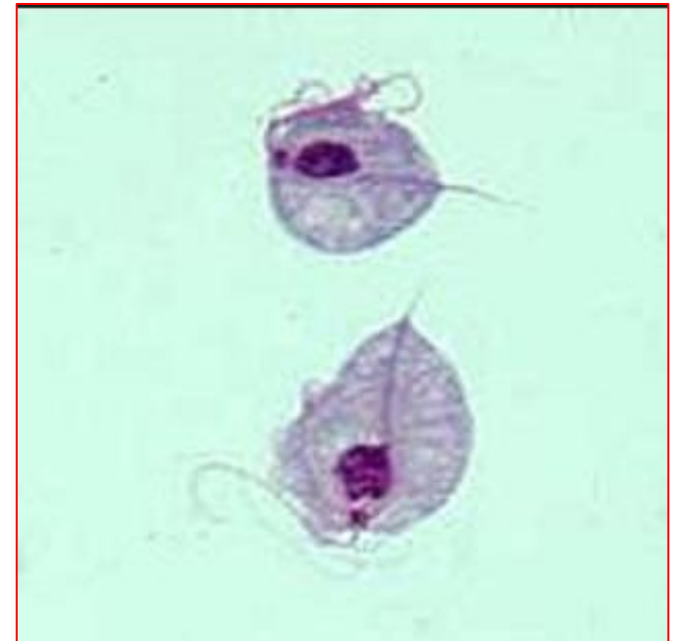
>4.5

★ Microscopy!

Motile trichomonads with flagella

Treatment

Metronidazole (treat partner)



# Discharge

## Candidiasis

Description

Thick, white

pH

< 4.5

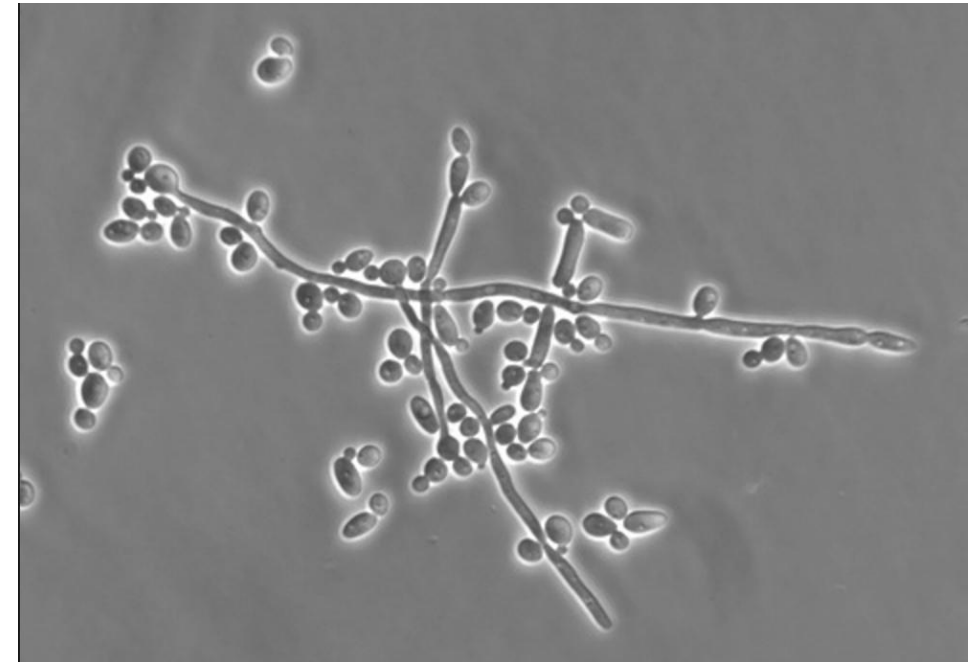


Microscopy!

KOH prep with pseudohyphae

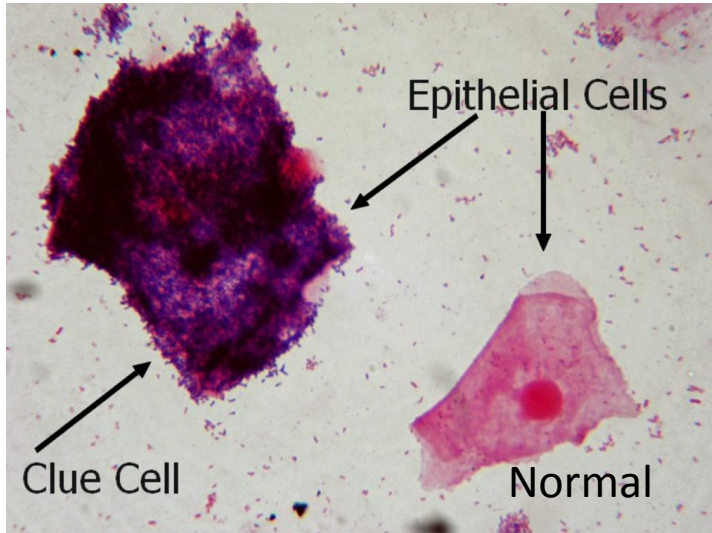
Treatment

Topical azoles or oral fluconazole

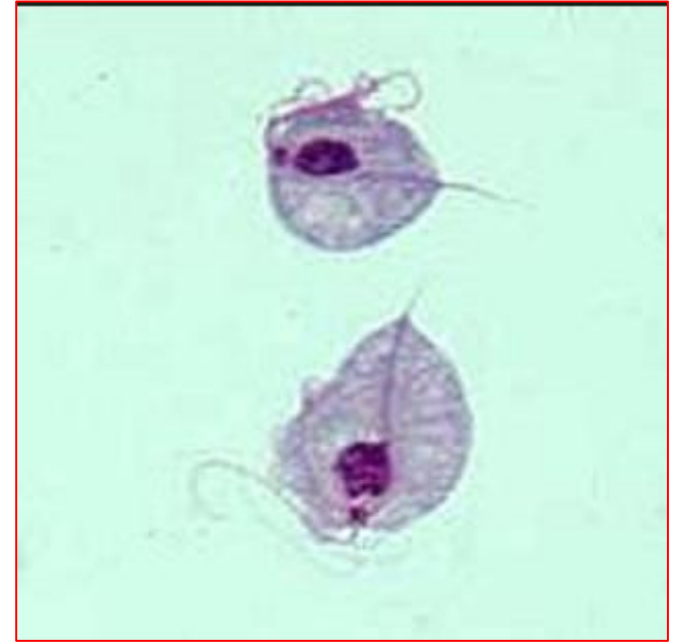


# Discharge

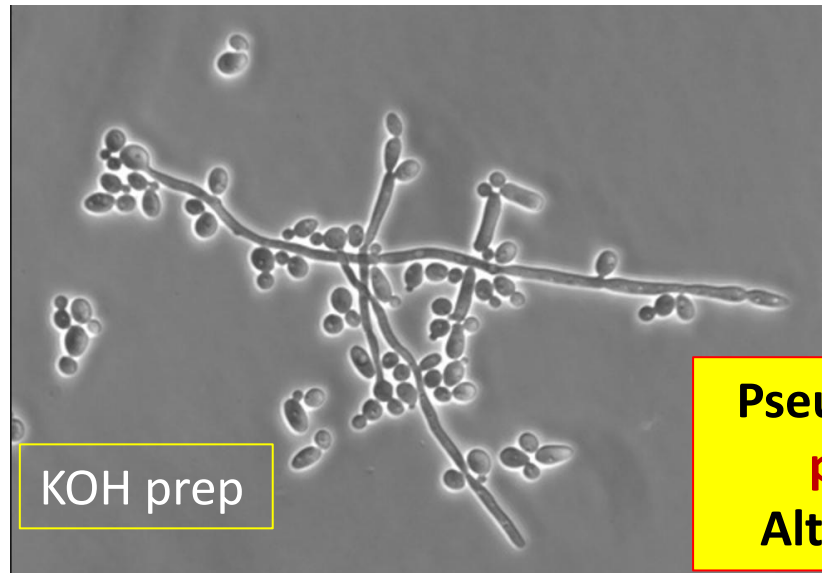
Bacterial Vaginosis  
Trichomoniasis  
Candidiasis



Clue cell (Gram stain)  
pH > 4.5  
Altered flora



Motile  
pH > 4.5  
STD



KOH prep

Pseudohyphae  
pH < 4.5  
Altered flora

A 19 year old female college student comes to the university health services due to one week of vaginal itching and green vaginal discharge. She has been sexually active with one new sexual partner. On wet mount there are multiple motile organisms with flagella. The vaginal pH is 5.5. What is the treatment?

- A. Fluconazole
- B. Metronidazole for patient only
- C. Metronidazole for patient and partner
- D. Ceftriaxone for patient only
- E. Ceftriaxone for patient and partner

A 19 year old female college student comes to the university health services due to one week of **vaginal itching** and **green vaginal discharge**. She has been sexually active with one new sexual partner. On wet mount there are **multiple motile organisms with flagella**. The vaginal **pH is 5.5**. What is the treatment?

- A. Fluconazole
- B. Metronidazole for patient only
- C. Metronidazole for patient and partner
- D. Ceftriaxone for patient only
- E. Ceftriaxone for patient and partner

# Discharge

Bacterial Vaginosis

Trichomoniasis

Candidiasis

**Neisseria gonorrhoeae**

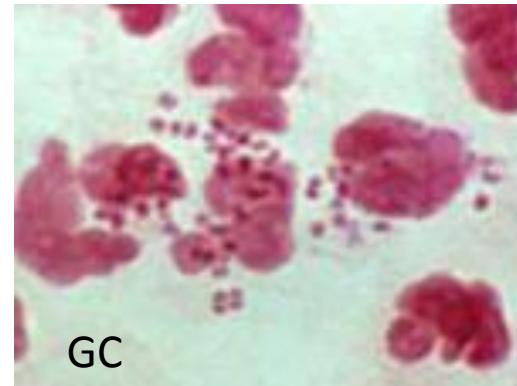
**Chlamydia trachomatis**

# Discharge

## Neisseria gonorrhoea/ Chlamydia trachomatis

Description

Purulent discharge



~~pH~~

★ Microscopy!

Gram negative diplococci (GC)/Gram negative intracellular (Chlamydia)

Treatment

Ceftriaxone (GC) + Azithromycin or doxycycline (Chlamydia)

# Discharge

Neisseria gonorrhoea/  
Chlamydia trachomatis

College age female presents with **SICK**  
(pain/nausea/vomiting/fever) and cervical  
discharge/cervical motion tenderness...

Diagnosis?

Cause?

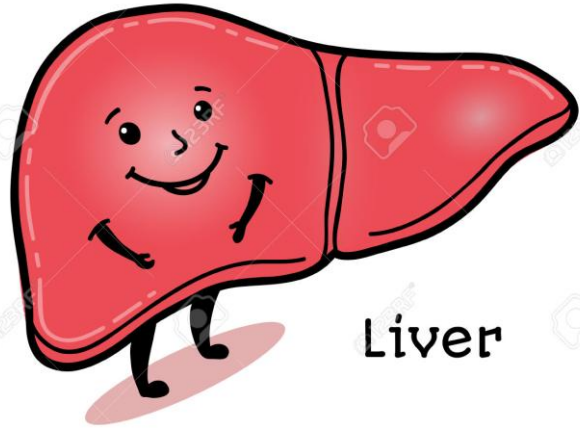
Complications?

PID

(pelvic inflammatory disease)



# Complications



1. Infertility
2. Ectopic pregnancy
3. Fitz-Hugh-Curtis syndrome

# Lesions

Treponema pallidum

Genital herpes

Condyloma acuminata (HPV)

Haemophilus ducreyi

Lymphogranuloma venereum (Chlamydia)

Granuloma inguinale  
(Klebsiella or Calymmatobacterium aka Donovanosis)

Lesions

```
graph TD; Lesions[Lesions] --> Painless[Painless]; Lesions --> Painful[Painful]; Painless --- TP[Treponema pallidum]; Painless --- CA[Condyloma acuminata]; Painless --- GI[Granuloma inguinale]; Painful --- GH[Genital herpes]; Painful --- HD[Haemophilus ducreyi]; Painful --- LGV[Lymphogranuloma venereum];
```

Painless

Painful

Treponema pallidum

Genital herpes

Condyloma acuminata

Haemophilus ducreyi

Chancroid

Granuloma inguinale

Lymphogranuloma venereum

Klebsiella; Donovanosis

Chlamydia trachomatis

# Lesions

Painless

Description

Treponema pallidum

Ulcer with well defined borders

Condyloma acuminata

HPV

Skin colored papules (genital warts)

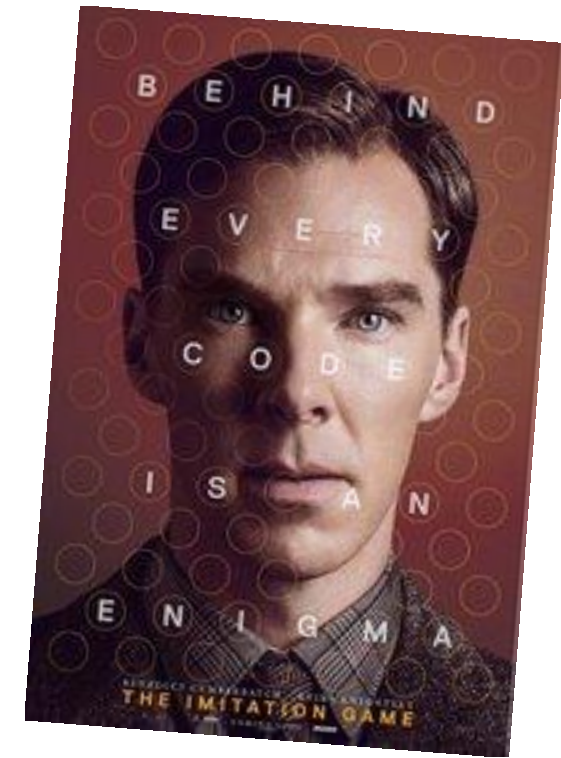
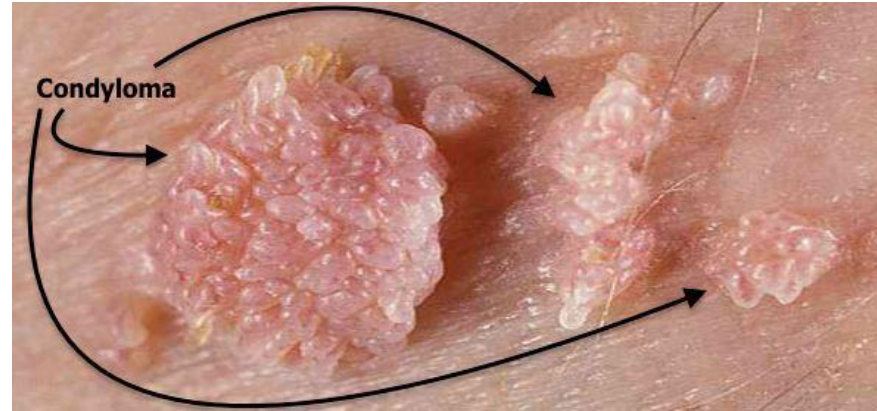
Granuloma inguinale

Klebsiella

Sharply demarcated ulcer with  
**BEEFY RED GRANULATION TISSUE**

# Syphilis- The Great Imitator

- Primary
  - Painless chancre
- Secondary
  - Condyloma lata
  - Rash on palms and soles
- Tertiary
  - Gummas
  - Aortitis
  - Neurosyphilis
  - Argyll Robertson pupil



## Diagnosis

1. VDRL/RPR
2. FTA-Abs

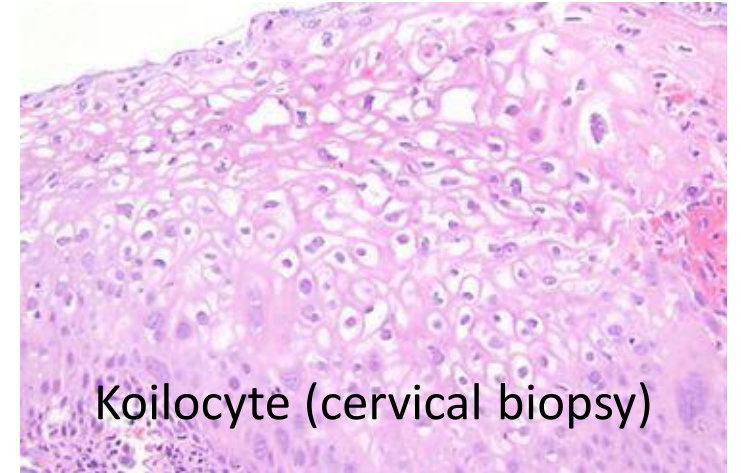


**TX PENICILLIN**

Painless

Lesions

Description



Koilocyte (cervical biopsy)

Condyloma acuminata

HPV

Skin colored papules (genital warts)

Granuloma inguinale

Klebsiella

Sharply demarcated ulcer with  
**BEEFY RED GRANULATION TISSUE**

Painless

Lesions

Description



*Klebsiella*  
*granulomatis*



Granuloma inguinale

Sharply demarcated ulcer with  
**BEEFY RED GRANULATION TISSUE**

# Lesions

## PAIN

Genital herpes

*Haemophilus ducreyi*

Chancroid

Lymphogranuloma venereum

Chlamydia

## Description

Vesicles

Ulcer with yellow/gray exudate

Ulcer, swollen tender lymph nodes

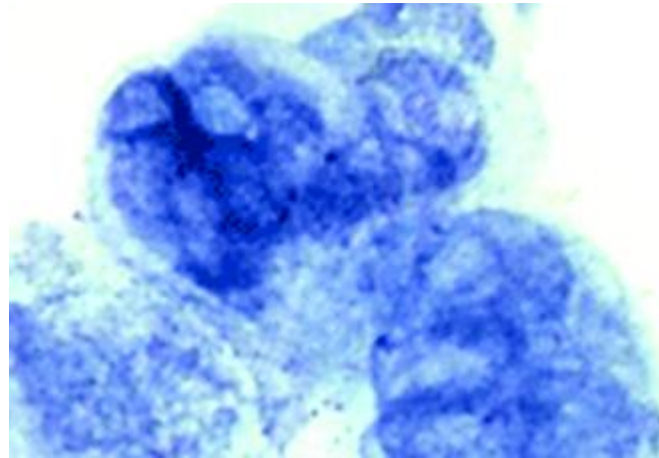


# Lesions

PAIN

Description

## Genital herpes (HSV)



Rx: thymidine kinase inhibitor (e.g. valacyclovir)

Vesicles

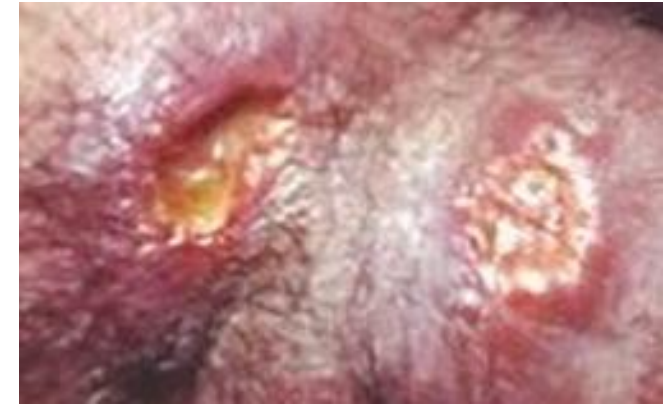


Tzank smear: multinucleated giant cells

PAIN

Lesions

Description



**Haemophilus ducreyi**

Chancroid

Ulcer with yellow/gray exudate

**Lymphogranuloma venereum**

Chlamydia

Ulcer, swollen tender lymph nodes

# Lesions

PAIN



Bubos:  
Regional  
Lymphadenopathy

Description



**Lympho**granuloma venereum

Chlamydia

Ulcer, swollen tender lymph nodes

Self-limited genital ulcer with secondary infection of lymphatics; think **Lympho-** rhymes with **Bubo**

27 yo male presents with a new penile lesion. He has had multiple new sexual partners over the past month and occasionally uses condoms. He says the lesion is painful. On physical exam there are multiple small vesicles and one large open vesicle. What is the diagnosis?

- A. Primary syphilis
- B. *Haemophilus ducreyi*
- C. Genital herpes
- D. Condyloma accuminata
- E. Lymphogranuloma venereum

27 yo male presents with a new penile lesion. He has had multiple new sexual partners over the past month and occasionally uses condoms. He says the lesion is **painful**. On physical exam there are multiple **small vesicles and one large open vesicle** on the penis. What is the diagnosis?

- A. Primary syphilis
- B. Haemophilus ducreyi
- C. Genital herpes
- D. Condyloma accuminata
- E. Lymphogranuloma venereum

# Genital Infections

## Discharge

Bacterial Vaginosis

Fishy, hi pH, clue cells

Trichomoniasis

Frothy, hi pH, motile parasites, **TREAT PARTNER**

Candidiasis

Thick, low pH, pseudohyphae on **KOH**; usually w/ predisposing condition

Neisseria gonorrhoeae

Chlamydia trachomatis

# Genital Infections

## Lesions

**Treponema pallidum**

Genital herpes

**Condyloma acuminata**

Haemophilus ducreyi

Lymphogranuloma venereum

**Granuloma inguinale**

# Genital Infections

## Lesions



Chancroid

Chlamydia



Bubo

Treponema pallidum

**Genital herpes**

Condyloma acuminata

Haemophilus **ducreyi**

**Lympho**granuloma venereum

Granuloma inguinale



# Genital Infections

## Discharge

Bacterial Vaginosis

Trichomoniasis

Candidiasis

Neisseria gonorrhoeae

Chlamydia trachomatis

## Lesions

Treponema pallidum

Genital herpes

Condyloma acuminata

Haemophilus ducreyi

Lymphogranuloma venereum

Granuloma inguinale