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THE JOURNAL OF URGENT CARE MEDICINE®

More STI Patients Are Heading Your Way: An Update on CDC STI Guidelines

June 7, 2023

This webinar is sponsored by

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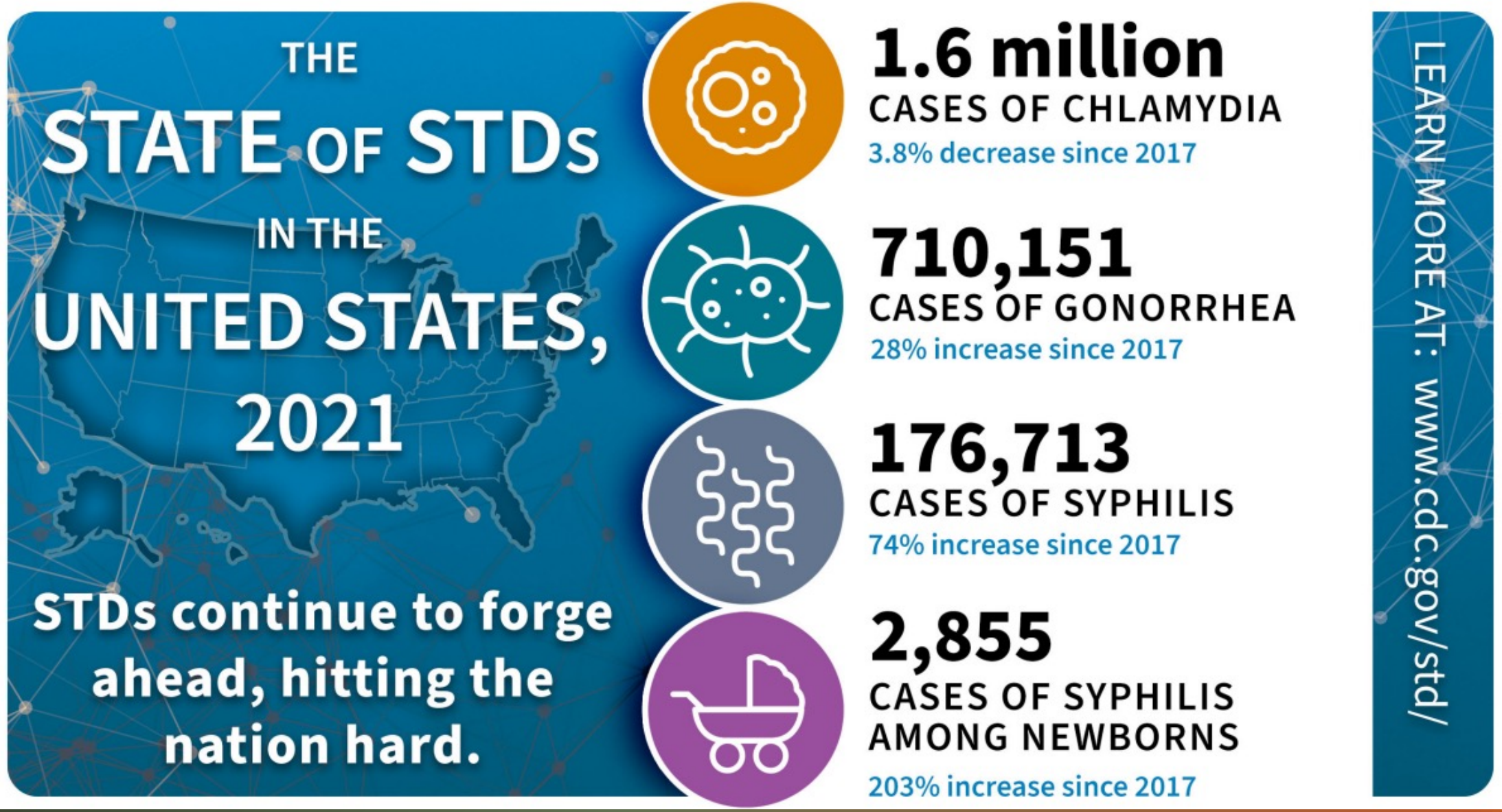
Our Speaker

Ina Park, MD, MS

- California Prevention Training Center
- UCSF School of Medicine
- CDC Division of STD Prevention


THE
STATE OF STDs
IN THE
UNITED STATES,
2021
STDs continue to forge ahead, hitting the nation hard.
1.6 million
CASES OF CHLAMYDIA
3.8% decrease since 2017
710,151
CASES OF GONORRHEA
28% increase since 2017
176,713
CASES OF SYPHILIS
74% increase since 2017
2,855
CASES OF SYPHILIS AMONG NEWBORNS
203% increase since 2017
LEARN MORE AT: www.cdc.gov/std/

Treatment Guidelines

Chlamydia
Gonorrhea
TRICHOMONAS

Chlamydia Treatment:

Urogenital/ Rectal/ Pharyngeal

Change in 2021 STI Treatment Guidelines

Recommended regimens (non-pregnant):

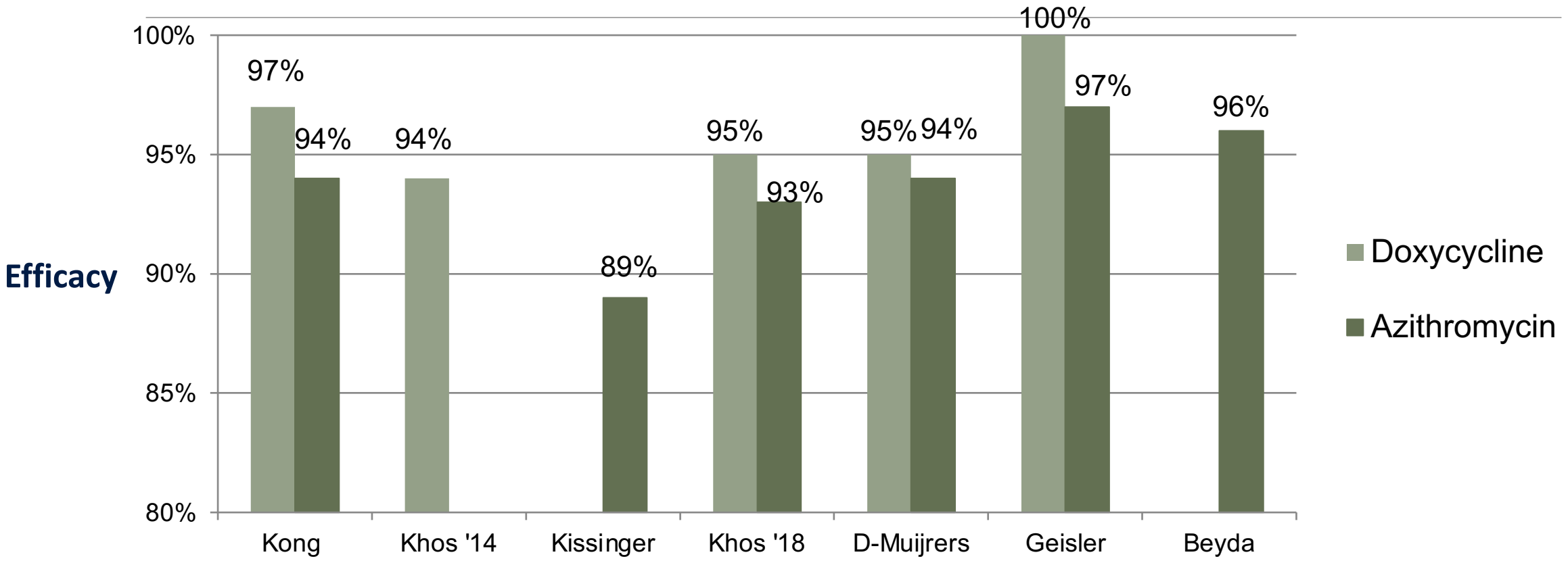
- Doxycycline 100 mg orally twice daily for 7 days*

Alternative regimens (non-pregnant):

- Azithromycin 1 g orally in a single dose **OR**
- Levofloxacin 500 mg orally once daily for 7 days

*Doxycycline delayed-release 200 mg, once-daily dosing for 7 days effective for urogenital CT. More costly but lower frequency GI side effects than standard doxycycline.

Doxycycline vs Azithromycin for Urogenital CT



Slide credit: Dr. Will Geisler

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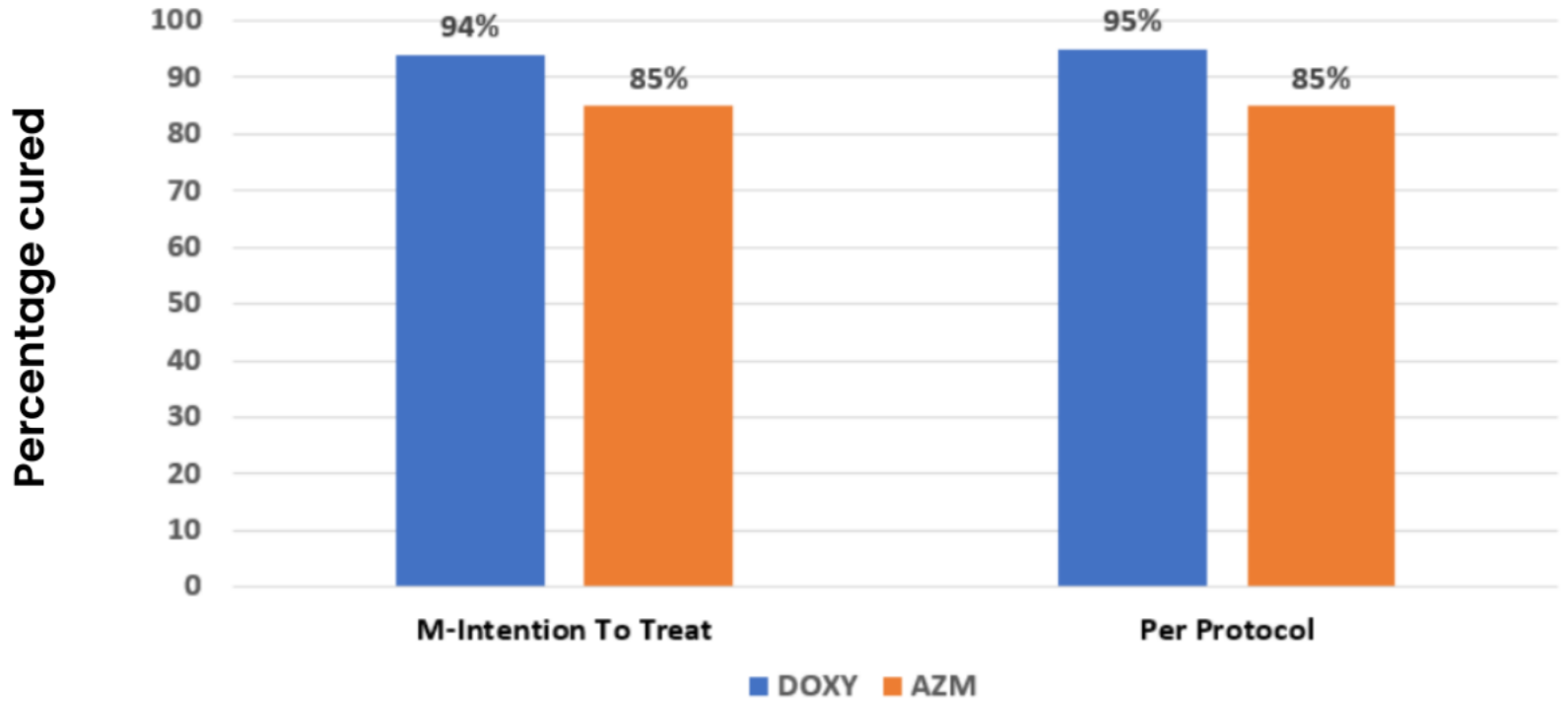
RCT of DOX vs AZM for Rectal CT in Women

Microbiologic Cure at 6 Weeks



Modified intention to treat: all pts with +CT vaginal and rectal NAAT who underwent randomization
Per Protocol: Complete NAAT data, exclude reinfections with new CT strain, condomless sex, <5 days of doxy, vomiting after first abx dose

Peuchant et al, Lancet Infect Dis 2022, May 9:S1473-3099(22)00148-7.

Gonorrhea Treatment Guidelines

for uncomplicated infections

Ceftriaxone **500** mg IM x 1
for persons weighing <150kg*

*For persons weighing ≥150 kg, 1 g of IM ceftriaxone should be administered

However, if chlamydia has not been excluded, treat for chlamydia with:

Doxycycline 100 mg PO BID x 7 days

For pregnancy, allergy, or concern for non-adherence, 1 g PO azithromycin x 1 can be used

- No longer recommending dual therapy with azithromycin
- Test-of-cure at 7-14 days post-treatment for **pharyngeal** gonorrhea

Update to CDC's Treatment Guidelines for Gonococcal infection, 2020; MMWR

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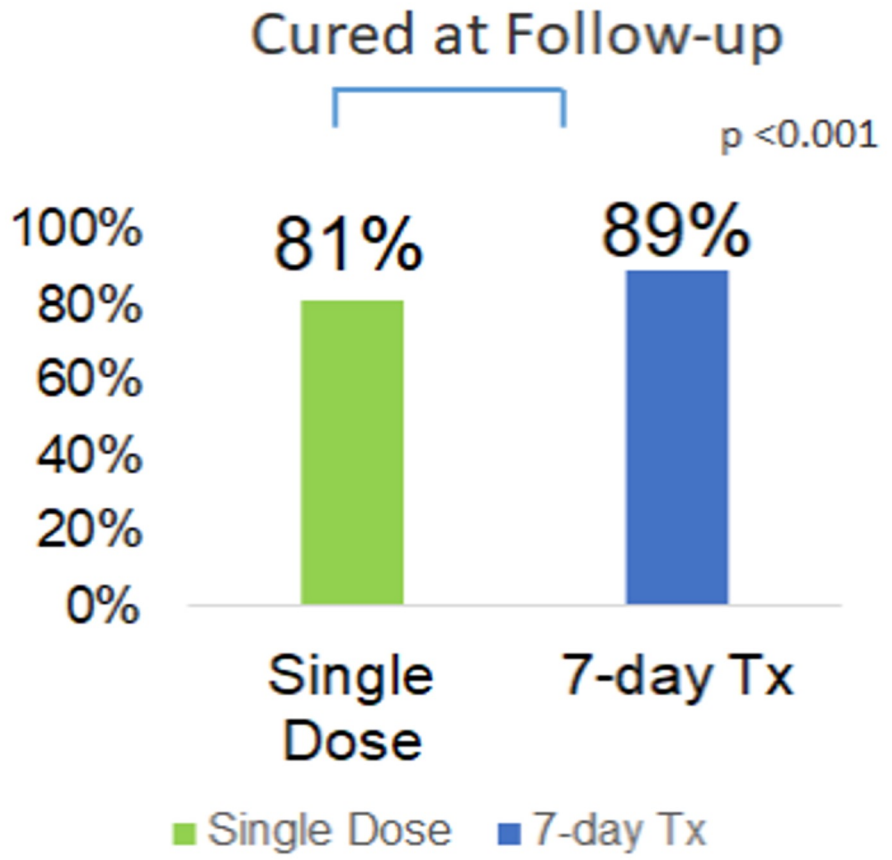
Trichomonas Treatment: Single-Dose Metronidazole Is Not as Effective as 7 Days

- Single dose previously recommended for trich in HIV-negative women
- 7-day therapy (500 mg BID) recommended for patients with HIV (CDC TX GL 2015)
- RCT: N=623 women randomized 1:1 to single dose MTZ vs 7 day
- Culture TOC, 6-12 days post treatment



Kissinger, 2018 Lancet Infect Dis

Trichomoniasis Treatment

Change in 2021 STI Treatment Guidelines

RECOMMENDED REGIMEN: **VAGINAL TRICHOMONAS (HIV+/HIV-)**

METRONIDAZOLE 500 MG ORALLY BID X 7D

METRONIDAZOLE 2 G ORALLY SINGLE DOSE FOR MEN W/ TRICHOMONAS OR MALE PARTNERS)*

ALTERNATIVE REGIMEN:

TINIDAZOLE 2 GM ORALLY IN A SINGLE DOSE

ACOG 2020 TREATMENT GUIDELINES

Metronidazole 500 mg orally BID x 7 d

Retest for reinfection in 3 months

CDC 2021 STD Treatment Guidelines,
ACOG Practice Bulletin 215. OB/GYN Vol 135. Jan 2020

*EPT may have a role in partner management for trichomoniasis

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Syndromic Management

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Syndromic Management

- Treatment based upon a “best guess” of diagnosis, using symptoms and a description of physical findings, but without the use of laboratory tests
- This approach works for:
  - Penile-urethral GC/CT, BV, candida vaginitis, +/- genital herpes; not good for cervical GC/CT)
  - Not very specific (ie, many false positives possible, resulting in overtreatment)

Vaginal Discharge

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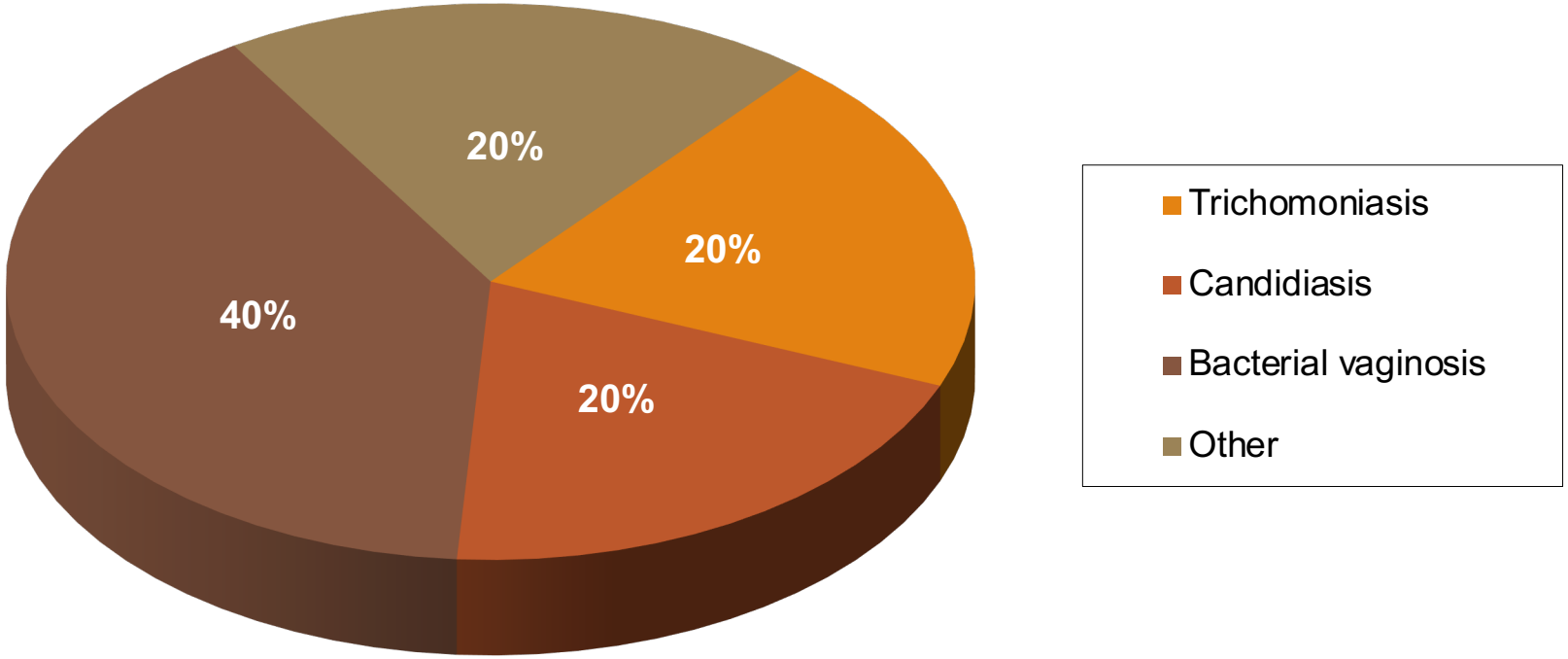
Vaginitis: Etiologies



"Other" includes atrophic, irritant/chemical, desquamative inflammatory vaginitis; erosive lichen planus

Summary of Vaginitis Findings

	Itch/ Burning	Malodor	Frothy	Color
Candida	I: Yes B: Sometimes	No	No	White
Trichomoniasis	I: Yes B: No	Yes	Yes	Yellow Sometimes white
Bacterial vaginosis	No	Yes	Yes	White “homogenized milk”
DIV	Yes	No	No	Profuse white or green
Physiologic	No	No	No	White

So, How Do We Make the Right Diagnosis?

History

Physical Exam

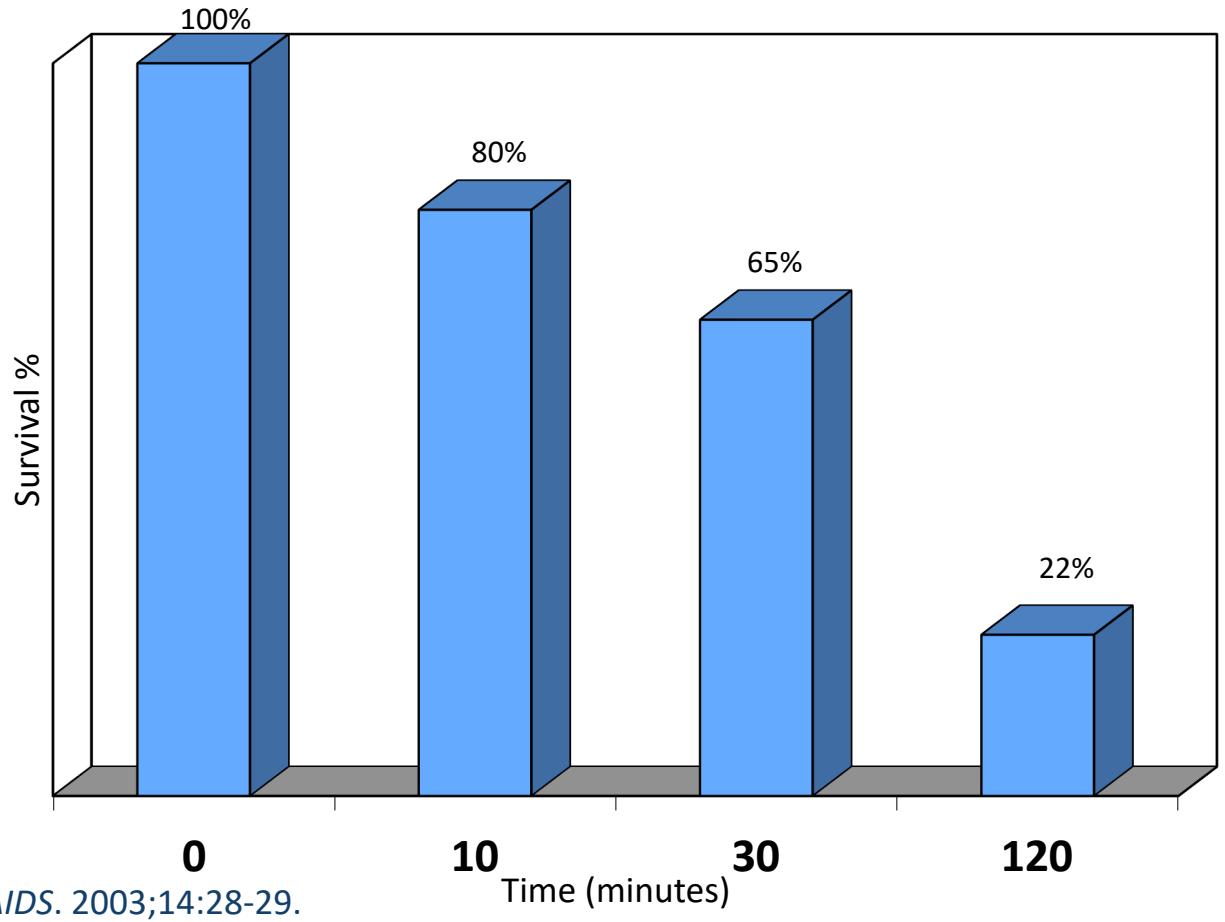
Wet mount microscopy, pH and/or point of care tests

- ***If pH 4.5 or less, BV and trich are unlikely***

STD work-up (nucleic acid amplification tests)

Occasionally vaginal culture (if resistant organism suspected)

‘Decreasing Shelf-Life’ of Wet Mounts for Trichomonas



Kingston MA, et al. *Int J STD AIDS*. 2003;14:28-29.

Point-of-Care Testing for Trichomonas

	Turnaround Time	Sensitivity	Specificity
Wet mount	5 min	44%-68%	100%
Rapid Ag: OSOM	10 min	83%-92%	99%-100%
Rapid PCR: Visby	30 min	99%	97%
Rapid nucleic acid amplification (eg, GeneXpert, AmpliVue)	40-45 min	95%-100%	97%-99%

Morris SR. *Lancet Infect Dis*. 2021;21(5):668-676. Gaydos CA. *Expert Rev Mol Diagn*. 2017;17:303–306. Schwebke JR. *J Clin Microbiol*. 2018;56:e01091-17. Gaydos CA. *Sex Transm Infect*. 2017; 93(Suppl 4):S31–S35. 99·2% (95·5-99·9) and specificity of 96·9% (95·8-97·7)

Lab-Based Tests: Culture vs NAATs

	FDA-cleared for men?	Sensitivity	Specificity
Culture	N/A	Women:75%-96% Men: 50%-80%	100%
Hologic Aptima	**No**	88%-100%	98%-100%
BD Probe Tec TV	**No**	98%-100%	98%-100%
BD Affirm VPIII	**No**	91%-100%	93%-96%
Roche Cobas TV/MG	**Yes**	Women: 96%-100% Men: 77%-100%	97%-99% 98%-100%
BD Max CT/GC/TV	**Yes**	Women: 90-100% Men: 81-100%	98%-100% 99%-100%

(For assays only cleared for women, ok to use for penile infections if lab validates samples (urine, urethral or meatal swabs)

Nye MB, et al. *Am J Obstet Gynecol*. 2009;200(2):188.e1-7. Coleman JS, et al. *J Clin Microbiol*. 2018;56(9):e00342-18. Van Der Pol B. *J Clin Microbiol*. 2014;52(3):885-889. Marlowe EM, et al. *Eur J Microbiol Immunol*. 2019;9(2):42-45. FDA: Https://www.accessdata.fda.gov/cdrh_docs/reviews/K182692.pdf. FDA: https://www.accessdata.fda.gov/cdrh_docs/pdf19/K190433.pdf.

Vaginal Discharge: What About GC/CT?

- CDC guidelines do not recommend empiric treatment for GC/CT in patients with vaginal discharge
- For patients with new vaginal discharge who need evaluation, testing for GC/CT is recommended prior to treatment
  - Exception is patients with known sexual contact to GC/CT

Urethral Discharge

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Case

35 yo cis male who has sex with women presents with dysuria and clear penile discharge x 2 days

- Empirically treated with ceftriaxone 500 mg IM and doxycycline x 7 days
- Urine GC and CT are negative
- He calls you 6 days later to say he’s not better
- He presents to urgent care and no discharge is present, but urine dip is positive for LE and negative for nitrite

Persistent Urethritis

You confirm the patient took their doxy and that their partner was treated.

You test for *Mycoplasma genitalium* and trichomonas.

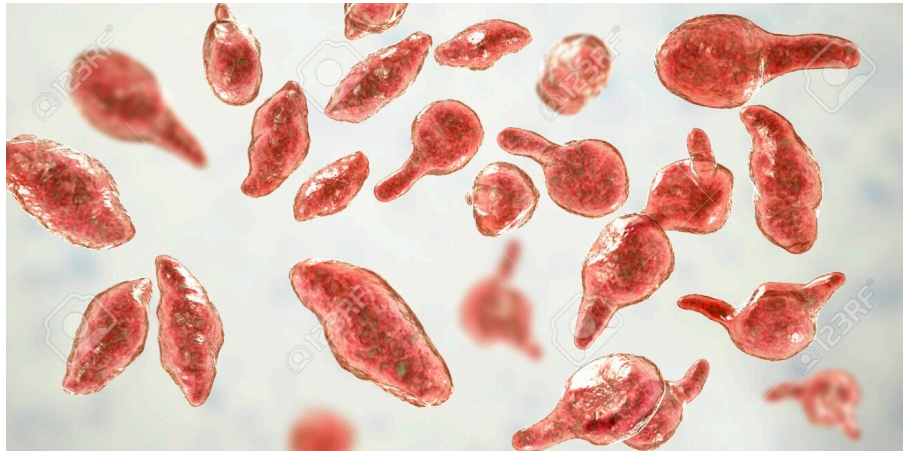
M gen NAAT is positive

NOW WHAT?

1. Treat with azithromycin 1 g PO x1
2. Treat with metronidazole 2 g PO x1
3. Treat with moxifloxacin 400 mg PO daily x 7 days
4. Treat with moxifloxacin 400 mg PO daily x 10 days

Mycoplasma genitalium

- AKA: MG, M gen, M gent
- Intracellular bacteria, slow growing, very difficult to culture (months)
- Can cause:
  - Cervicitis, PID, infertility
  - Urethritis (and persistent urethritis)
  - Prostatitis
  - Epididymitis
  - Proctitis? → Jury still out



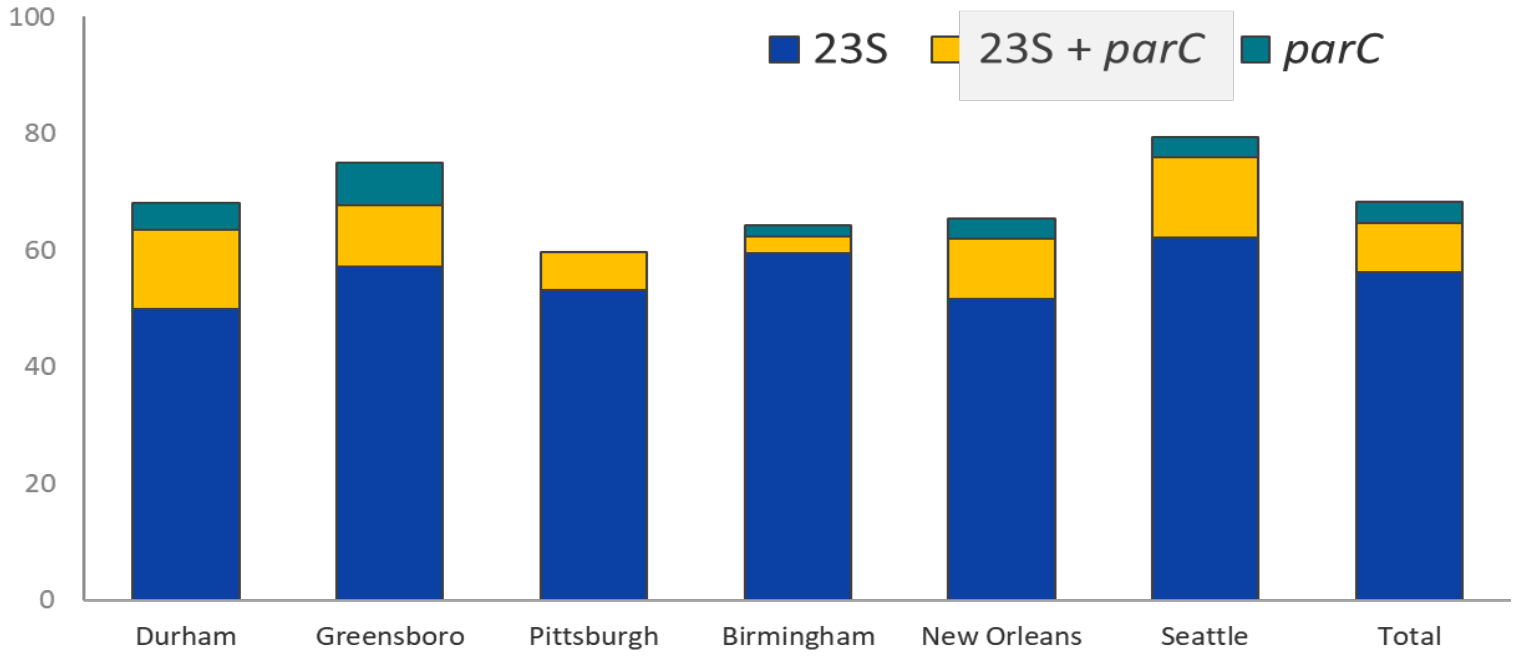
WATCH LIST

DRUG-RESISTANT

MYCOPLASMA GENITALIUM

https://www.cdc.gov/drugresistance/pdf/threats-report/2019-ar-threats-report-508.pdf

Over 50%-60% of *M genitalium* Infections Have Resistance Mutations to Macrolides (Azithro)



National Institutes of Health
[HHSN2722013000121, HHSN272000010, DIMD16-0039]

Bachmann LH, Kirkcaldy RD, et al. CID 2020
Slide credit: L Bachmann

Mycoplasma genitalium: Testing

Who to test?

- CDC: People with symptoms or signs that might be caused by MG who fail initial treatment
  - **Persistent urethritis**
  - Cervicitis, consider for PID
    - (In SF, everyone with urethritis is tested on initial presentation)
- Contacts to patients with confirmed MG
- DO NOT screen asymptomatic individuals

M genitalium Treatment

- **Sequential treatment for suspected/documented *M genitalium***

Change in 2021 STI Treatment Guidelines

Start with doxycycline to reduce bacterial load

Doxycycline 100 mg BID x 7 days → THEN → Moxifloxacin 400 mg QD x 7 days

If local macrolide resistance is low or known macrolide sensitive

Doxycycline 100 mg BID x 7 days → THEN → Azithromycin 2.5 gm over 4 days

(Azithromycin – 1 g x 1 day then 500 mg x 3 day)

MG can be difficult to treat – if someone does not get better, they should be retested (wait 21 days for a test of cure)

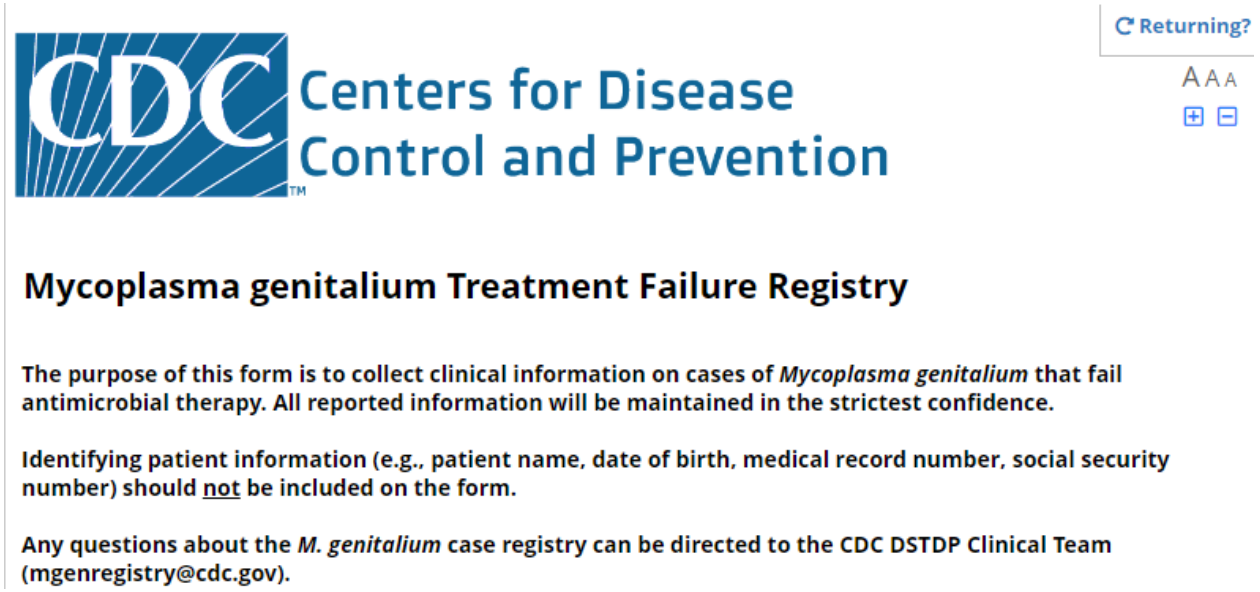
Mycoplasma genitalium (MG) Treatment Failure Registry

PLEASE REPORT!

Purpose: Collect clinical information on cases of MG that fail antimicrobial therapy

Rationale: Surveillance of possible moxifloxacin resistant MG, inform treatment options

- Any provider can report a case (no coordination with health department)
- No identifying patient information collected
- CDC staff will follow up with providers via phone/email for additional demographics
- Questions can be emailed to mgenregistry@cdc.gov



https://redcap.link/mgenregistry

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How should providers manage rectal symptoms if an STI is suspected?

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Rectal Symptoms: r/o Proctitis

- Test for GT/CT, HSV-PCR (plus HIV and syphilis)
  - Ceftriaxone 500 mg IM plus doxycycline 100 mg orally twice a day x 7 days
  - If the patient is pregnant or doxycycline is not available, then azithromycin 1 g orally in a single dose can be used

What if the client has a sore throat and suspects exposure to GC/CT through oral sex?

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Sore Throat and Suspicion of GC/CT Through Oral Sex

- Symptomatic pharyngitis is more likely to be caused by non-sexually transmitted bacteria, upper respiratory viruses (including COVID)
- Empiric treatment not recommended, unless patient known exposure to GC/CT

Genital or Anal Ulcers

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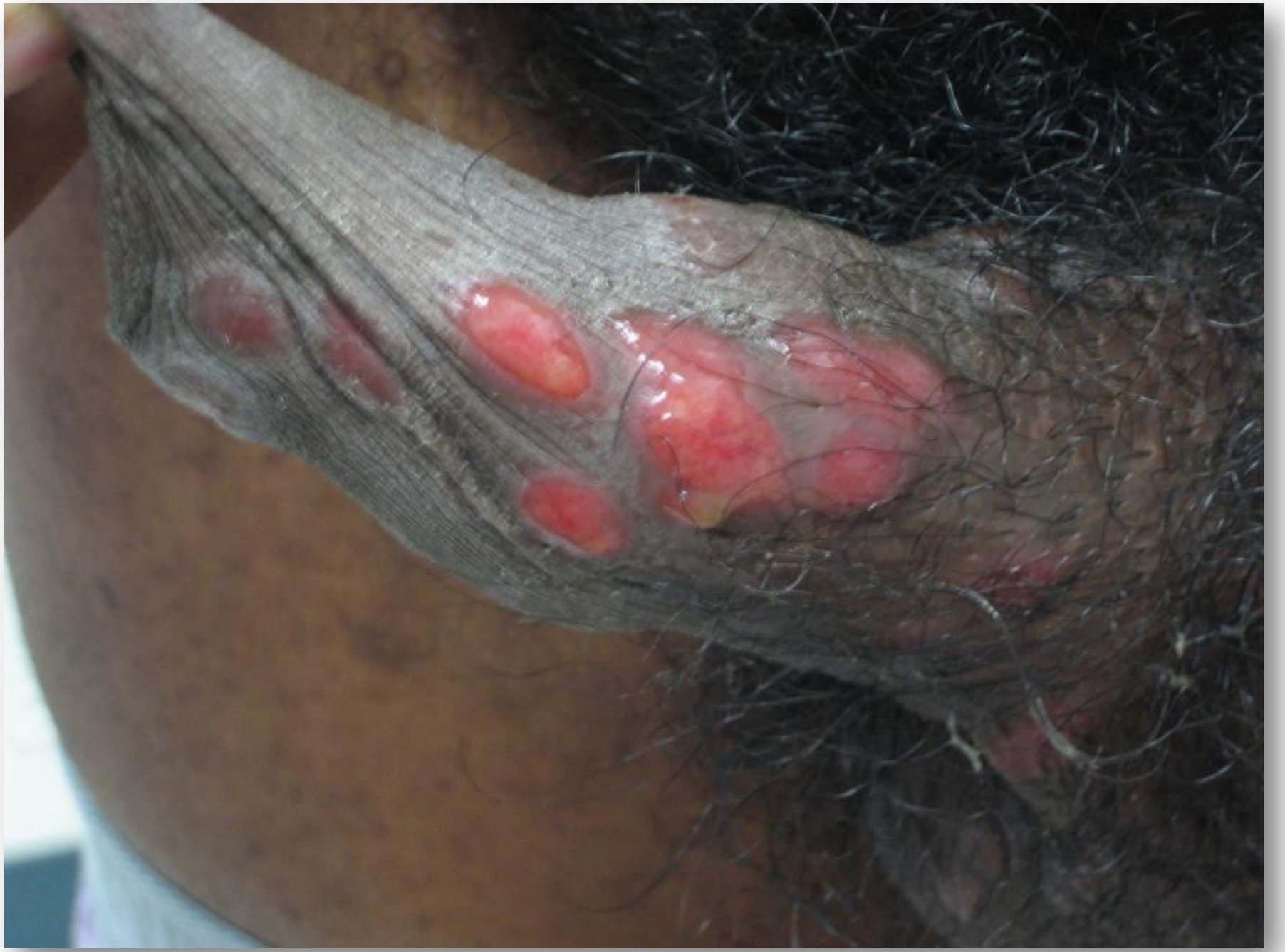
35-year-old bisexual male presents to your clinic with genital ulcers.

The ulcers are a little bit painful. They are not pruritic. There are several of them.

The patient’s physical exam reveals the following findings . . .



health
CARE AGENCY

What is the most likely diagnosis?

A. Genital herpes

B. Primary syphilis

C. Secondary syphilis

D. Chancroid

E. Pityriasis rosea

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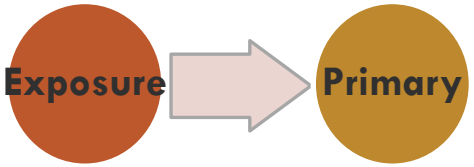
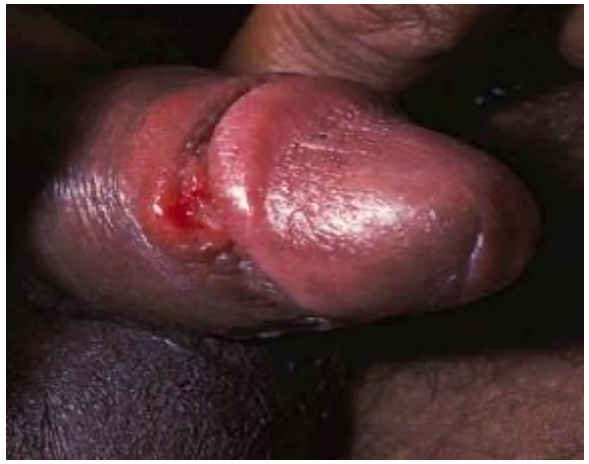
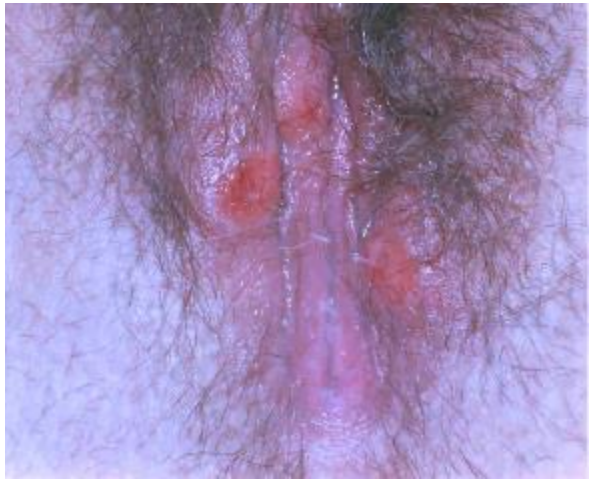
Primary Syphilis

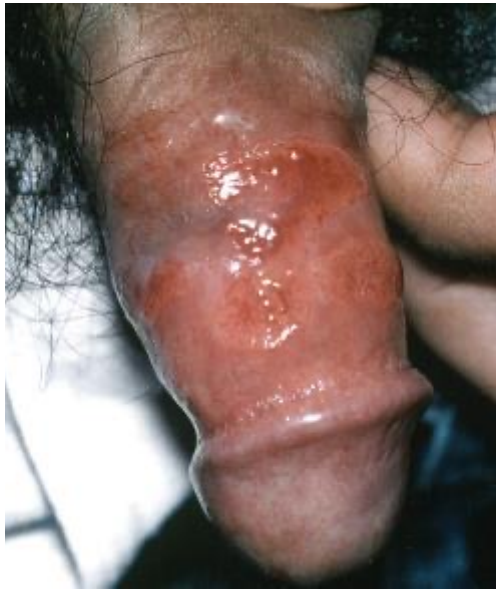




Mosby *STD Atlas, 1997*

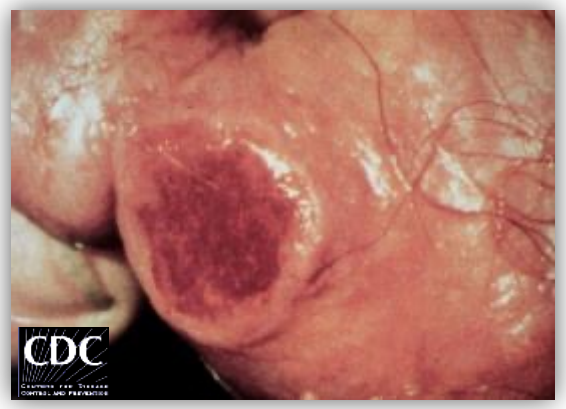


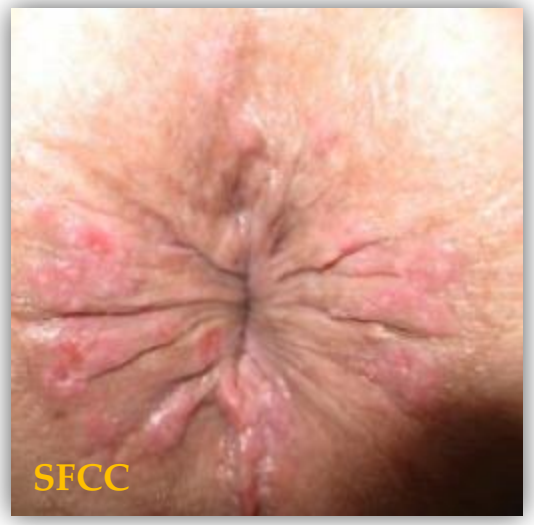
Dr. Joseph Engelman, San Francisco City Clinic

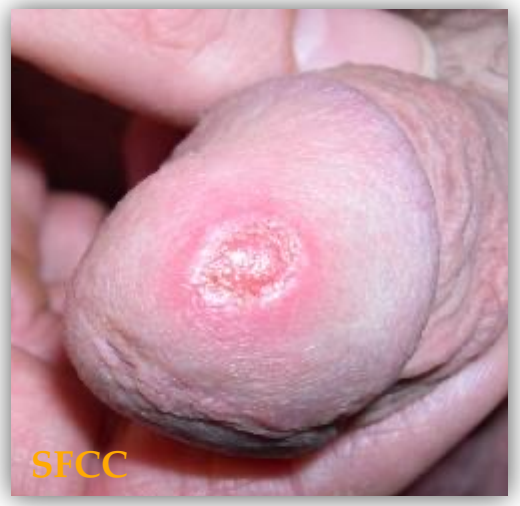


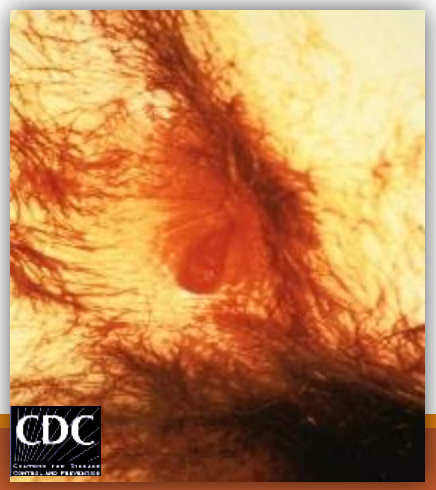
Courtesy: SF City Clinic

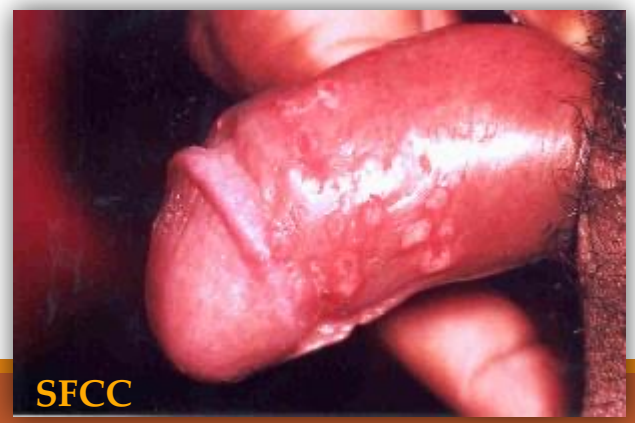
Primary Syphilis



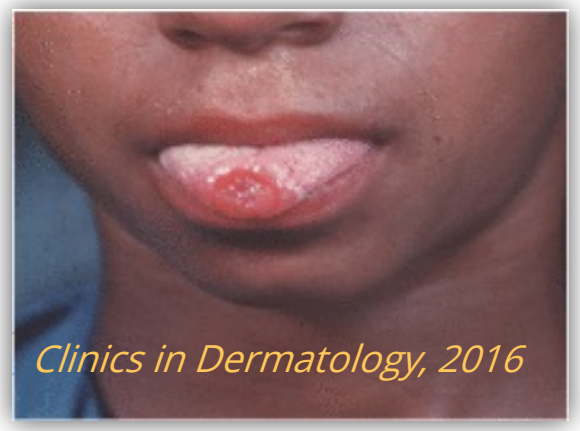


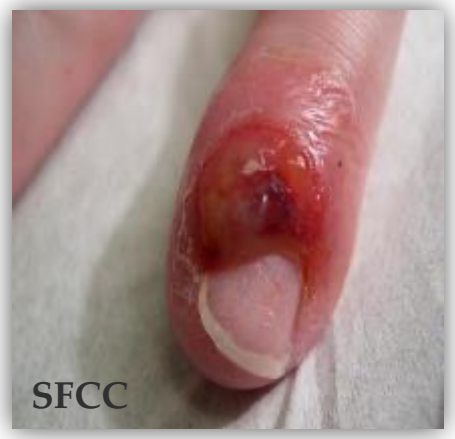


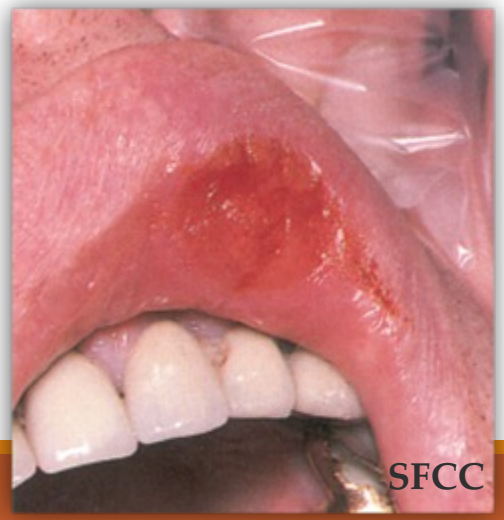


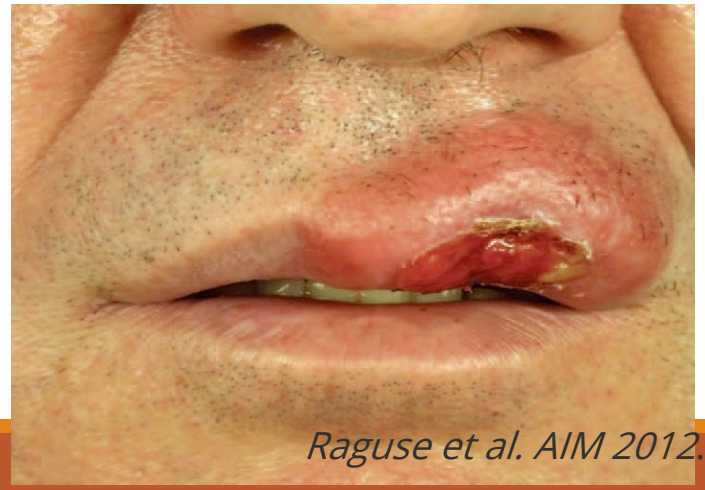


Primary Syphilis: Extragenital Chancres









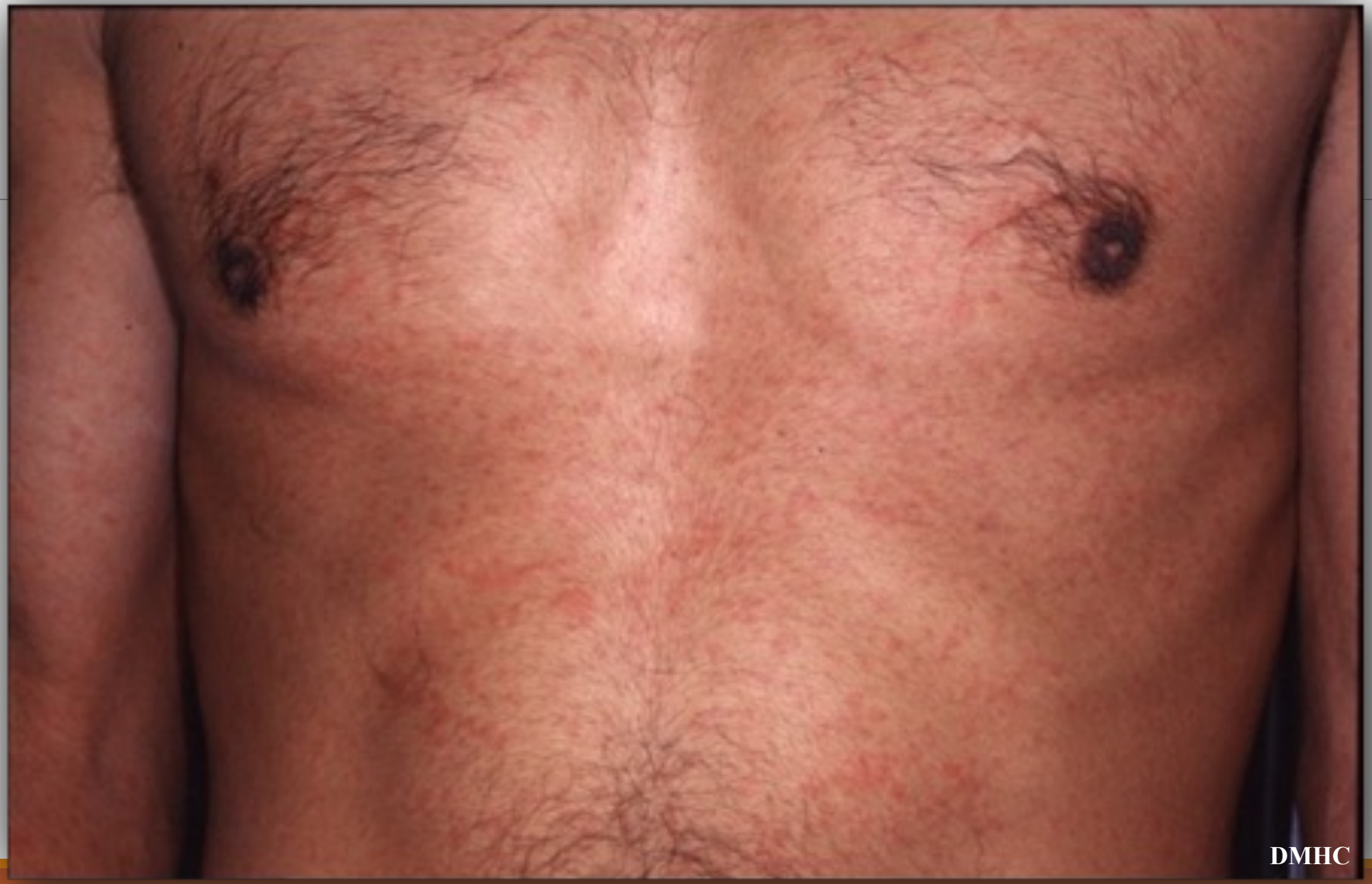
After examining the patient’s genital ulcers, the provider suspects genital herpes.

The patient is prescribed acyclovir.

His ulcers resolve entirely; he feels well.

He returns a few weeks later, this time with a diffuse but subtle non-pruritic rash.

The appearance of the rash is as shown:


DMHC

What is the most likely diagnosis?

A. Secondary syphilis

B. Tinea versicolor

C. Coxsackie virus (hand-foot-mouth disease)

D. Atopic dermatitis

E. Contact dermatitis

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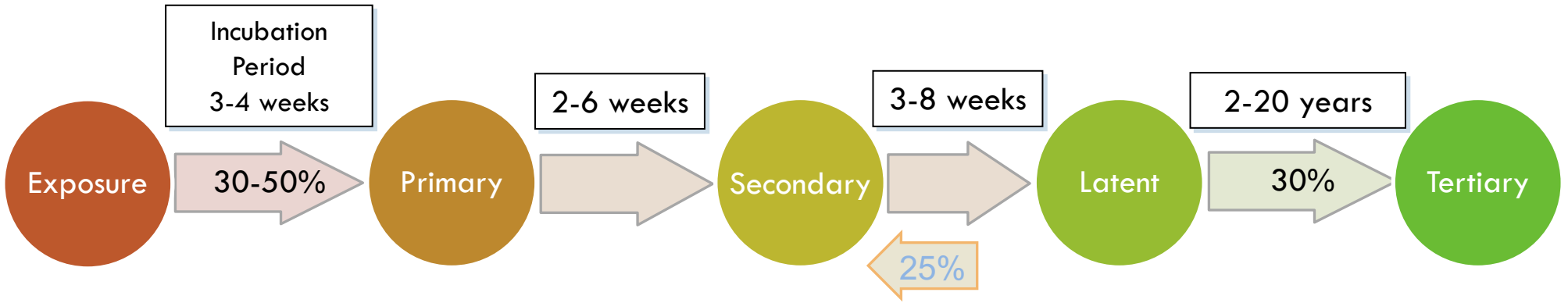
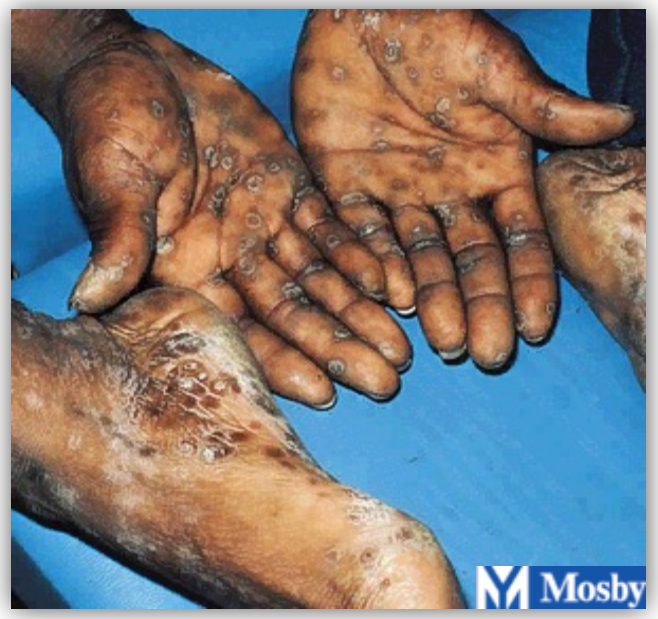
Natural History of Syphilis: Secondary Syphilis

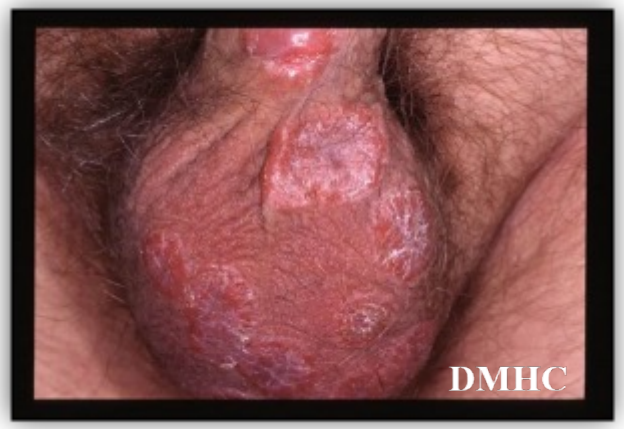


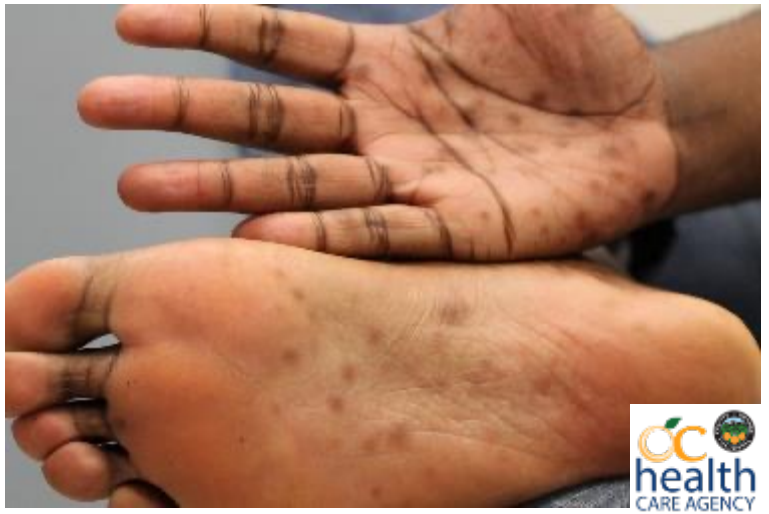
Secondary signs

- Rash (75-90%),
  - Involving palms/soles (60%)
- Generalized lymphadenopathy (70-90%)
- Constitutional symptoms (50-80%)
- Mucous patches (5-30%)
- Condyloma lata (5-25%)
- Patchy alopecia (10-15%)
- Symptoms of neurosyphilis (1-2%)

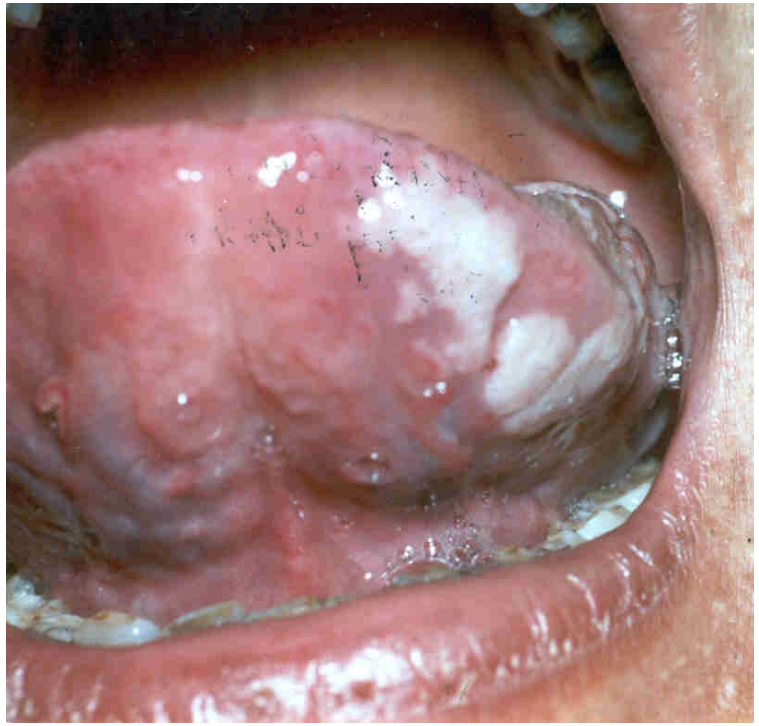
Secondary Syphilis: Rash

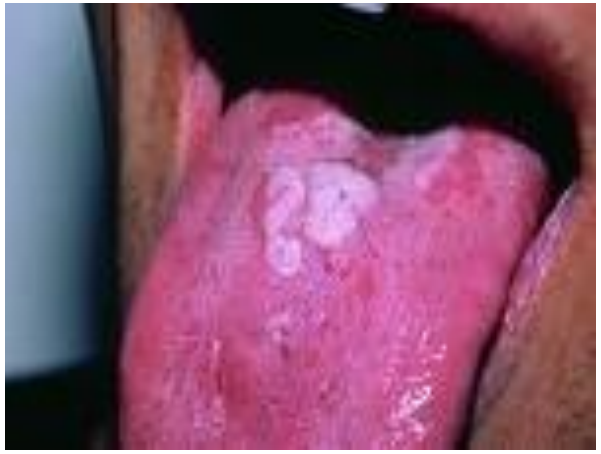


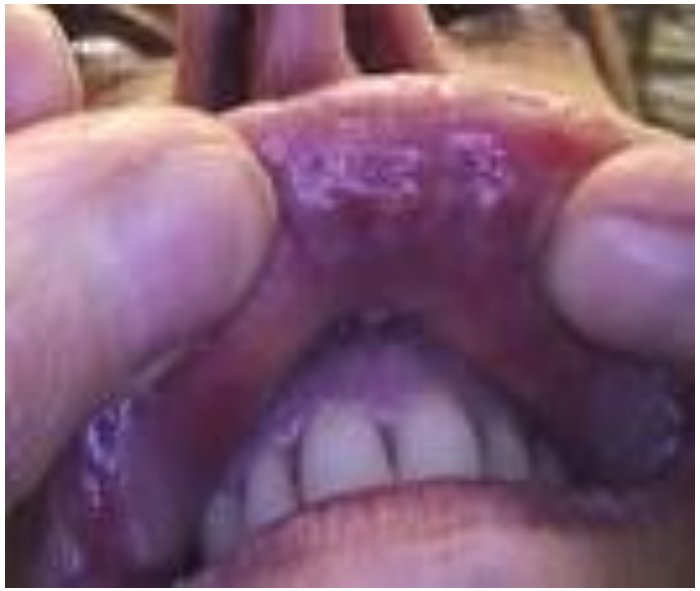




Secondary Syphilis: Mucous Patches

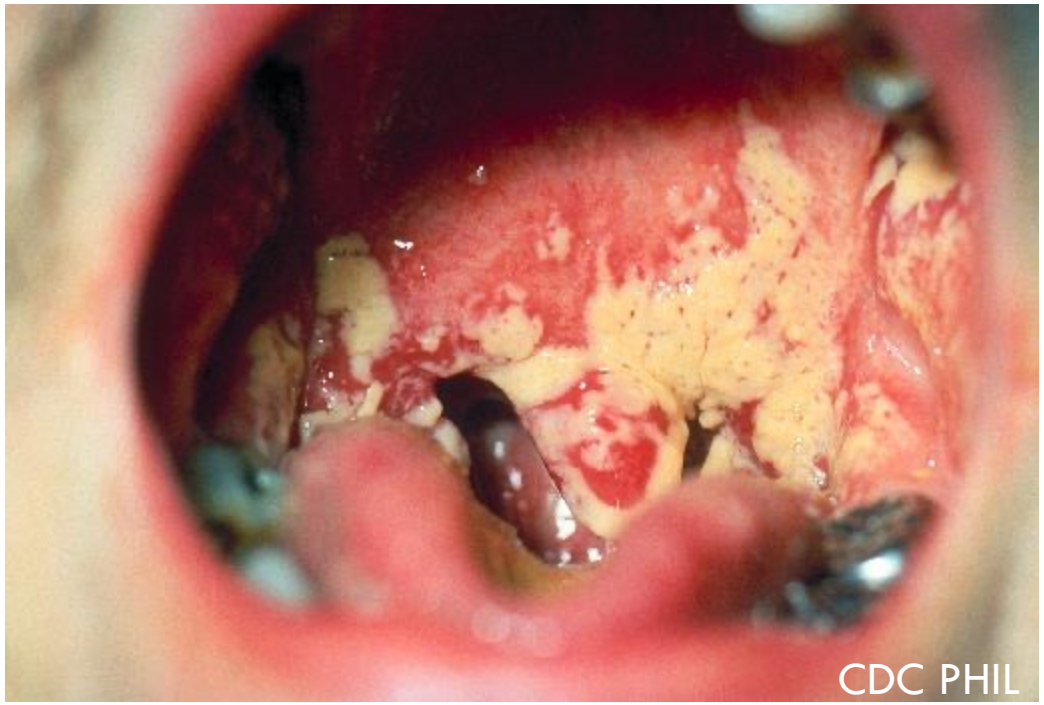




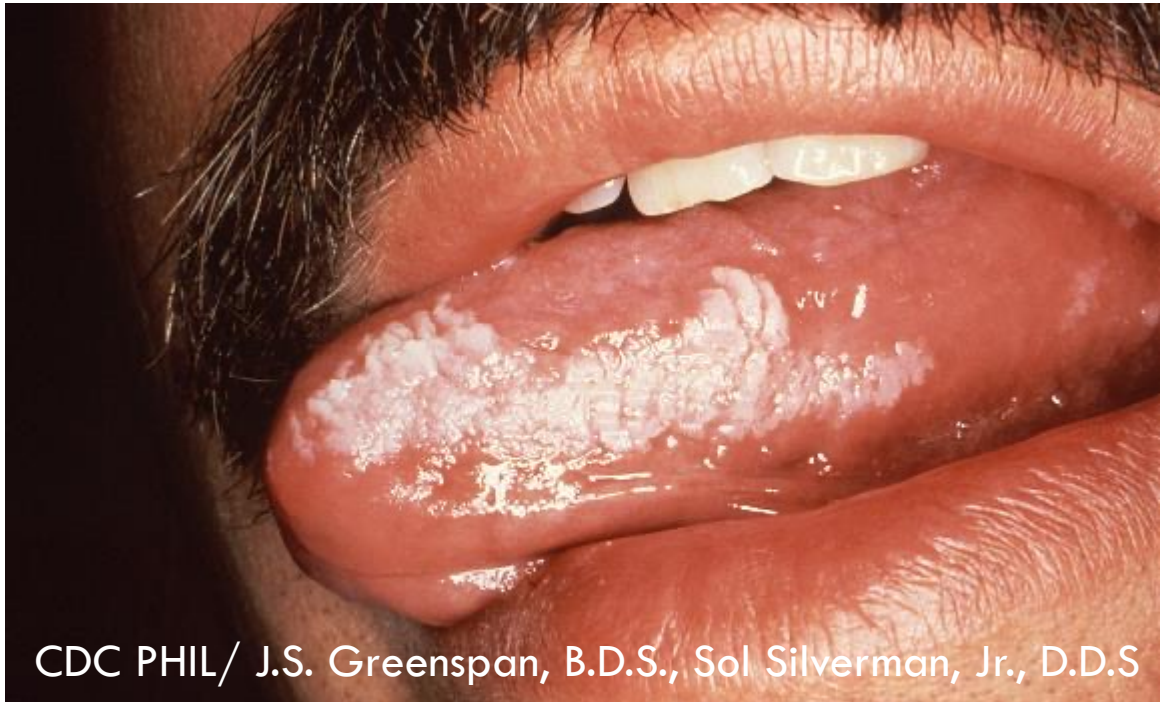


Courtesy: Gregory Melcher, UC Davis

Mucus Patches: Differential Diagnosis



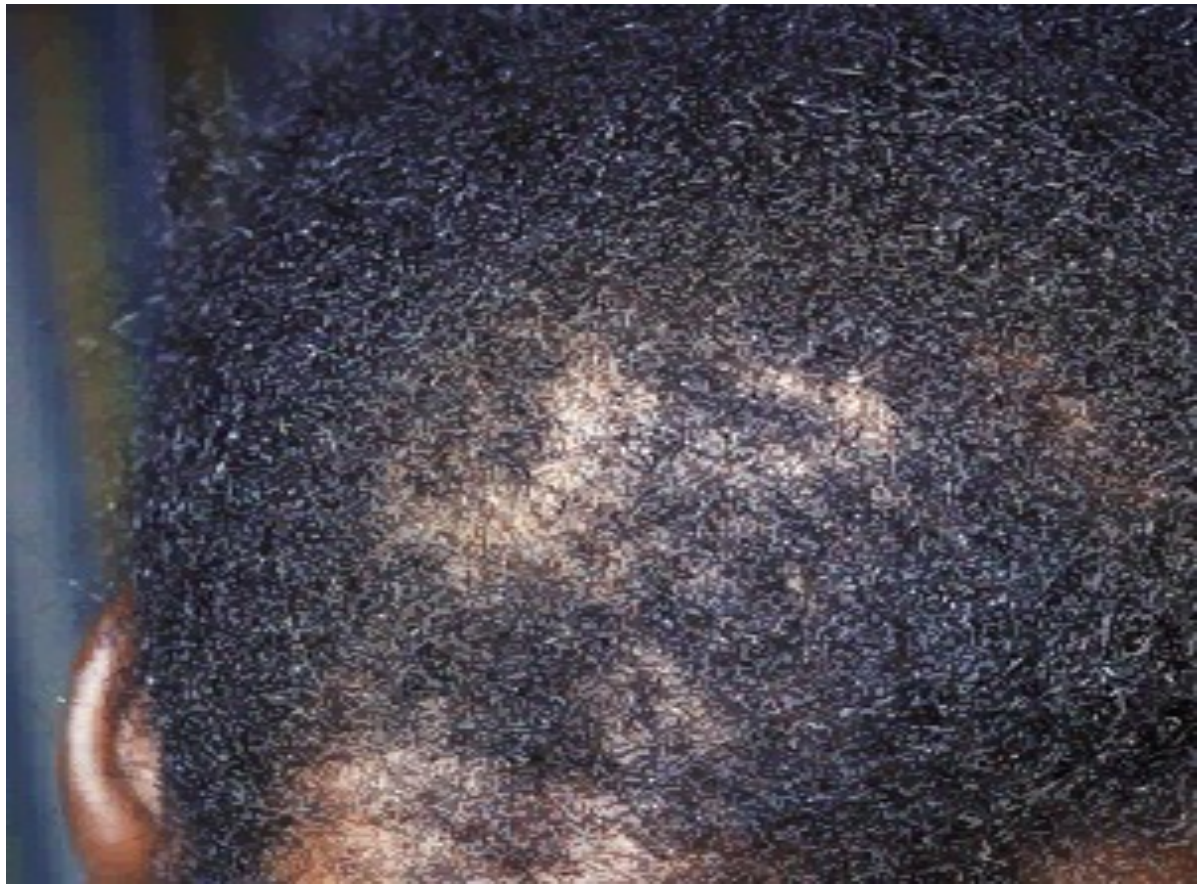
Oropharyngeal candidiasis / Thrush



Oral hairy leukoplakia

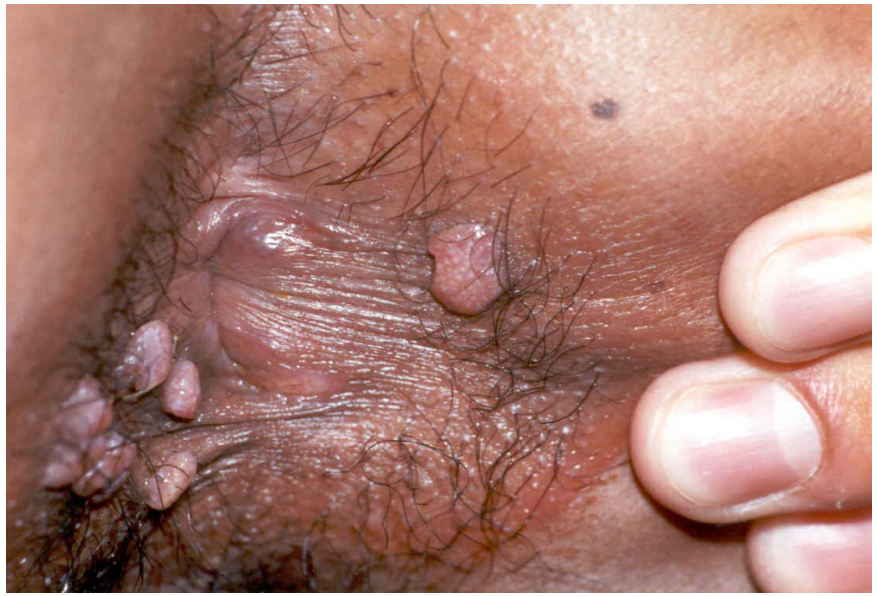
https://phil.cdc.gov/details.aspx?pid=1217; https://phil.cdc.gov/details.aspx?pid=6061

Secondary Syphilis: Patchy Alopecia

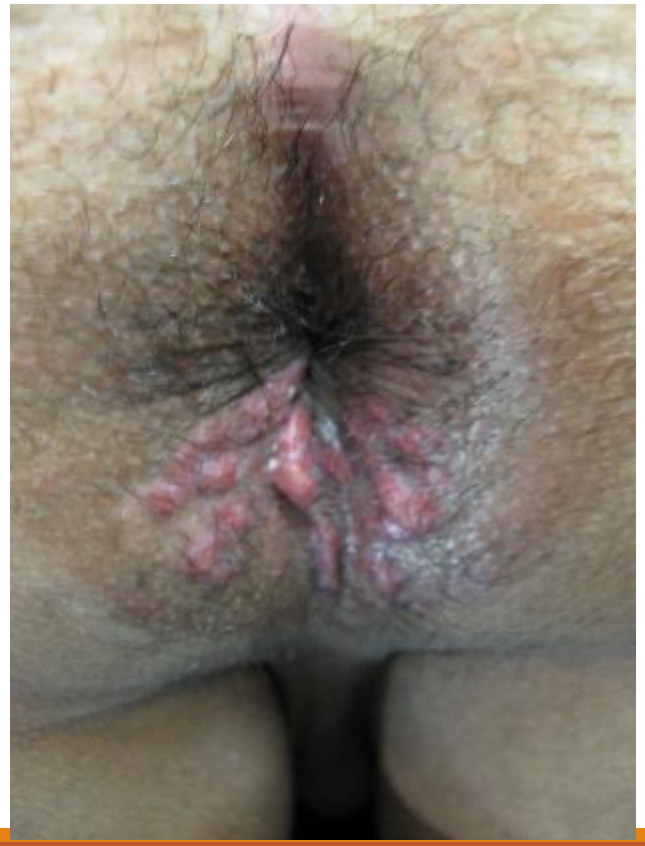


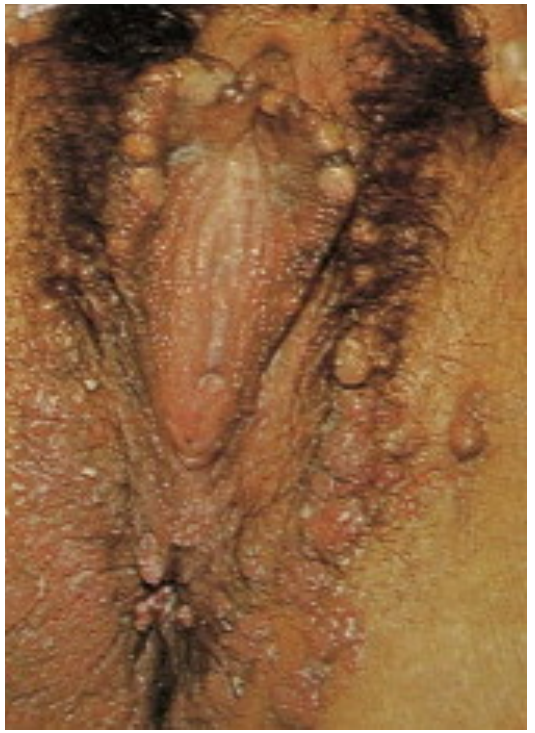
Mosby *STD Atlas, 1997*

Secondary Syphilis: Condyloma lata



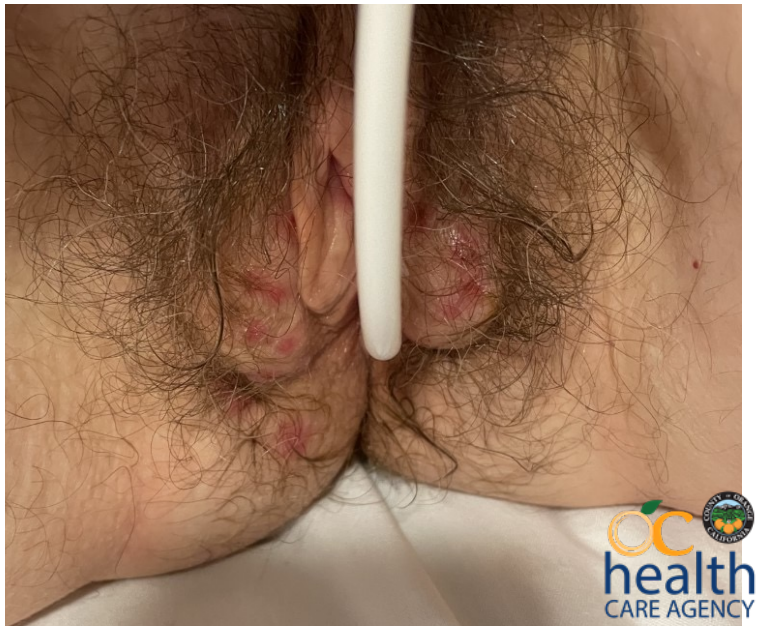
Courtesy: Gregory Melcher, UC Davis
Susan Philip, SF DPH & UCSF



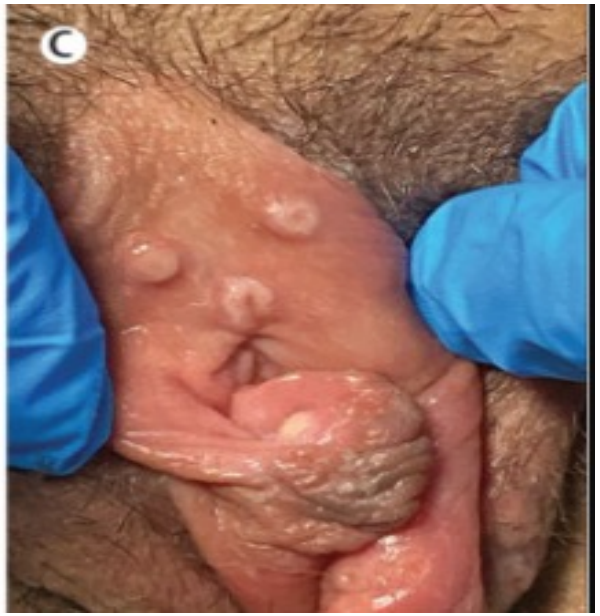


Forbes CD, Jackson WF. *Color Atlas and Text of Clinical Medicine*, 3rd ed. London: Mosby; 2003

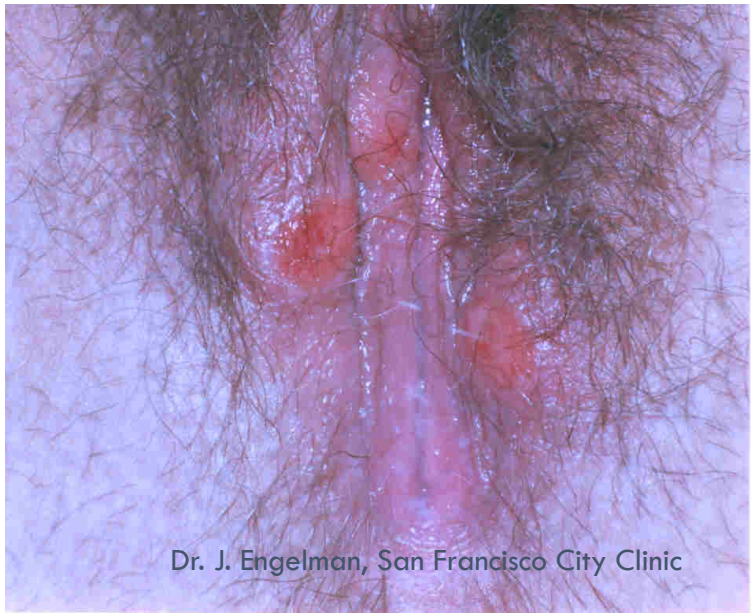
Can be difficult to distinguish MPX, genital herpes and primary syphilis



Genital HSV-2



MPX



Primary syphilis

The Lancet DOI: (10.1016/S0140-6736(22)02187-0)

Syphilis Treatment

Primary, Secondary, and Early Latent Syphilis

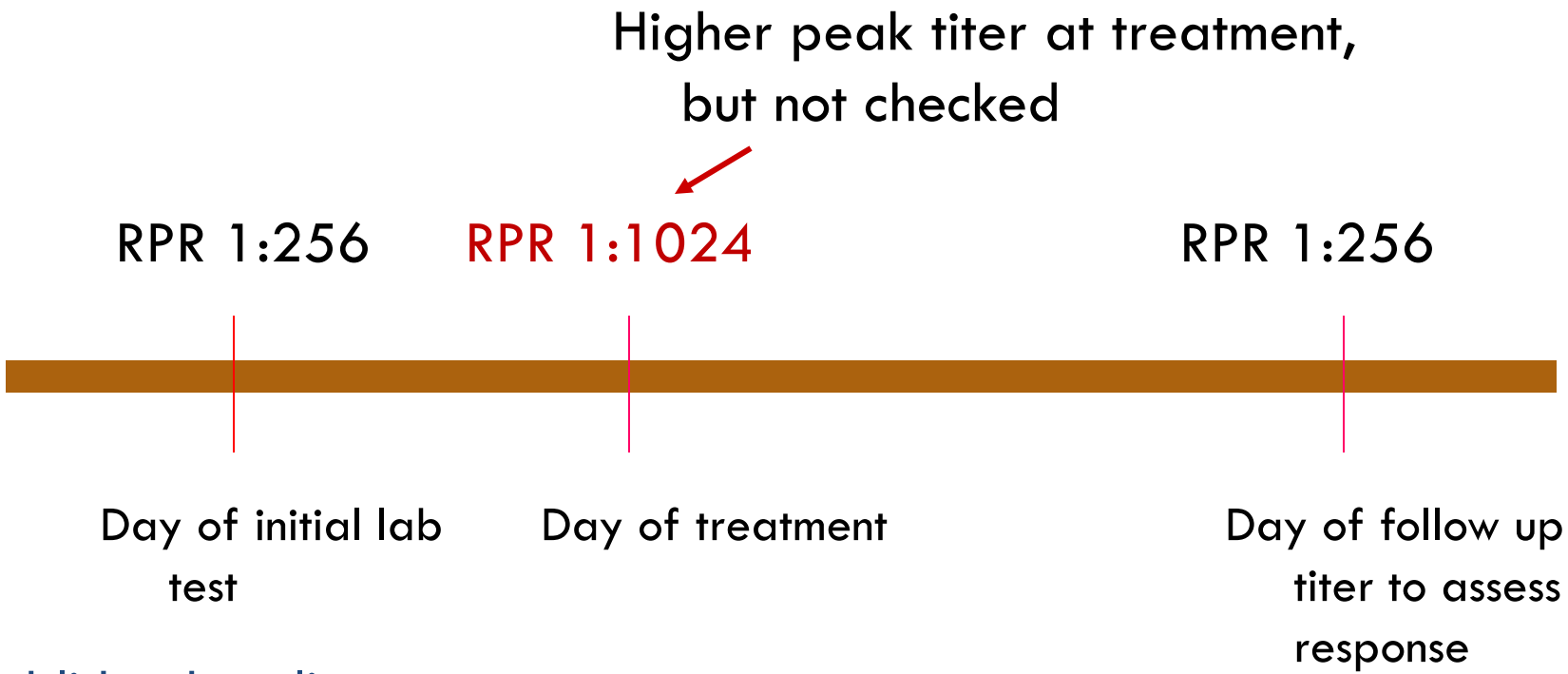
Benzathine penicillin G* 2.4 million units IM in a single dose

*** Bicillin L-A is the trade name. DO NOT use Bicillin C-R!**

Alternatives (non-pregnant penicillin-allergic adults):

- Doxycycline 100 mg po bid x 2 weeks
- Tetracycline 500 mg po qid x 2 weeks
- Ceftriaxone 1 g IV or IM qd x 10-14 d

Importance of Day of Treatment Titer

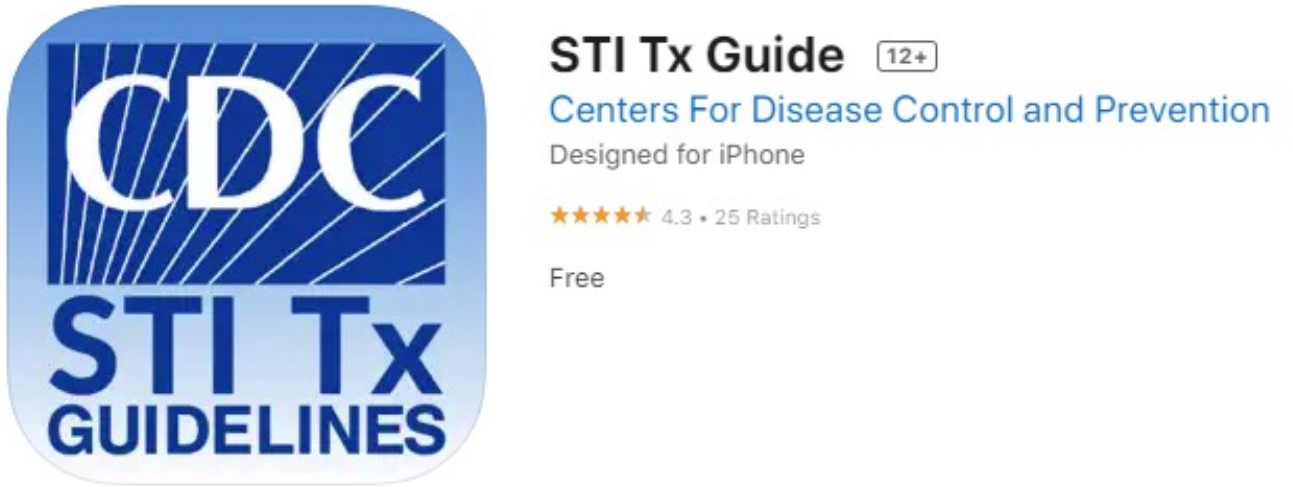


Establishes baseline to compare response post treatment

Frequently forgotten and without baseline makes assessment of titer response difficult

Resources

Get the free CDC Treatment Guidelines App



App Store (Apple)

Google Play (Android)

https://www.cdc.gov/std/treatment-guidelines/default.htm

Love STIs and want free CME? https.//www.std.uw.edu/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National STD experts review
Response within 1-5 business
days, depending on urgency
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Acknowledgements

- Patty Cason, NP
- Amanda Thornton, MD
- The Doxy PEP Study Team

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Questions

Thank you!

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