Syphilis 101

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Presenter Disclosures

- The author and their spouses/partners wish to disclose they have no financial interests or other relationships with the manufacturers of commercial products, suppliers of commercial services, or commercial supporters.

PTC Disclosures

- This training is in alignment with the 2021 STI Treatment Guidelines and peer-reviewed research. We recognize that the CDC may be in the process of modifying the 2021 STI Treatment Guidelines to comply with recent Executive Orders. Upon receiving additional guidance from CDC or the release of updated STI Treatment Guidelines, we will ensure our training content aligns.

- We do not consent to recording this webinar or to AI note taking; we are not recording this webinar.

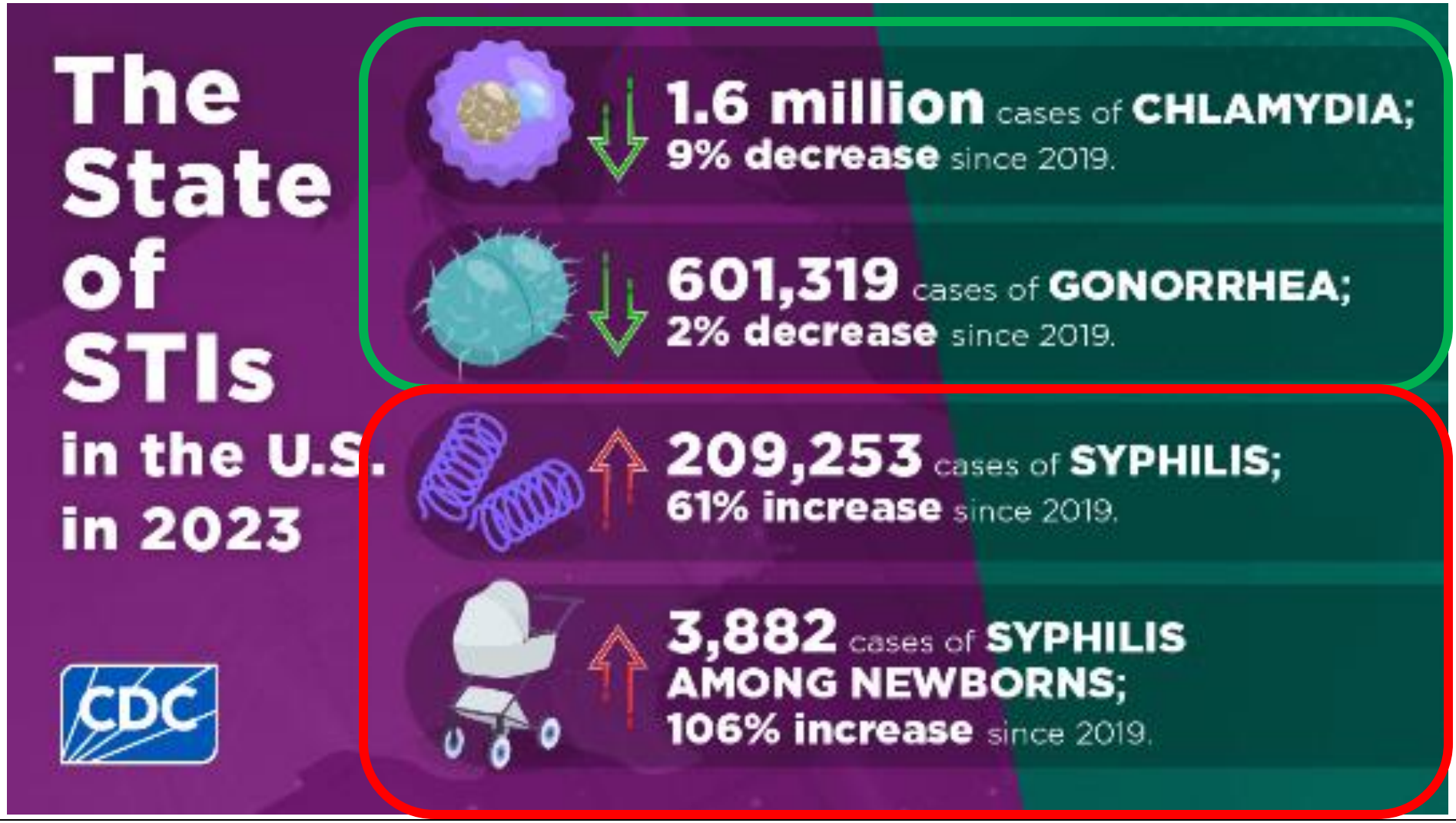
Objectives

1. Recognize the burden of syphilis
2. Identify the stages of syphilis infection
3. Interpret syphilis serologic tests
4. Summarize indications for other testing
5. Determine appropriate syphilis treatments by stage/presentation
6. Discuss appropriate follow up testing and partner management

Not covered

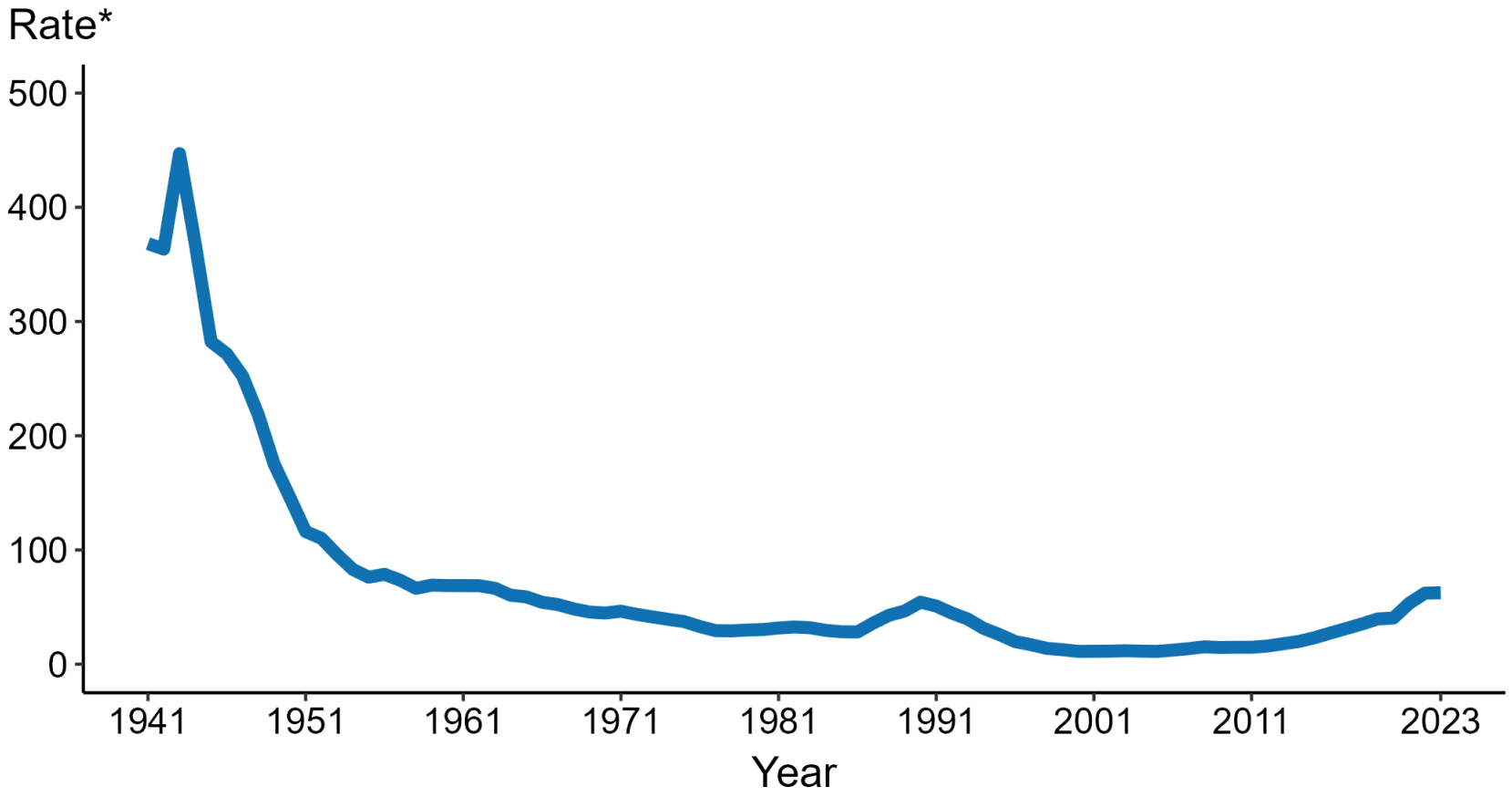
- Congenital syphilis
- Syphilis in pregnancy
- Syphilis prevention e.g. Doxy PEP

Bacterial STIs in 2023—good news/bad news



Syphilis: bouncing back

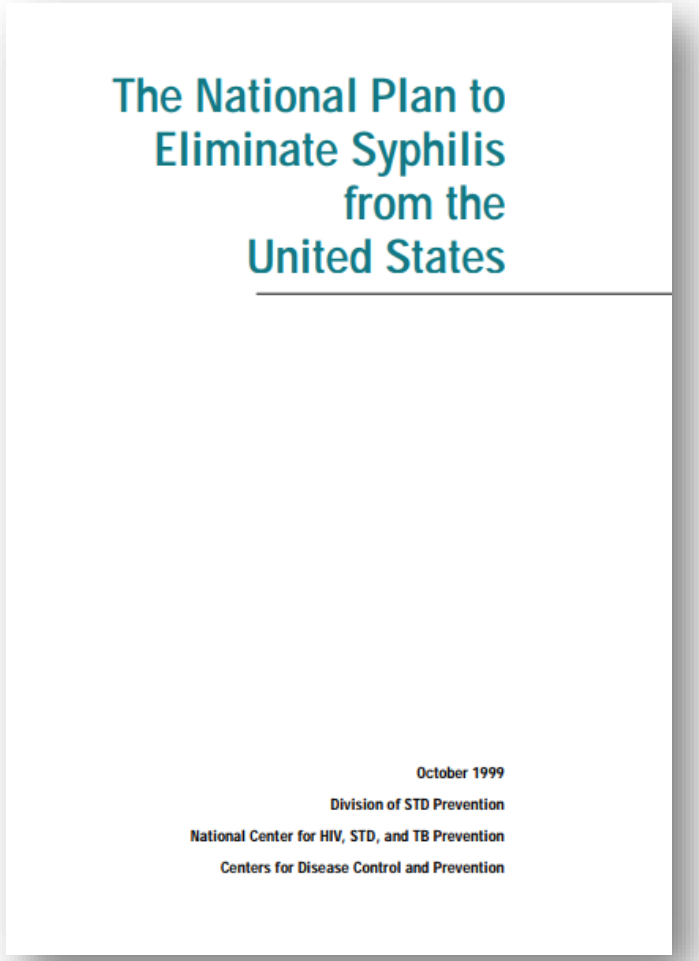
Syphilis — Rates of Reported Cases by Year, United States, 1941–2023



* Per 100,000

NOTE: Total syphilis includes all stages of syphilis and congenital syphilis

The National Plan to Eliminate Syphilis


The National Plan to Eliminate Syphilis from the United States

October 1999

Division of STD Prevention

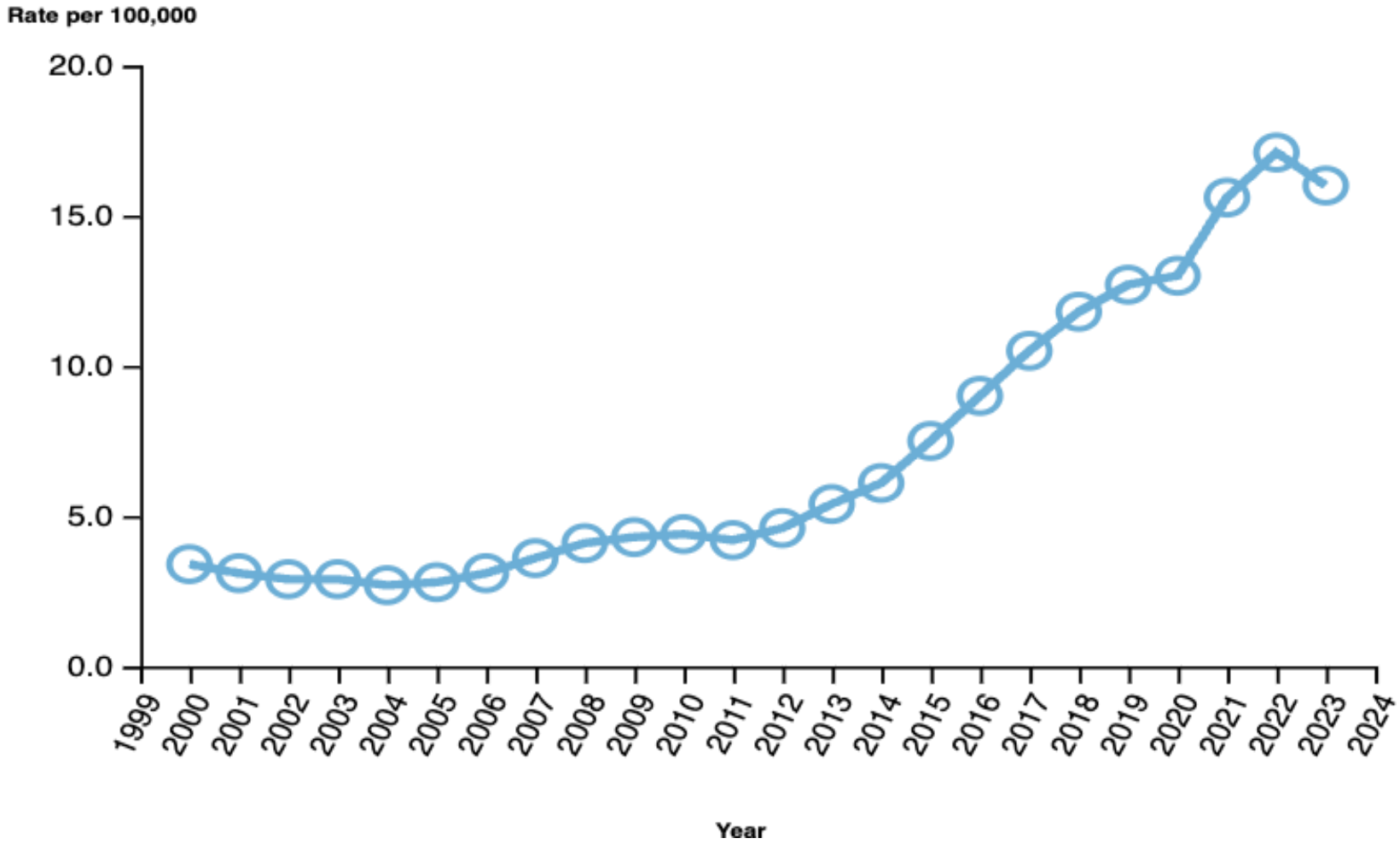
National Center for HIV, STD, and TB Prevention

Centers for Disease Control and Prevention

As we approach the end of the 20th century, the United States is faced with a unique opportunity to eliminate syphilis within its borders. Syphilis is easy to detect and cure, given adequate access to and utilization of care. Nationally, it is at the lowest rate ever recorded and it is confined to a very limited number of geographic areas, primarily in the southern United States. Where syphilis does persist in the U.S., it disproportionately burdens African Americans living in poverty. Syphilis elimination is not only feasible, but also can have far-reaching public health implications by removing its devastating consequences—increased likelihood of HIV transmission and spontaneous abortions, stillbirths, and multi-system disorders caused by congenital syphilis acquired from mothers with syphilis.

- https://www.cdc.gov/stopsyphilis/exec.htm

Primary and Secondary Syphilis | 2023 | All age groups



Centers for Disease Control and Prevention. NCHHSTP AtlasPlus. https://www.cdc.gov/nchhstp/atlas/index.htm. Accessed 2/8/24.

Congenital and maternal syphilis

Congenital syphilis rates 2000-2023

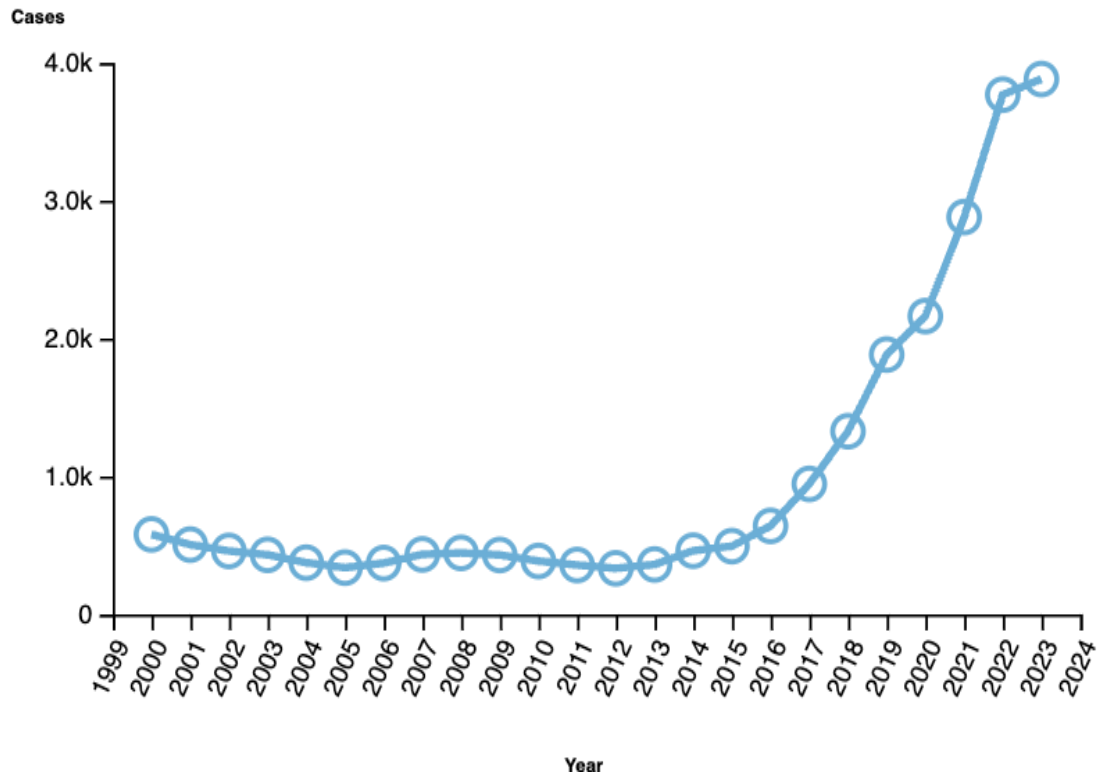
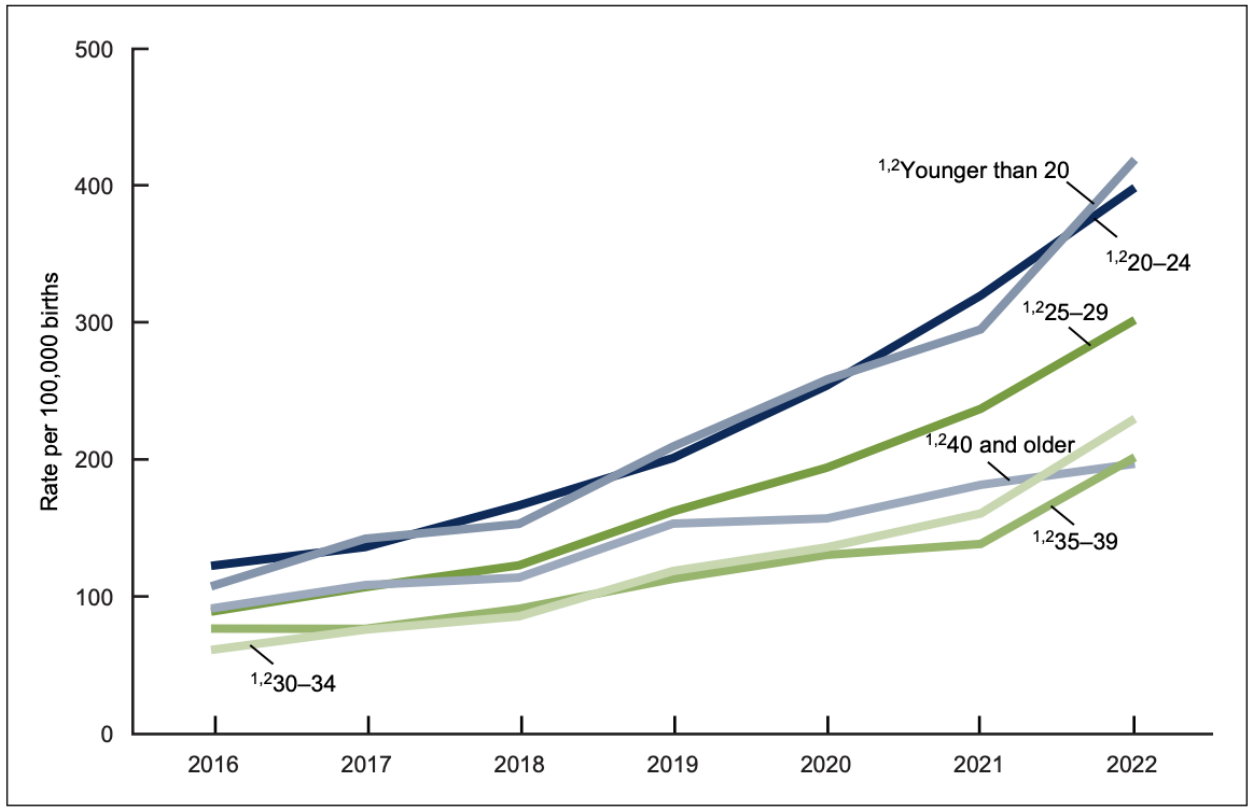
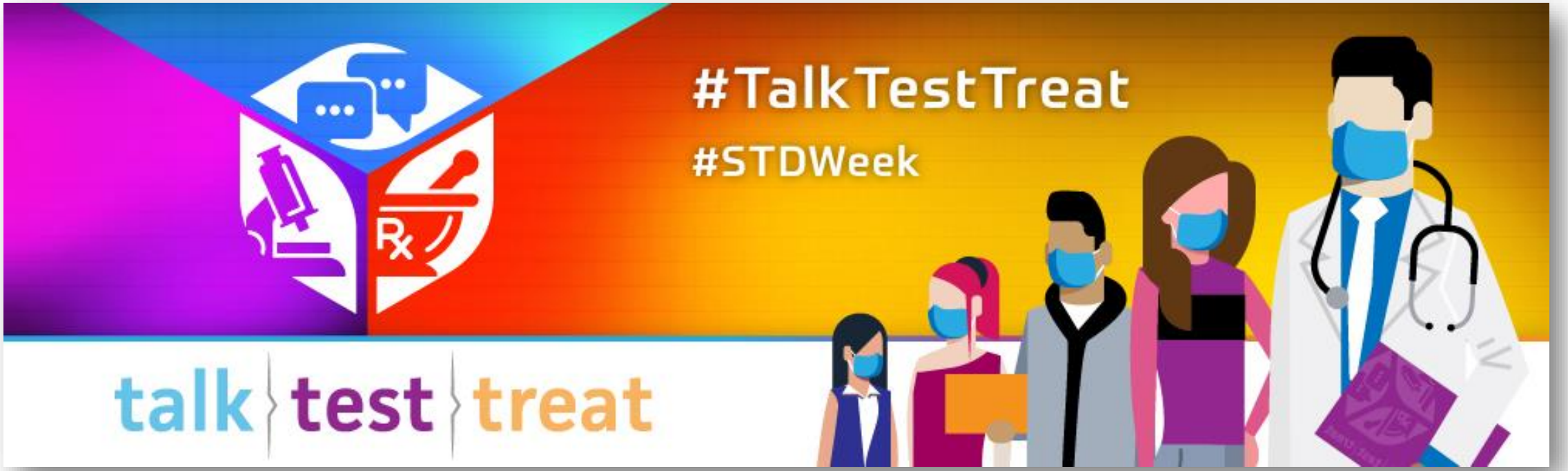


Figure 3. Maternal syphilis rate, by age group: United States, 2016–2022



- Gregory, Elizabeth and Ely, Danielle. Trends and Characteristics in Maternal Syphilis Rates During Pregnancy: Unites States, 2016-2022. NCHS Data Brief No. 486, Feb 2024.

What can we do?

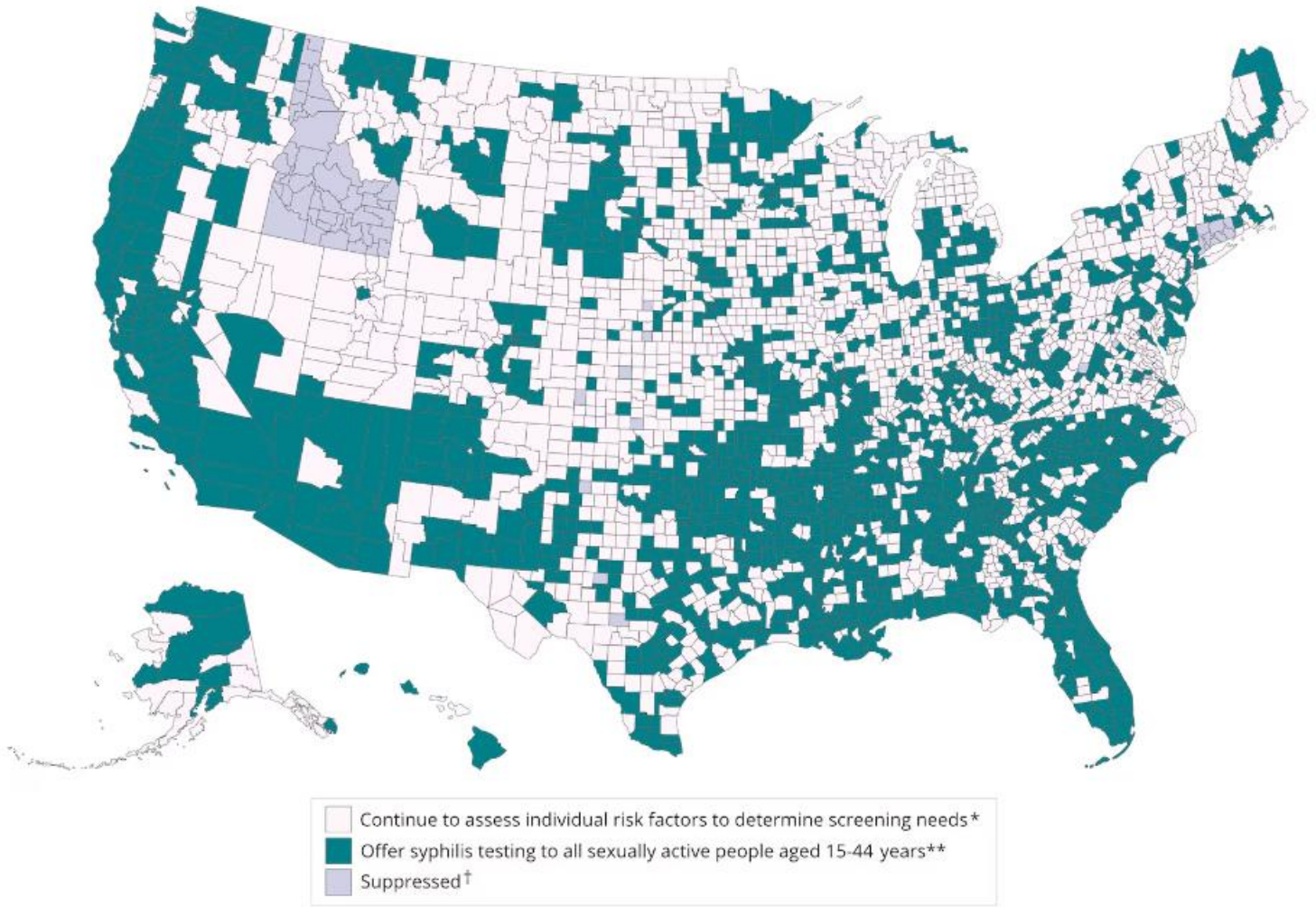


General Screening for Syphilis

Population	Recommendations
Men who have sex with men	• At least annually if sexually active • Every 3-6 months based if increased risk*
Patients taking PrEP	• At initiation and every 3-6 months if increased risk*
Persons living with HIV	• At diagnosis and at least annually if sexually active, and more frequently depending on individual risk and local epidemiology*
Non-pregnant Women Other individuals*** Non-MSM Men	• No national recommendation for **routine** screening • Screen asymptomatic adults a increased risk*
Pregnant Women	• First prenatal encounter plus third trimester (28 weeks) and at delivery if increased risk or in a community with increased prevalence***

• Workowski KA, Bachmann LH, Chan PA, et al. Sexually Transmitted Infections Treatment Guidelines, 2021. MMWR Recomm Rep. 2021;70(4):1-187. Published 2021 Jul 23. doi:10.15585/mmwr.rr7004a1

Syphilis rates are high (almost) everywhere



- Counties with syphilis rates >4.6 per 100,000 among females 15-44
- **72%** of the US population

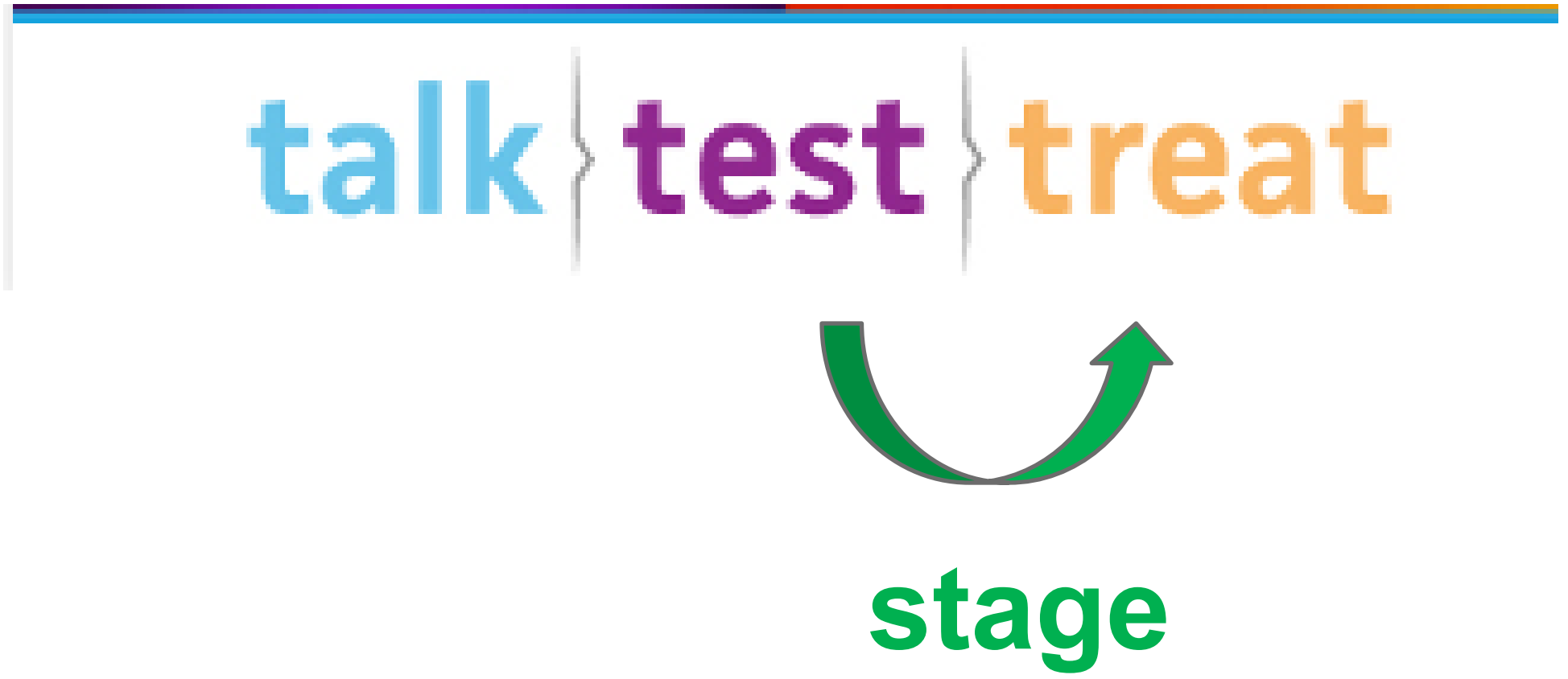
McDonald R et al. *Vital Signs*: Missed Opportunities for Preventing Congenital Syphilis — United States, 2022. MMWR Morb Mortal Wkly Rep 2023;72:1269–1274

A case for increased screening

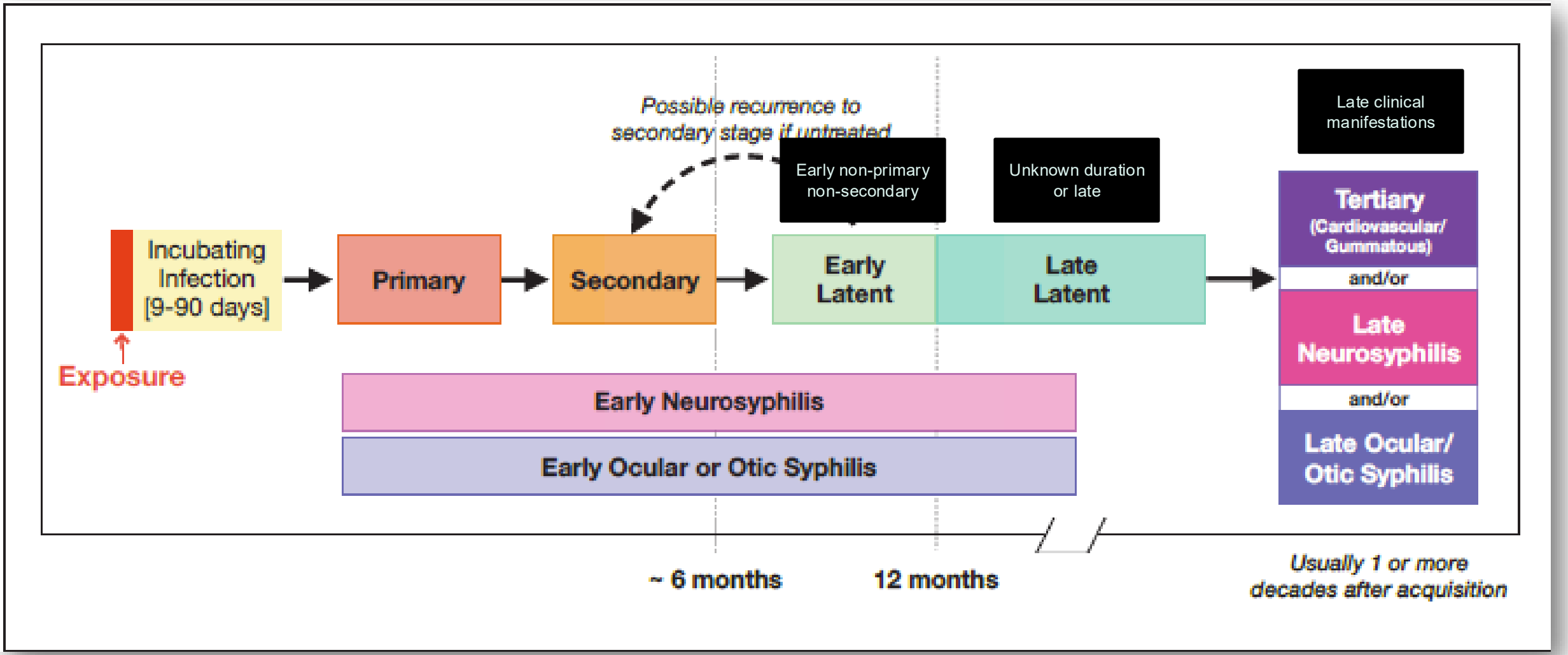
- 2023 syphilis surveillance numbers by stage:
  - 53,007 cases of P&S syphilis
  - 53,573 cases of early non-primary non-secondary syphilis
  - 98,791 cases of unknown duration or late syphilis
  - 3,882 cases of congenital syphilis
- Almost ¾ of cases have no symptoms!

There is a significant burden of asymptomatic disease, including among people of reproductive potential

A missing step

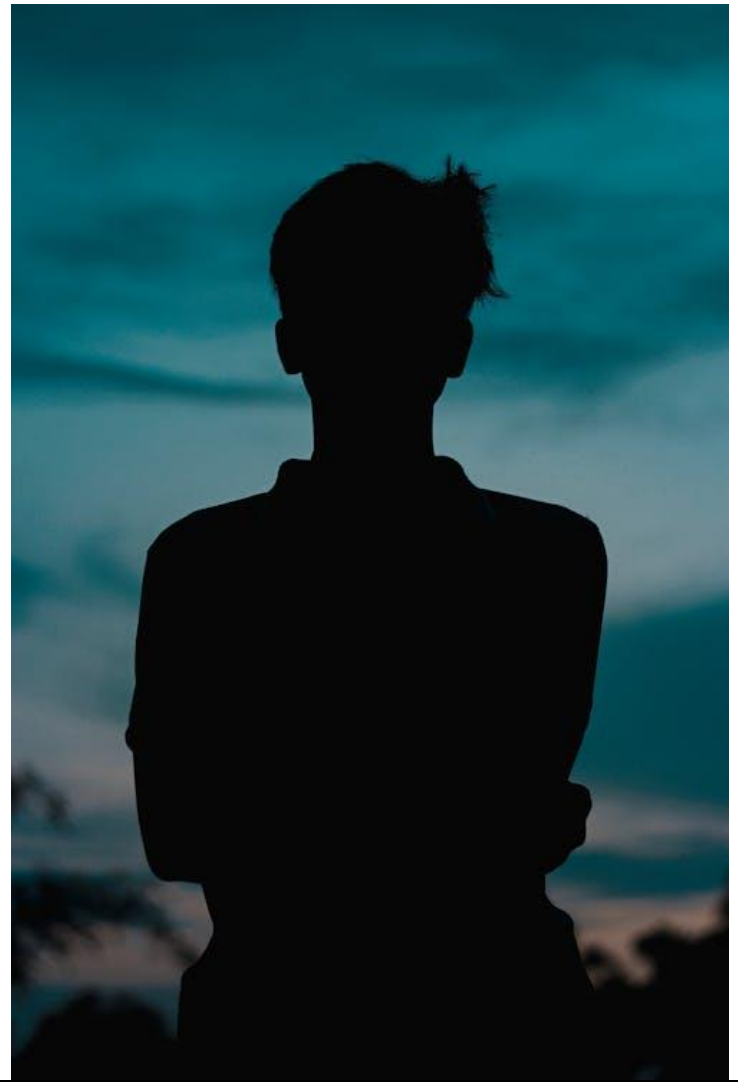


Syphilis – Natural History



- New York City Department of Health and Mental Hygiene, and the New York City STD Prevention Training Center. The Diagnosis and Management of Syphilis: An Update and Review. March 2019. A PDF version is available at https://www.publichealth.columbia.edu/file/15568/download?token=exDNYpJ-

Meet Jack

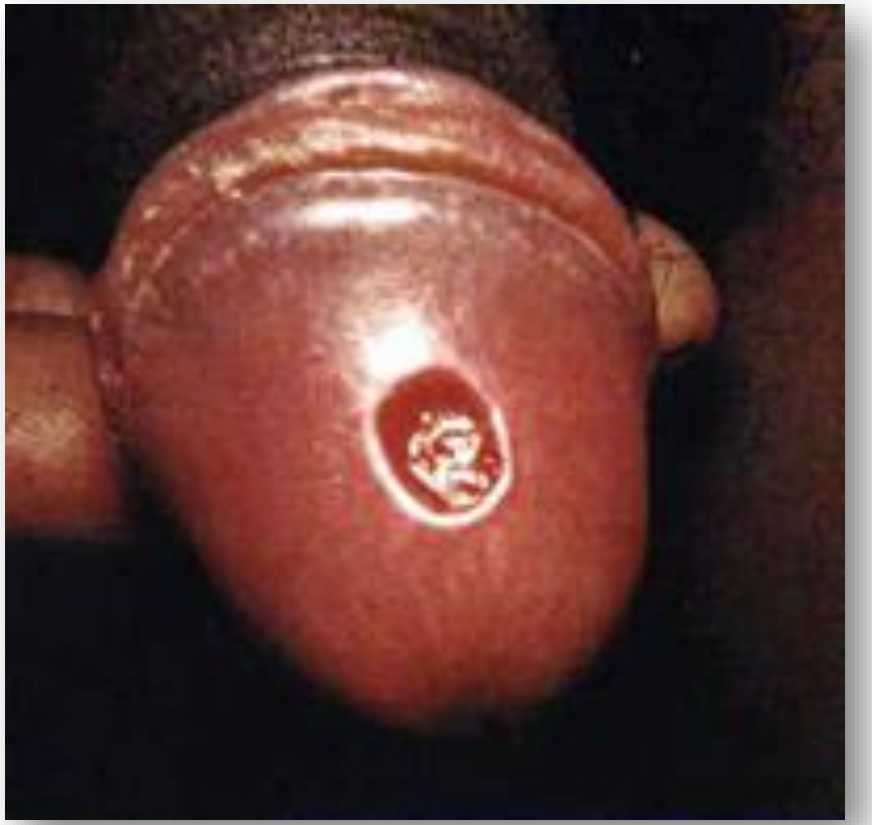


- 24-year-old bisexual male
- Presents for “an ulcer on my penis”
- “It has been there for a few days but doesn’t hurt”
- On exam had some inguinal lymphadenopathy

- **How to stage Jack?**

Syphilis – Primary

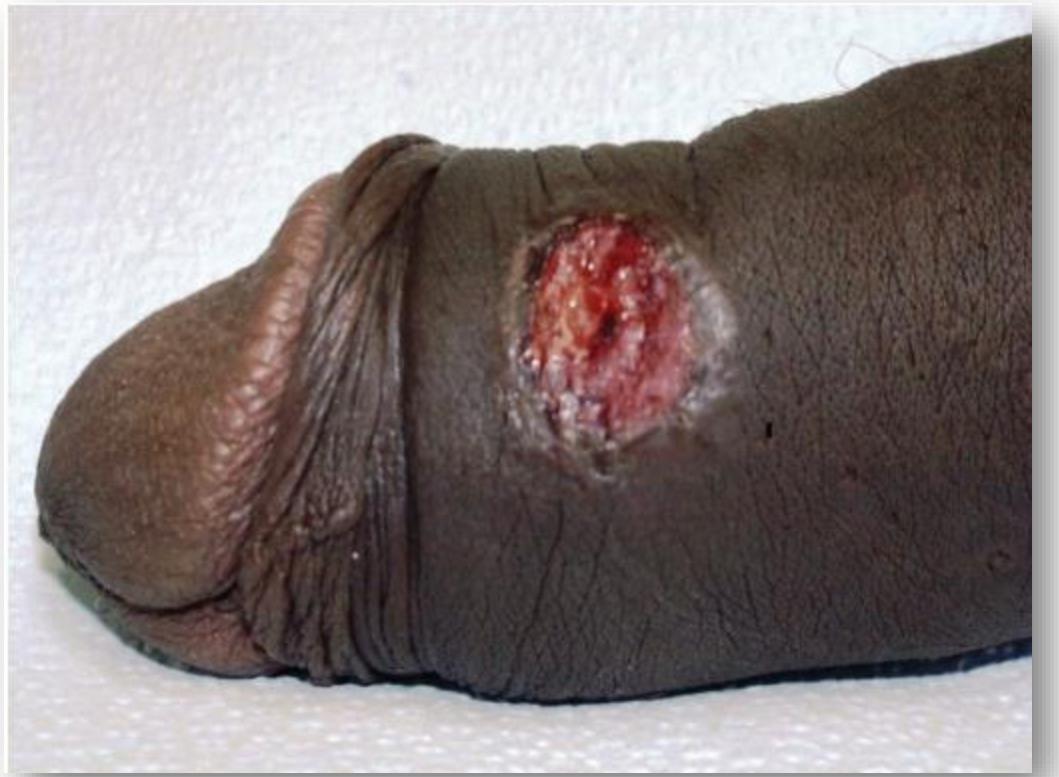
A stage of infection with *Treponema pallidum* characterized by one or more ulcerative lesions (e.g. chancre), which might differ considerably in clinical appearance



- CTSE Definition Available at: https://cdn.ymaws.com/www.cste.org/resource/resmgr/2017PS/2017PSFinal/17-ID-11.pdf
- Image: https://www.cdc.gov/std/training/picturecards.htm

Syphilis – Primary

- Primary Syphilis
  - **Local**
  - **One or more ulcers (chancres) at inoculation site**
  - Painless
    - May go unnoticed
    - Often associated with regional or bilateral lymphadenopathy
  - Occur 10 – 90 days after infection
  - Highly infectious
  - Resolves in 1-6 weeks



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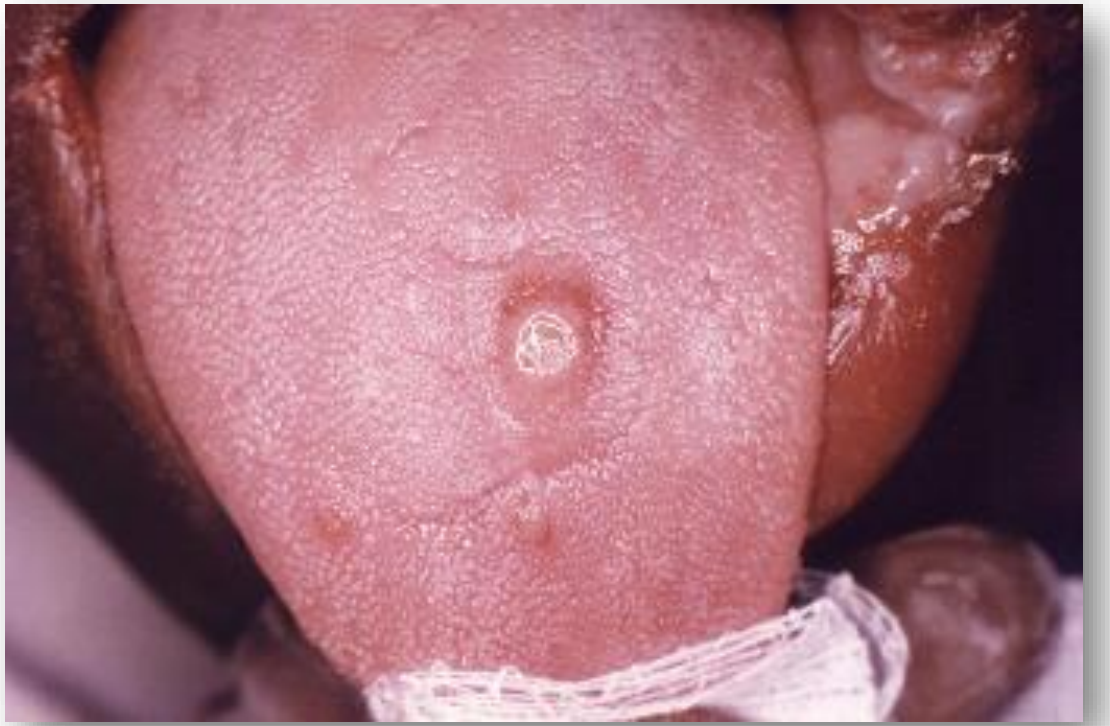

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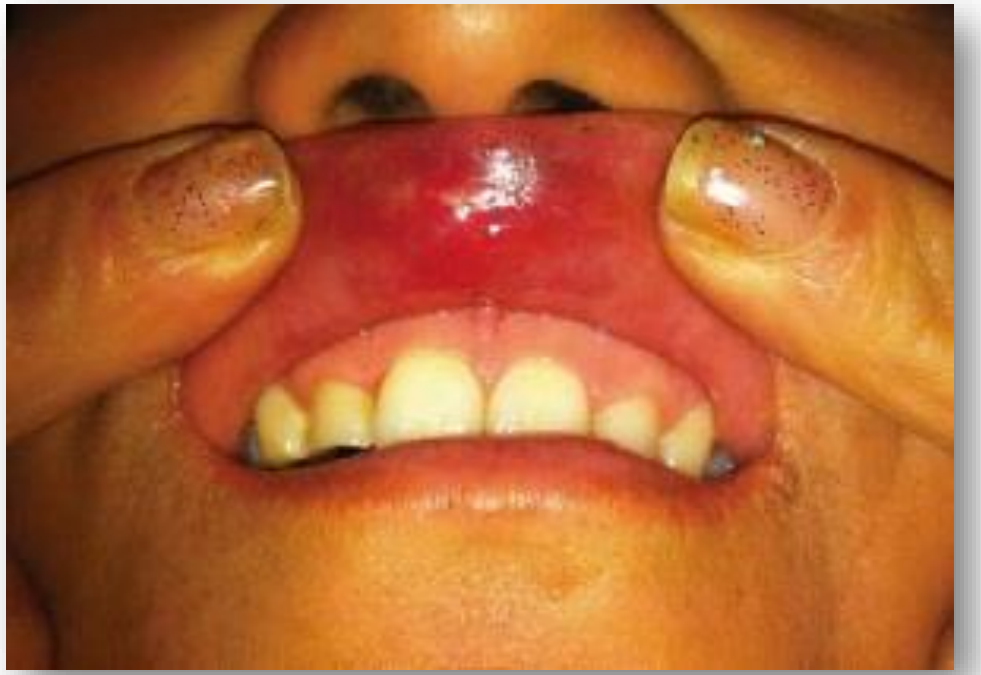

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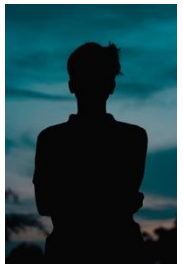

Possible recurrence to secondary stage if untreated

Incubating Infection [9-90 days]

Exposure

Primary

Secondary

Early Latent

Late Latent

Tertiary (Cardiovascular/ Gummatous)

and/or

Late Neurosyphilis

and/or

Late Ocular/ Otic Syphilis

Early Neurosyphilis

Early Ocular or Otic Syphilis

~ 6 months

12 months

Usually 1 or more decades after acquisition

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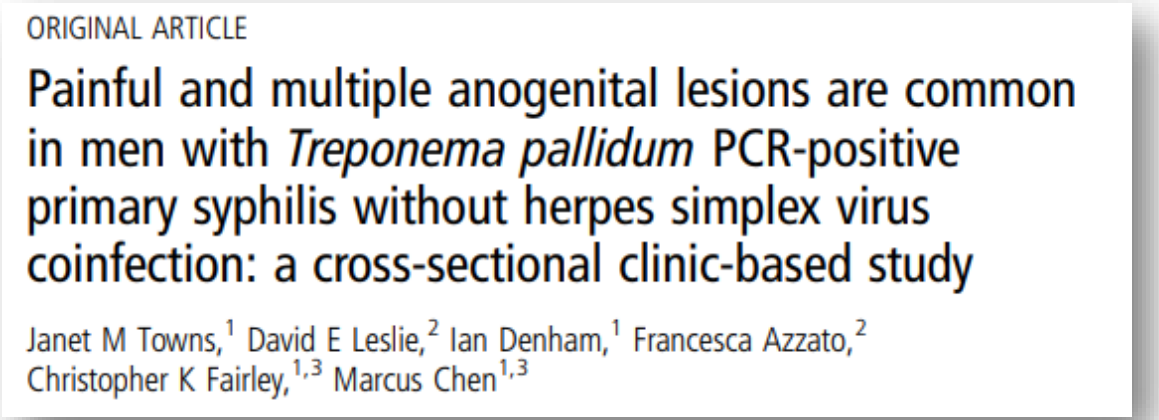
2021 STI Guideline Updates to Primary Syphilis

- Classic Presentation
  - Single painless ulcer or chancre at the site of infection

- **Atypical presentations**
  - Multiple, atypical, or painful lesions at the site of infection



ORIGINAL ARTICLE

Painful and multiple anogenital lesions are common in men with *Treponema pallidum* PCR-positive primary syphilis without herpes simplex virus coinfection: a cross-sectional clinic-based study

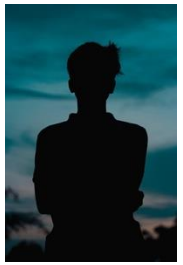
Janet M Towns,[1] David E Leslie,[2] Ian Denham,[1] Francesca Azzato,[2] Christopher K Fairley,[1,3] Marcus Chen[1,3]

- Towns JM, Leslie DE, Denham I, Azzato F, Fairley CK, Chen M. Painful and multiple anogenital lesions are common in men with Treponema pallidum PCR-positive primary syphilis without herpes simplex virus coinfection: a cross-sectional clinic-based study. Sex Transm Infect. 2016 Mar;92(2):110-5. doi: 10.1136/sextrans-2015-052219. Epub 2015 Sep 16. PMID: 26378262.

Meet Jill

- 25-year-old female
- Presents for “routine STI testing”
- In a new (last 3 weeks) relationship with a bisexual male who was recently diagnosed with syphilis (Jack)
- She reports no lesions, no rash, and her exam is benign

Syphilis – Incubation



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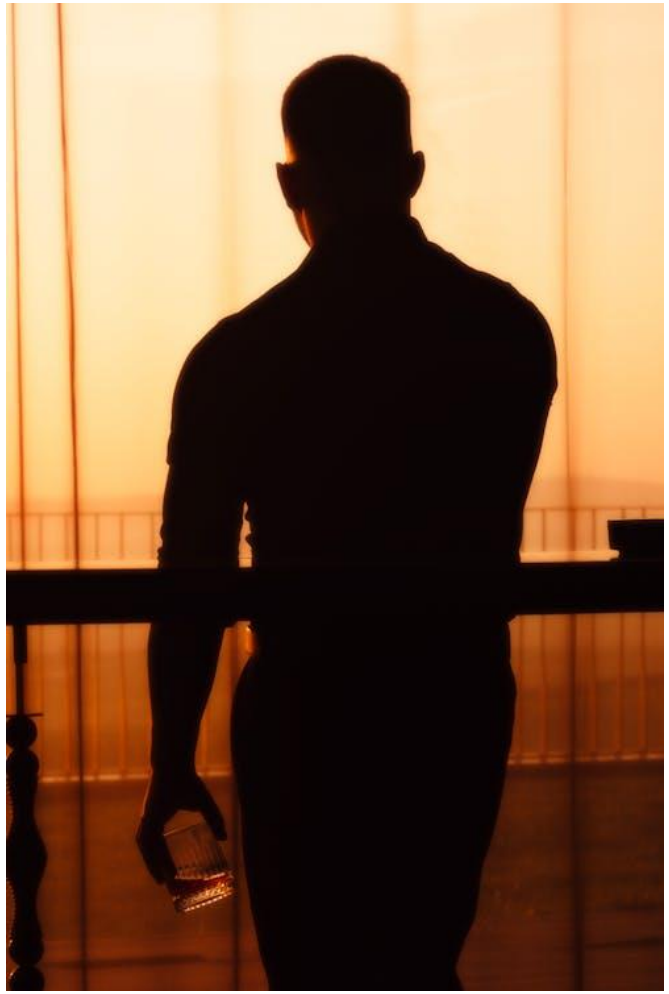
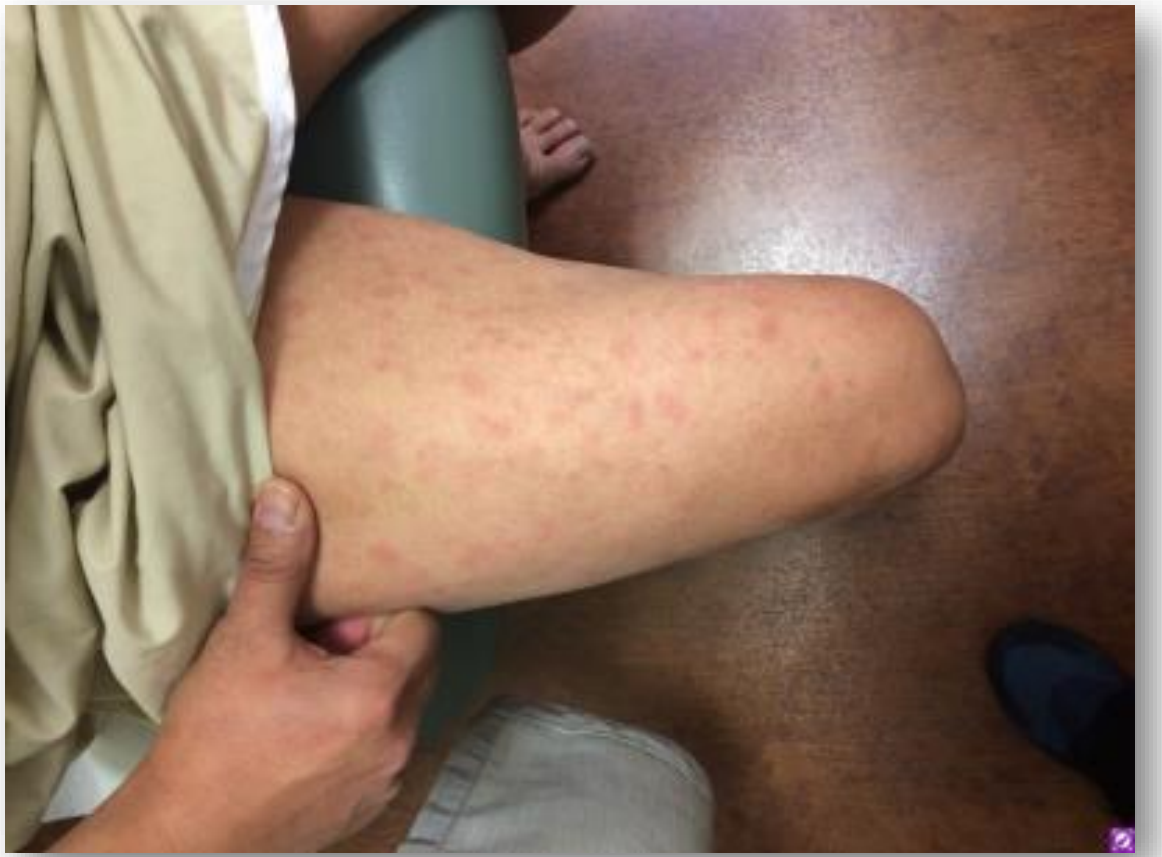
Meet Jordan

- 30-year-old man who has sex with men who started PrEP 6 months ago
- Presents to clinic today for a routine PrEP visit and notes a recent history of diffuse skin rash that has now faded without ay persistent symptom
- 6 weeks ago he presented to an urgent care when the rash appeared, and was sent home with a topical steroid cream



Jordan's Urgent Care Visit

- Diffuse, non-pruritic, non-painful, rash
- Erythematous macules and patches on his chest, axilla, abdomen, and bilateral upper and lower extremities



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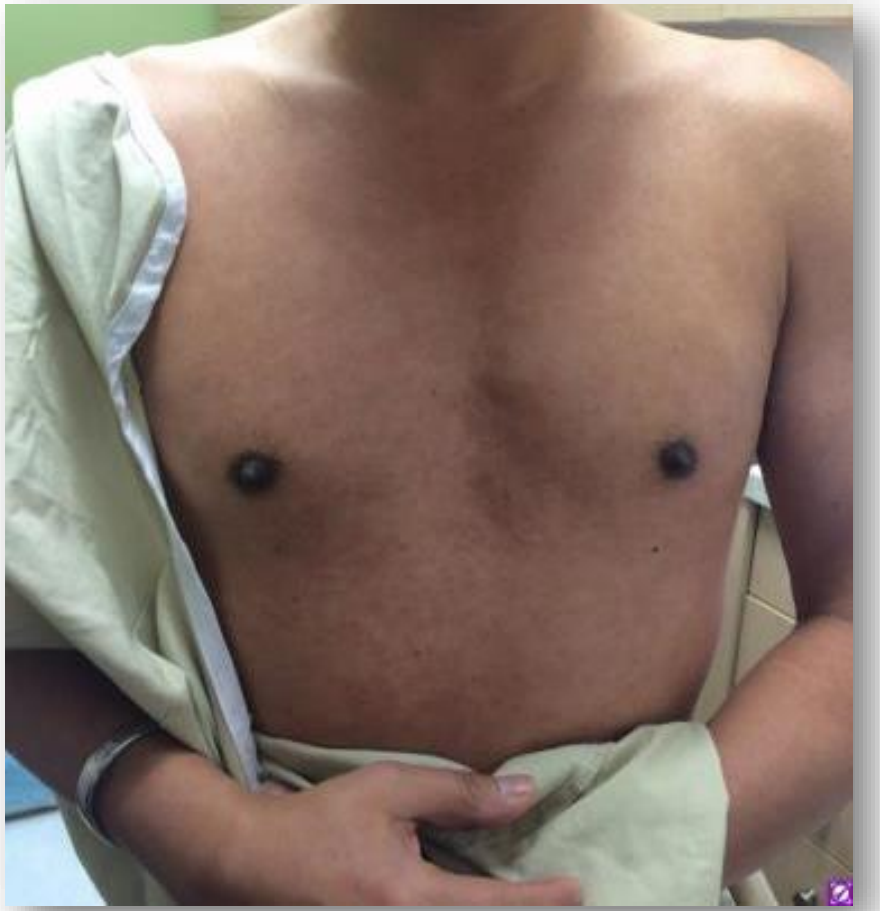
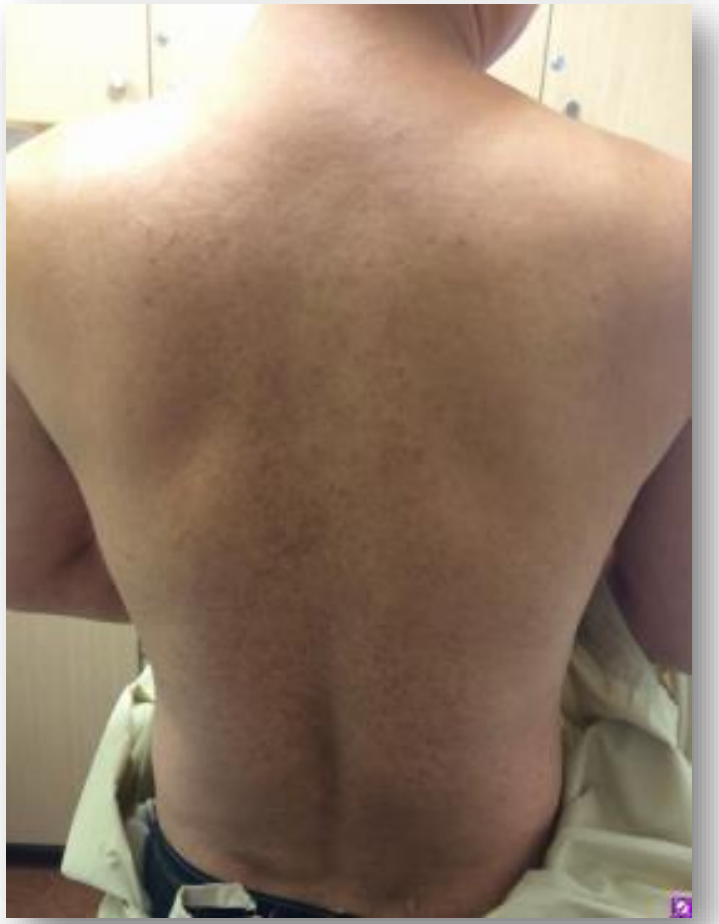


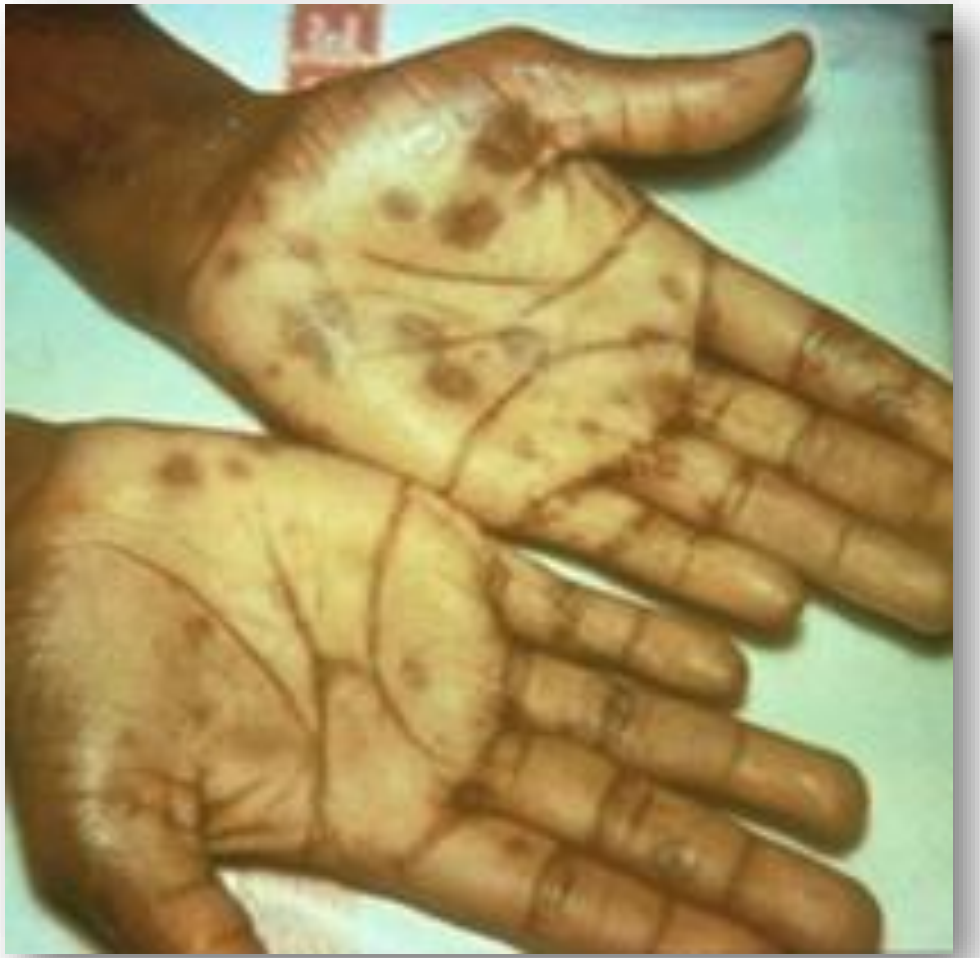


Secondary Syphilis

- Characterized by localized AND/OR diffuse mucocutaneous lesions (e.g., rash – such as non-pruritic macular, maculopapular, papular, or pustular lesions), often with generalized lymphadenopathy

- Other signs can include mucous patches, condyloma lata, and alopecia

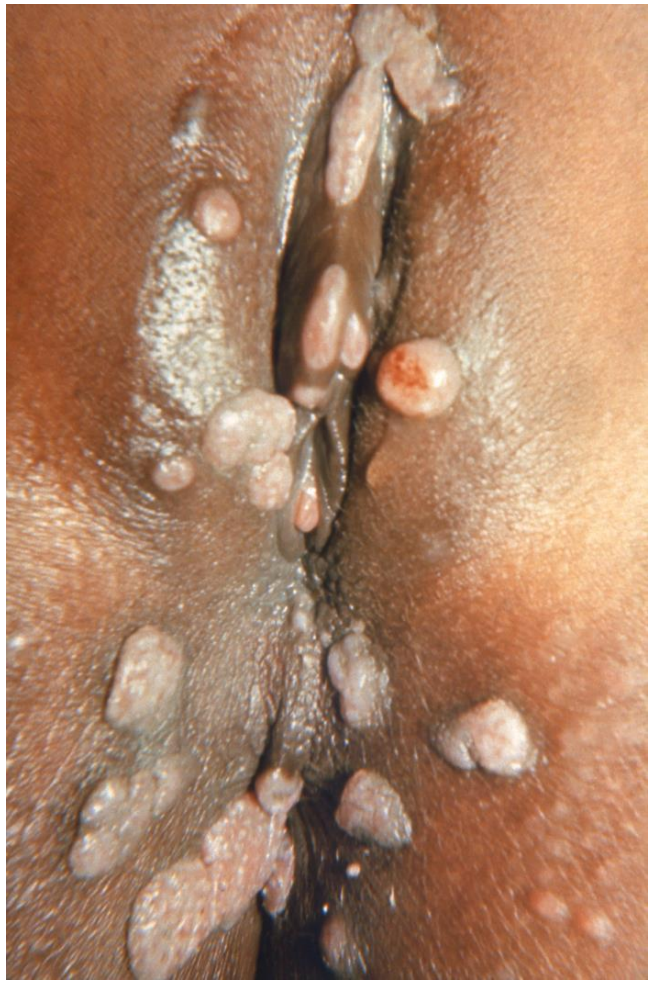
- **The primary ulcerative lesion may still be present**



- Photos from CDC Public Health Image Library (PHIL). Available: https://phil.cdc.gov/Default.aspx Stock photo. Posed by model

Secondary Syphilis

- Secondary Syphilis
  - **Bacterial Dissemination**
  - **Dermatologic manifestations**
  - Systemic symptoms
    - Low-grade fever
    - Fatigue
    - Painless generalized adenopathy
  - Usually, 4-8 weeks after infection
    - Resolves in 6 weeks
    - Highly infectious



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Syphilis - Secondary

Organ System	Clinical Findings
Skin and Mucous Membranes	• Rash or other skin lesions with varied appearance frequently on palms/soles – Macular/papular/maculopapular – Annular – Psoriasiform – Necrotic (rare) • Condyloma lata: moist, gray-white, wart-like growths appearing in warm moist areas such as the perineum and the anus • Patchy alopecia, often with a moth-eaten appearance • Mucous patches: flat, silver-gray discrete macules, plaques or erosions involving the mouth, tongue, or ano-genital mucosa • Split- or fissured-papules at the angles of the mouth and nasolabial folds (rare)
Systemic	• Lymphadenopathy • Systemic symptoms including: malaise, fever, and other nonspecific constitutional symptoms
Gastrointestinal	• Gastric syphilis • Hepatitis (usually subclinical)
Renal	• Glomerulonephritis • Nephrotic syndrome
Musculoskeletal	• Arthritis • Periostitis

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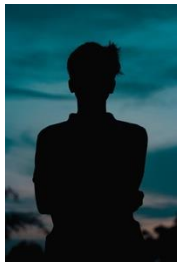
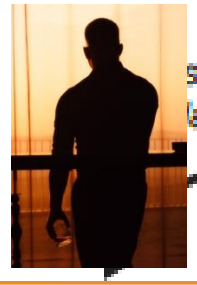
Syphilis – Secondary/Early Latent





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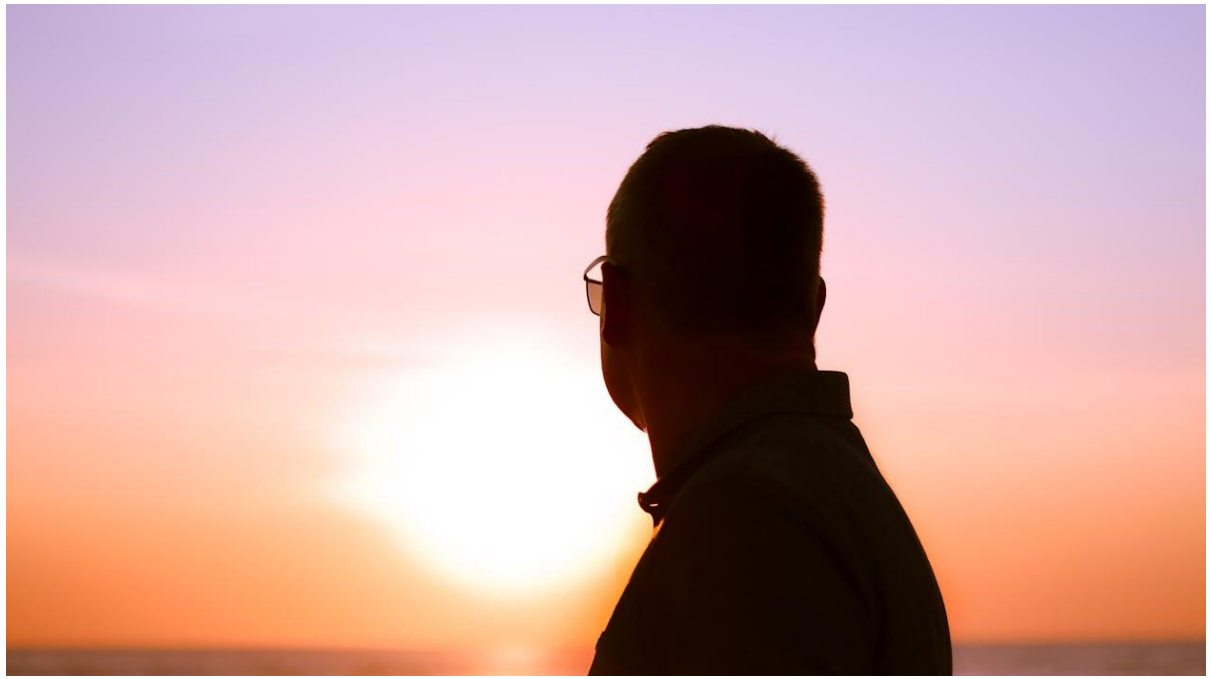
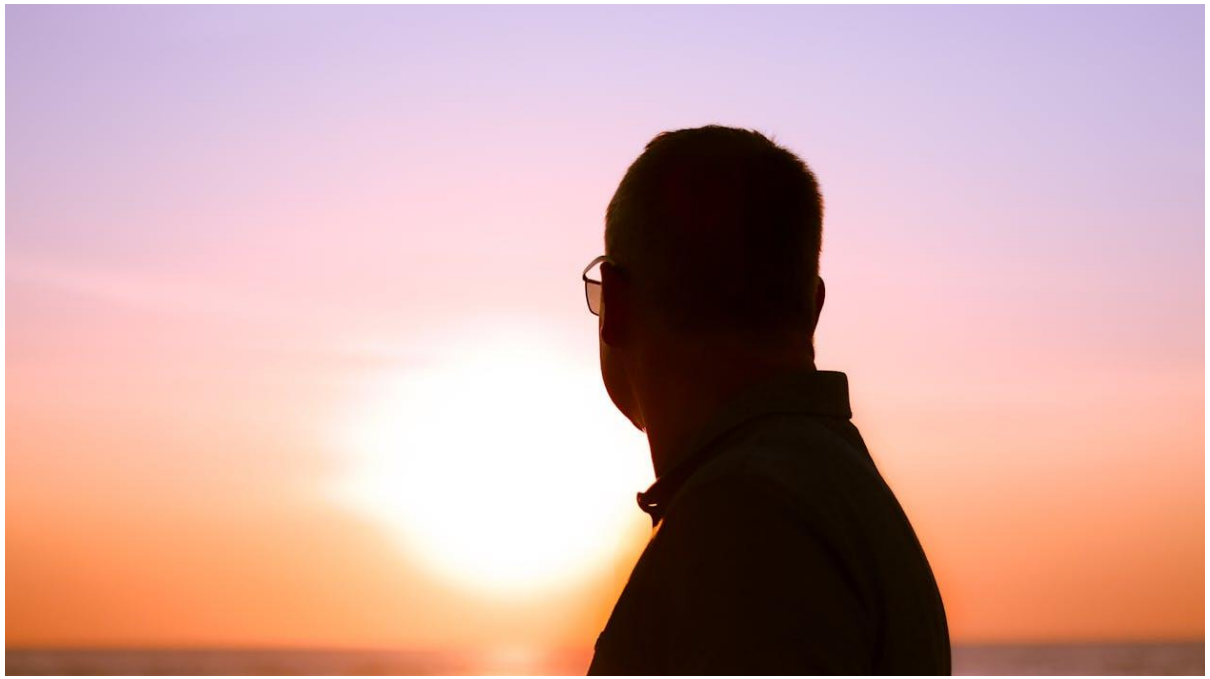
Today's Visit with Jordan

- A few days ago Jordan felt like he was having a hard time hearing the TV
- Went to ED and was seen by ENT
  - "Asymmetric hearing loss, please get MRI"
  - MRI unremarkable
  - Told to follow-up outpatient



Today's Visit with Jordan

- At today's visit, Jordan notes that he's also having a hard time reading his homework
- A thorough neurologic exam reveals decreased visual and auditory acuity, but no other CN abnormalities
- You send him urgently to the ophthalmology clinic
- On the note from his fundoscopic exam:
  - "Panuveitis"



Clinical Descriptions of Ocular and Otic Manifestations

Ocular Syphilis

- Often presents as panuveitis
- Can involve any structure in the anterior and posterior segment of the eye including:
  - Conjunctivitis
    - Red eye/Pain
  - Anterior uveitis
  - Posterior interstitial keratitis
  - Optic neuropathy
  - Retinal vasculitis
- Can lead to **permanent** vision loss

Otosyphilis

- Typically presents with cochleo-vestibular symptoms including
  - Tinnitus
  - Vertigo
  - Sensorineural hearing loss
    - Unilateral/Bilateral
    - Have a sudden onset
    - Progress rapidly
- Can result in **permanent** hearing loss

Other neurosyphilis manifestations

NEUROSYPHILIS SYNDROME	ONSET	POSSIBLE SYMPTOMS & CLINICAL FINDINGS (Exam findings are listed in bold)	
Asymptomatic Neurosyphilis	Soon after infected	None	
Acute Syphilitic Meningitis	Within 1st year *Can be seen during primary or secondary syphilis*	• Meningismus (headache, nuchal rigidity, photophobia) • Nausea, vomiting • Focal neurologic symptoms (vision changes, tinnitus, hearing loss, facial weakness or other cranial nerve symptoms) • Seizures	• Symptoms of increased intracranial pressure • **Nuchal rigidity (+ Kernig/Brudzinski signs)** • **Deafness (progressive or sudden)** • **Cranial nerve deficits (3rd, 6th, 7th, 8th CN)** • **Hemiplegia/Aphasia**
Meningo-vascular Neurosyphilis (Rare spinal cord involvement)	Months to years (average 7 years)	<u>Infarction-related focal neurologic symptoms</u> • **Paresthesias** • Seizures • **Hemiparesis, Hemiplegia** • **Aphasia** • **Hemianopsia (decreased vision or blindness in left or right half of visual field)**	<u>Pre-infarction symptoms</u> • Headache • Dizziness/vertigo • Stuttering stroke-like symptoms (weakness, **paresthesias**) • Psychiatric manifestations (mood, personality, or behavioral changes; irritability) • **Memory loss, slowed mentation & speech**

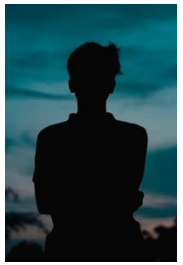
Screening for Neuro, Ocular, and Otic Syphilis

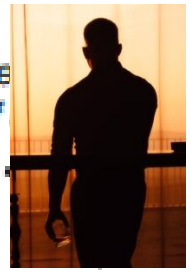
Screening Questions for Neurosyphilis (Including Ocular and Otosyphilis)

Questions		
Symptoms of Otosyphilis		
1) Have you recently had new trouble hearing?	☐ Yes – refer to ENT	☐ No
2) Do you have ringing in your ears?	☐ Yes – refer to ENT	☐ No
Symptoms of Ocular syphilis		
3) Have you recently had a change in vision?	☐ Yes – refer to ophthalmology	☐ No
4) Do you see flashing lights?	☐ Yes – refer to ophthalmology	☐ No
5) Do you see spots that move or float by in your vision?	☐ Yes – refer to ophthalmology	☐ No
6) Have you had any blurring of your vision?	☐ Yes – refer to ophthalmology	☐ No
Symptoms of neurosyphilis		
7) Are you having headaches?	☐ Yes	☐ No
8) Have you recently been confused?	☐ Yes	☐ No
9) Has your memory recently gotten worse?	☐ Yes	☐ No
10) Do you have trouble concentrating?	☐ Yes	☐ No
11) Do you feel that your personality has recently changed?	☐ Yes	☐ No
12) Are you having a new problem walking?	☐ Yes	☐ No
13) Do you have weakness or numbness in your legs?	☐ Yes	☐ No

- https://kingcounty.gov/depts/health/communicable-diseases/hiv-std/~/media/depts/health/communicable-diseases/documents/hivstd/Screening-Tool-Neurosyphilis.ashx

Syphilis – Secondary/Early Latent





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Meet Jackie

- 29 year old female presents for a follow up visit
- She noted during a recent family planning visit that she was considering becoming pregnant
- Comprehensive STI testing was performed at that time at the discretion of the treating clinician, and included syphilis testing
- She has been referred to you for a positive result
- A pregnancy test from that visit was negative
- Prior syphilis testing two years ago was negative
- She notes no symptoms today, and has a normal exam

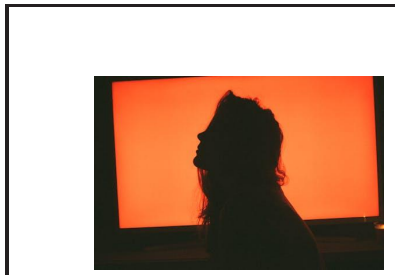
Syphilis – Latent

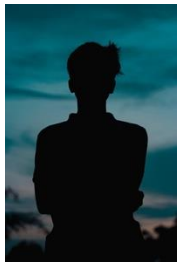
Latent Phase	Definition
Syphilis, early non-primary non-secondary	Duration of infection <= 1 year
Syphilis, unknown duration or late	Duration of infection >1 year
	Unknown duration of infection

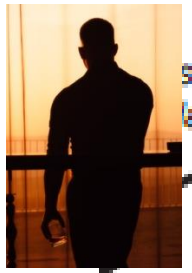
*****Latent syphilis requires no exam findings of primary, secondary or tertiary syphilis**

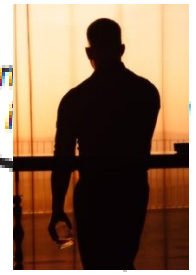
- Early latent disease is differentiated due to the risk of relapsed or intermittent bacteremia
  - This can occur in up to 24% of patients
  - Manifests as symptoms of secondary syphilis including CNS disease
- Risk for infecting partners remains
- Risk of relapsed symptoms and infectiousness decreases after 1 year

Syphilis – Secondary/Early Latent









Incubating Infection [9-90 days]

Exposure

Primary

Secondary

Early Latent

Late Latent

Tertiary (Cardiovascular/ Gummatous)

and/or

Late Neurosyphilis

and/or

Late Ocular/ Otic Syphilis

Early Neurosyphilis

Early Ocular or Otic Syphilis

~ 6 months

12 months

Usually 1 or more decades after acquisition

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Testing

How Do We Test for Syphilis?

- Multiple options exist to test directly for the presence of treponemes in primary syphilis lesions
  - Dark-field microscopy
  - Direct fluorescent antibody testing
  - T palladium NAAT
    - No FDA-approved tests are commercially available

- Unfortunately, these are not available in most clinical settings

Serologic testing

Non-treponemal (lipoidal antigen) tests	Treponemal tests
Test serum reactivity (presence of antibodies) to cardiolipin-cholesterol-lecithin	Test serum reactivity against T. pallidum-specfic antigens
Antigen response is due both directly to bacteria and host tissue damage	More specific than non-treponemal tests
Up to 11% of positive tests in one series not due to T pallidum	Often remain positive for life
Degree of reactivity changes over disease course/after treatment	Generally automated
Generally manual	

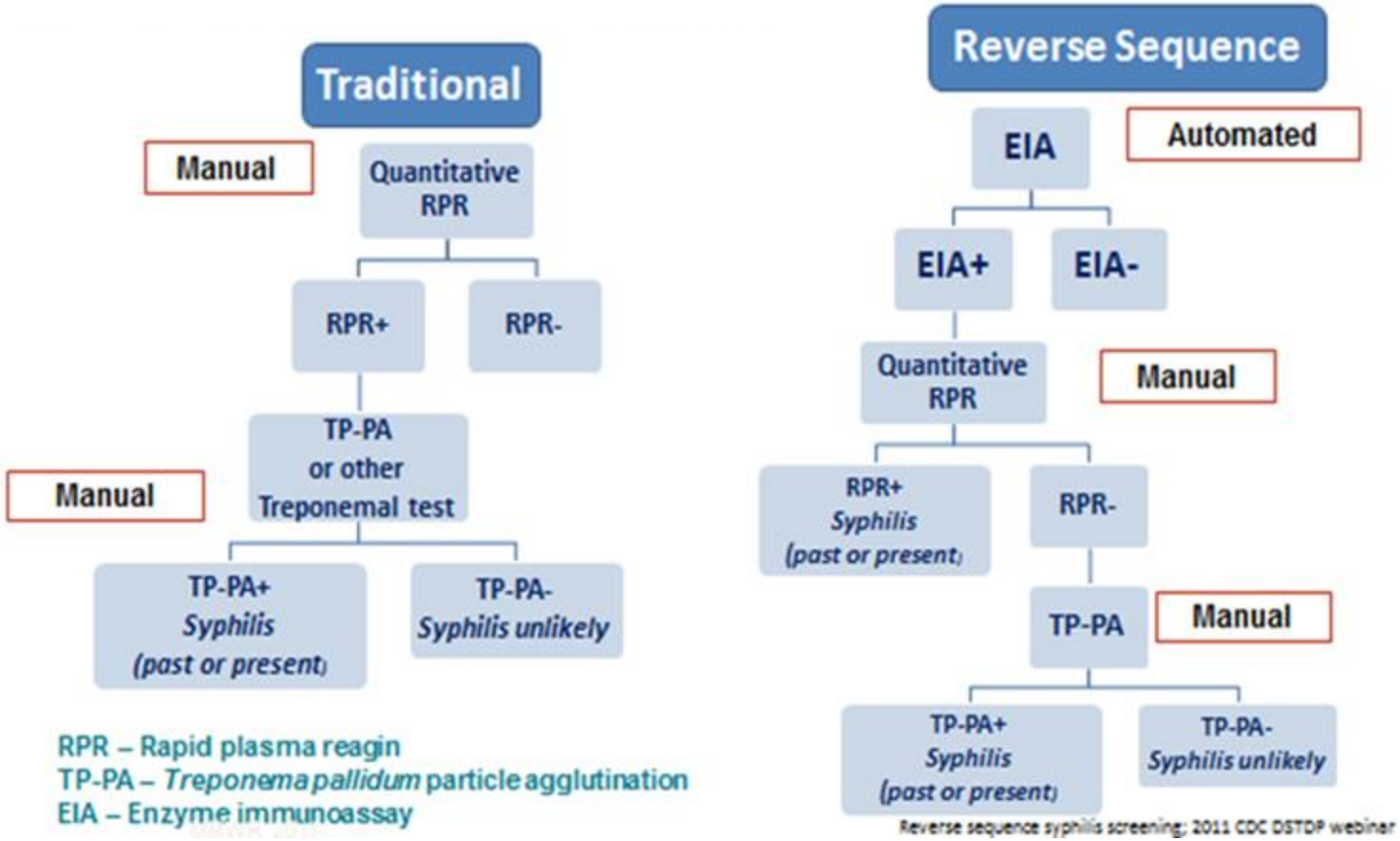
Papp JR, Park IU, Fakile Y, Pereira L, Pillay A, Bolan GA. CDC Laboratory Recommendations for Syphilis Testing, United States, 2024. MMWR Recomm Rep 2024;73(No. RR-1):1–32.

Serologic Testing

Non-treponemal (lipoidal antigen) tests	Treponemal tests
Rapid plasma reagin (RPR)	Enzyme Immunoassay (EIA)
Venereal disease research laboratory (VDRL)	Fluorescent treponemal antibody (FTA-ABS)
	Treponema pallidum particle agglutination (TP-PA)
	Chemiluminescence assay (CIA)

Papp JR, Park IU, Fakile Y, Pereira L, Pillay A, Bolan GA. CDC Laboratory Recommendations for Syphilis Testing, United States, 2024. MMWR Recomm Rep 2024;73(No. RR-1):1–32.

Serologic Testing



RPR – Rapid plasma reagin
TP-PA – *Treponema pallidum* particle agglutination
EIA – Enzyme immunoassay

- Thanks to Hilary Reno and Joseph Cherabie from the St. Louis PTC for this slide

Syphilis – Traditional Algorithm

Nontreponemal Test
(Quantitative RPR)

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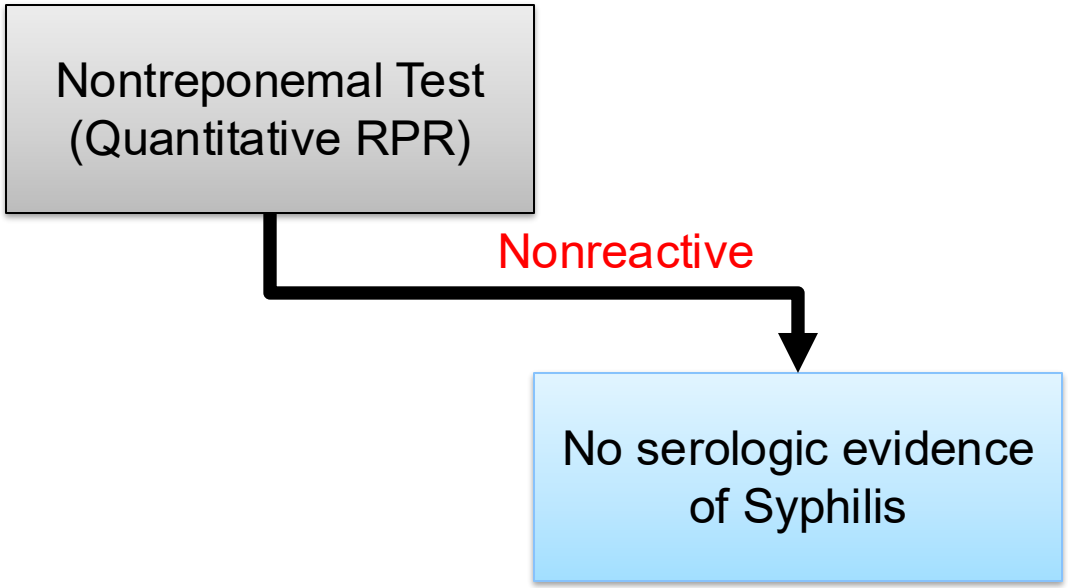

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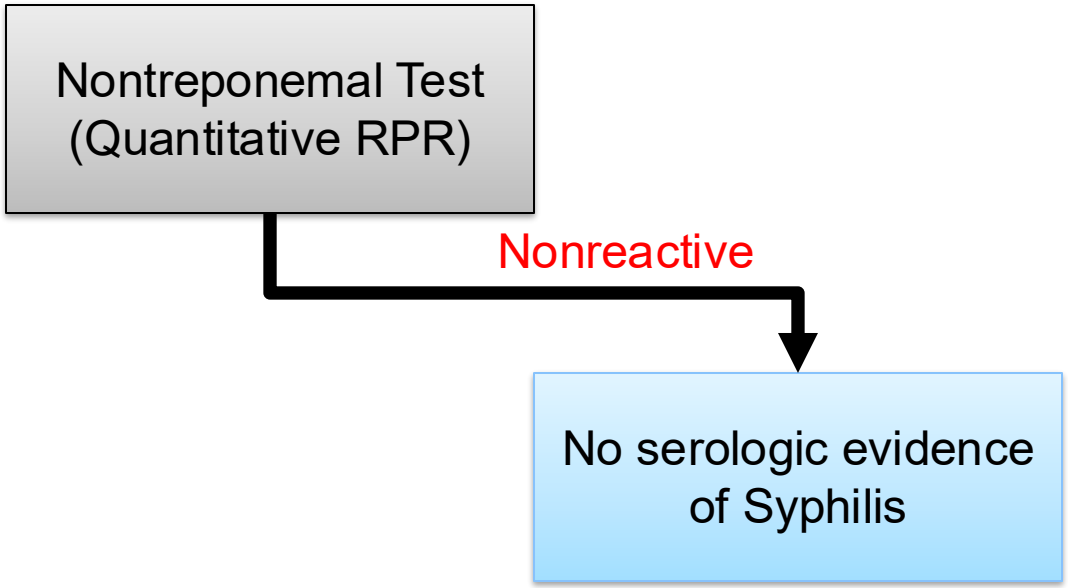

Limitations:

- Incubation period
- Early primary infection

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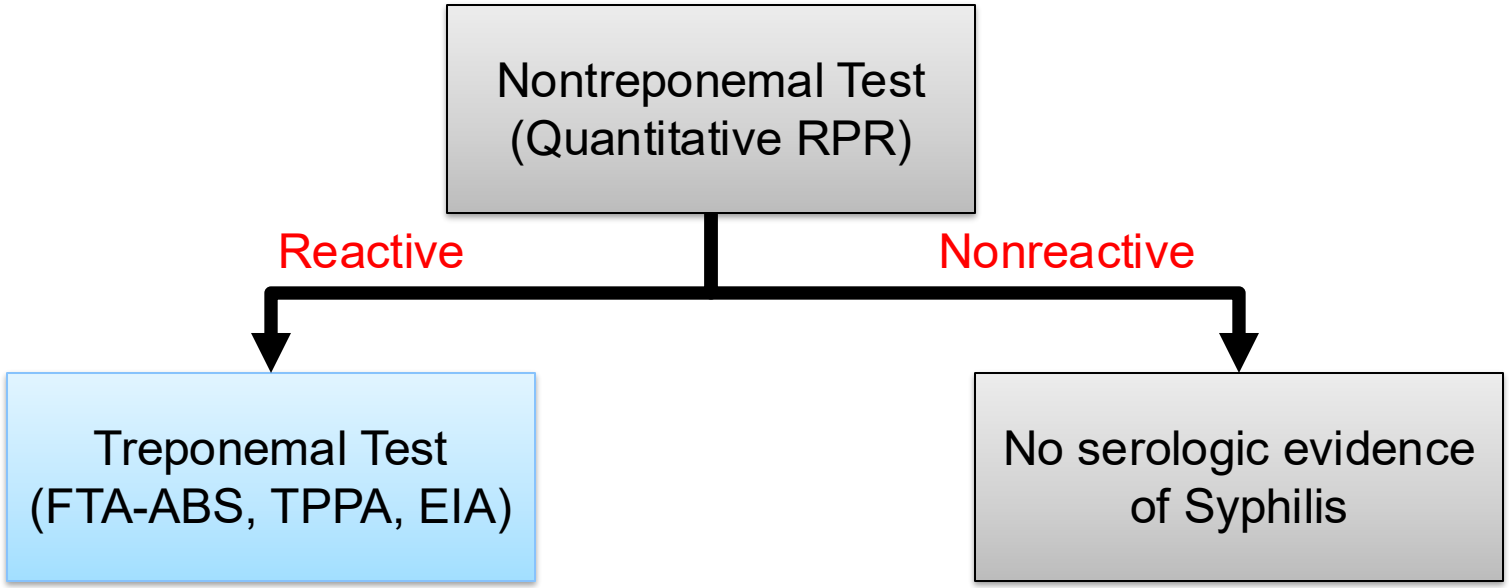

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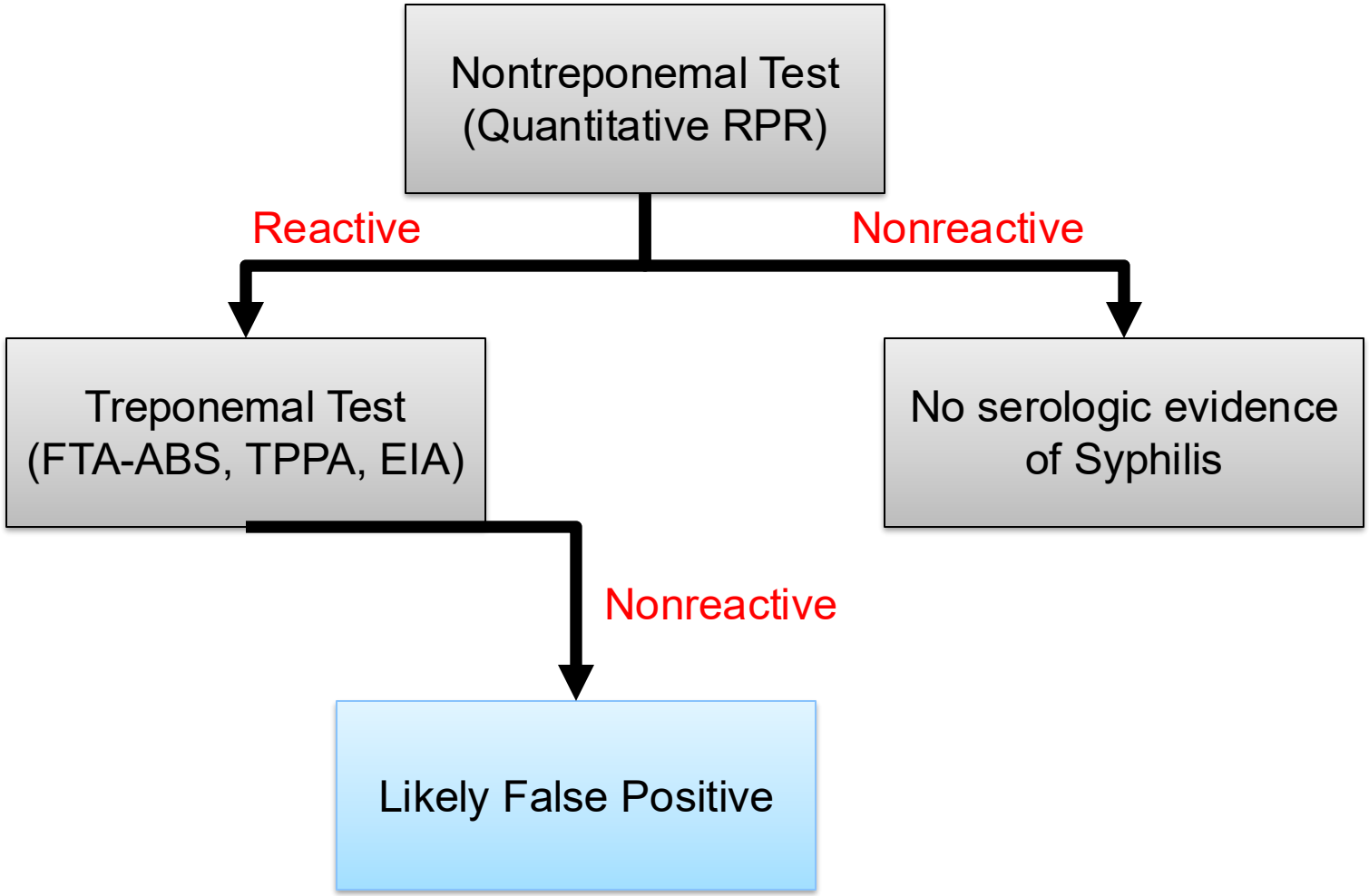

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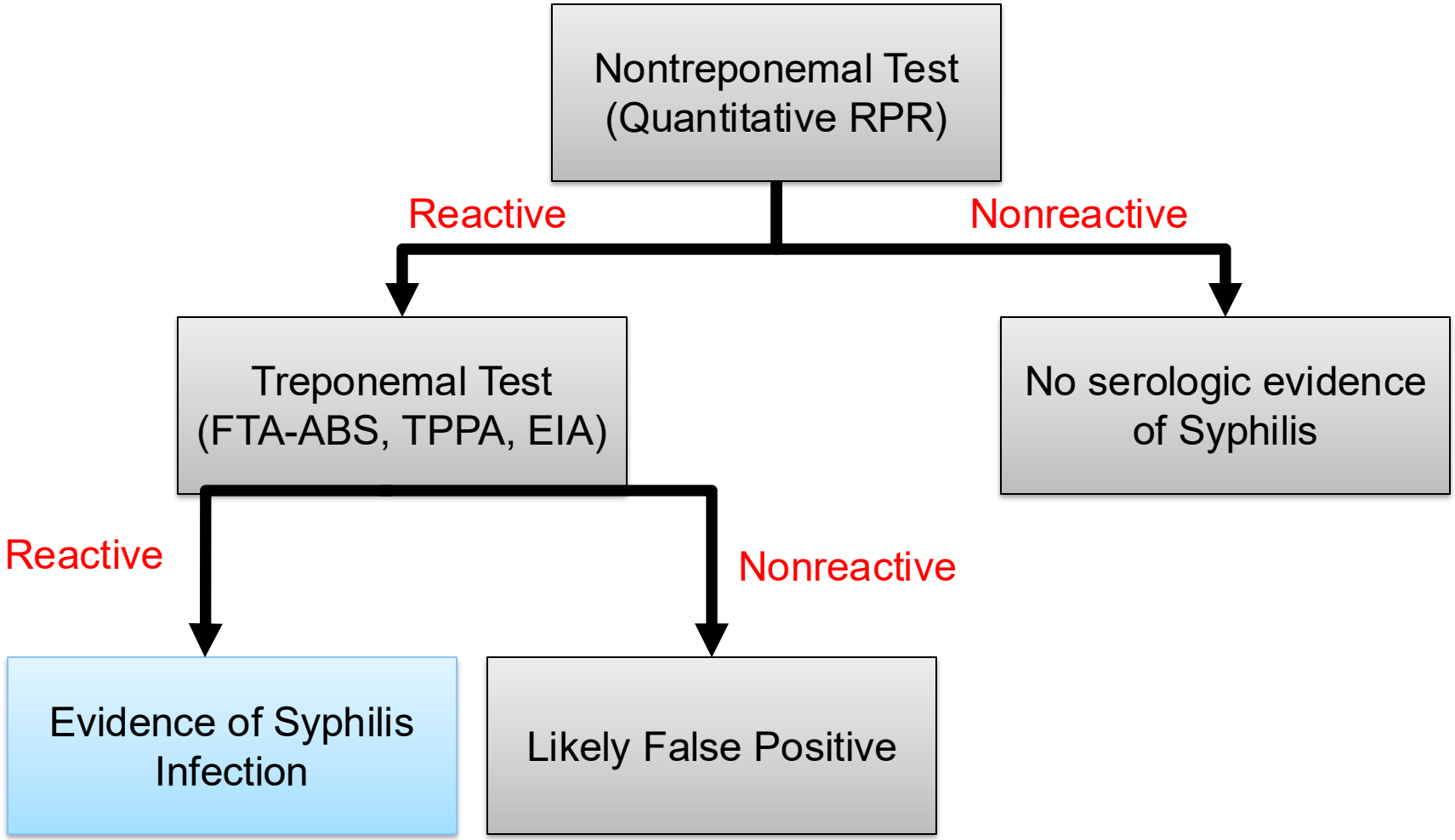

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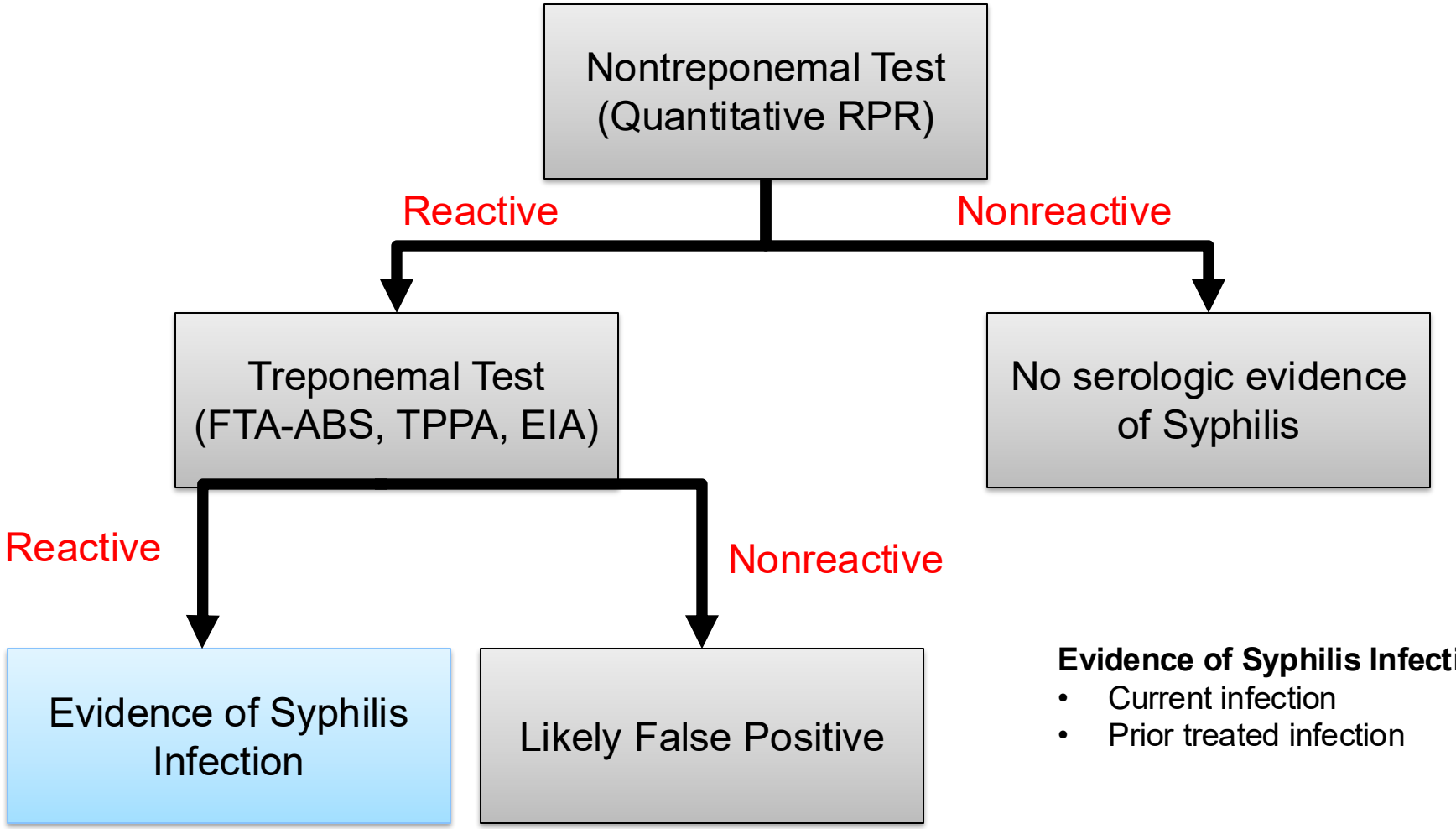

Evidence of Syphilis Infection:

- Current infection
- Prior treated infection

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Syphilis – Reverse Algorithm

Screening Treponemal Test
(EIA)
Automated

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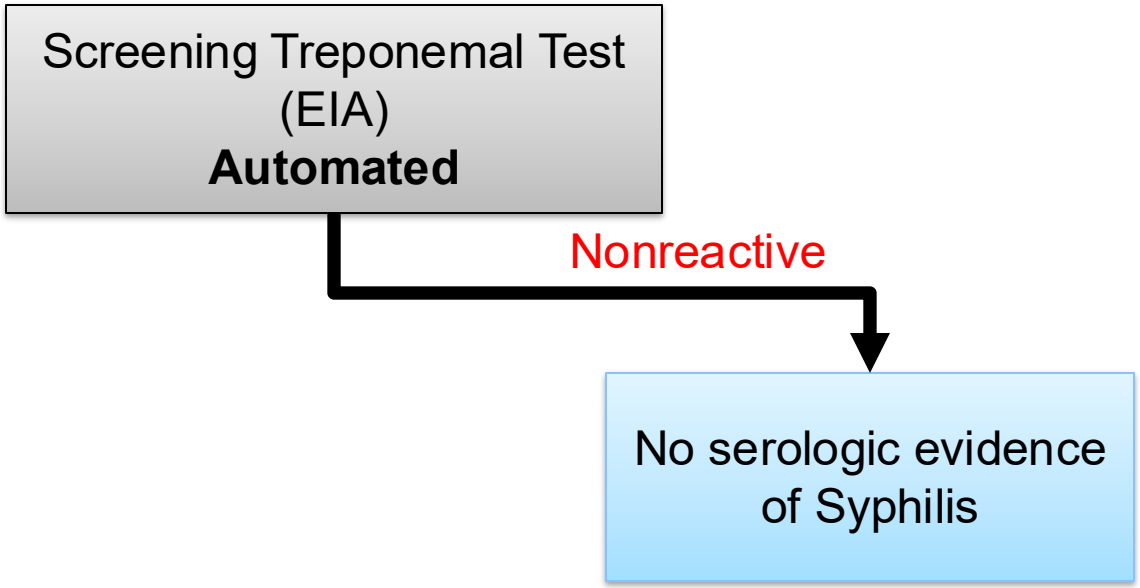

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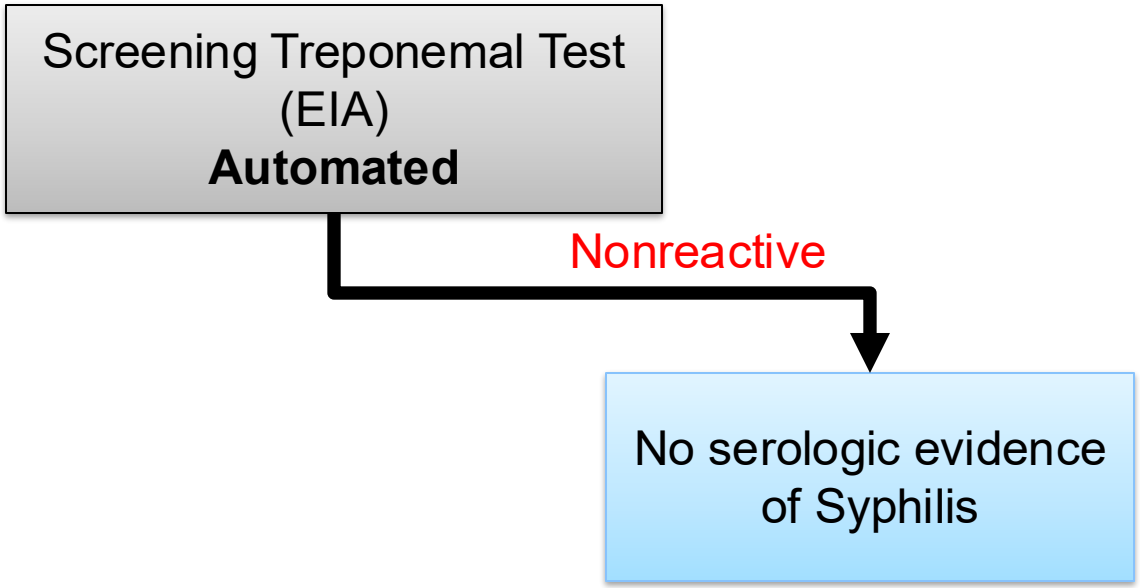

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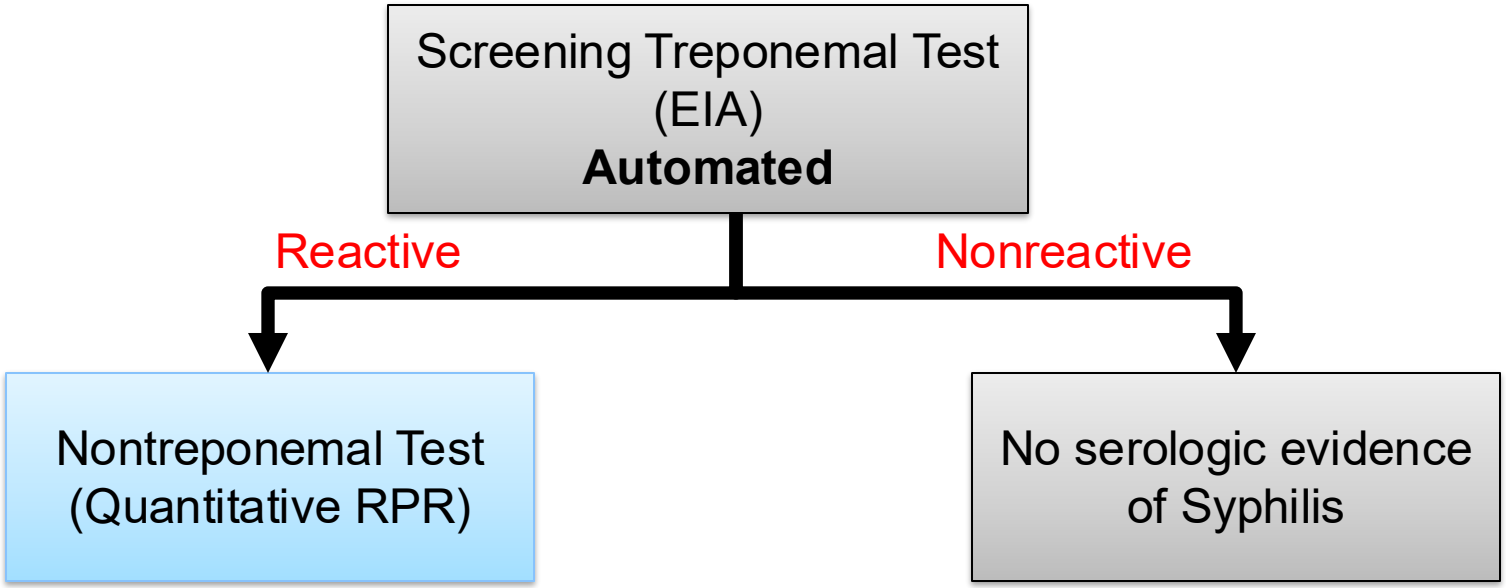

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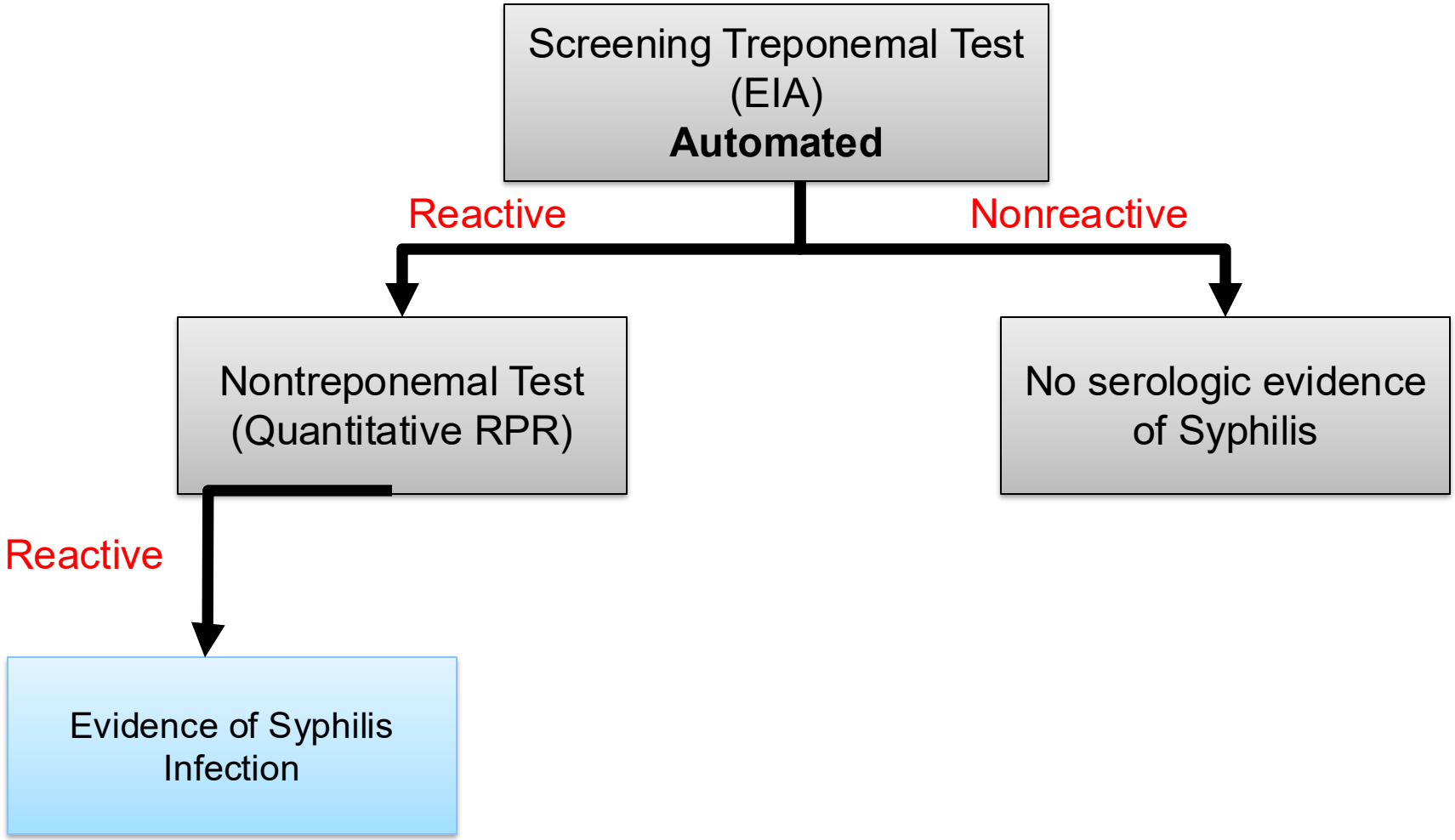

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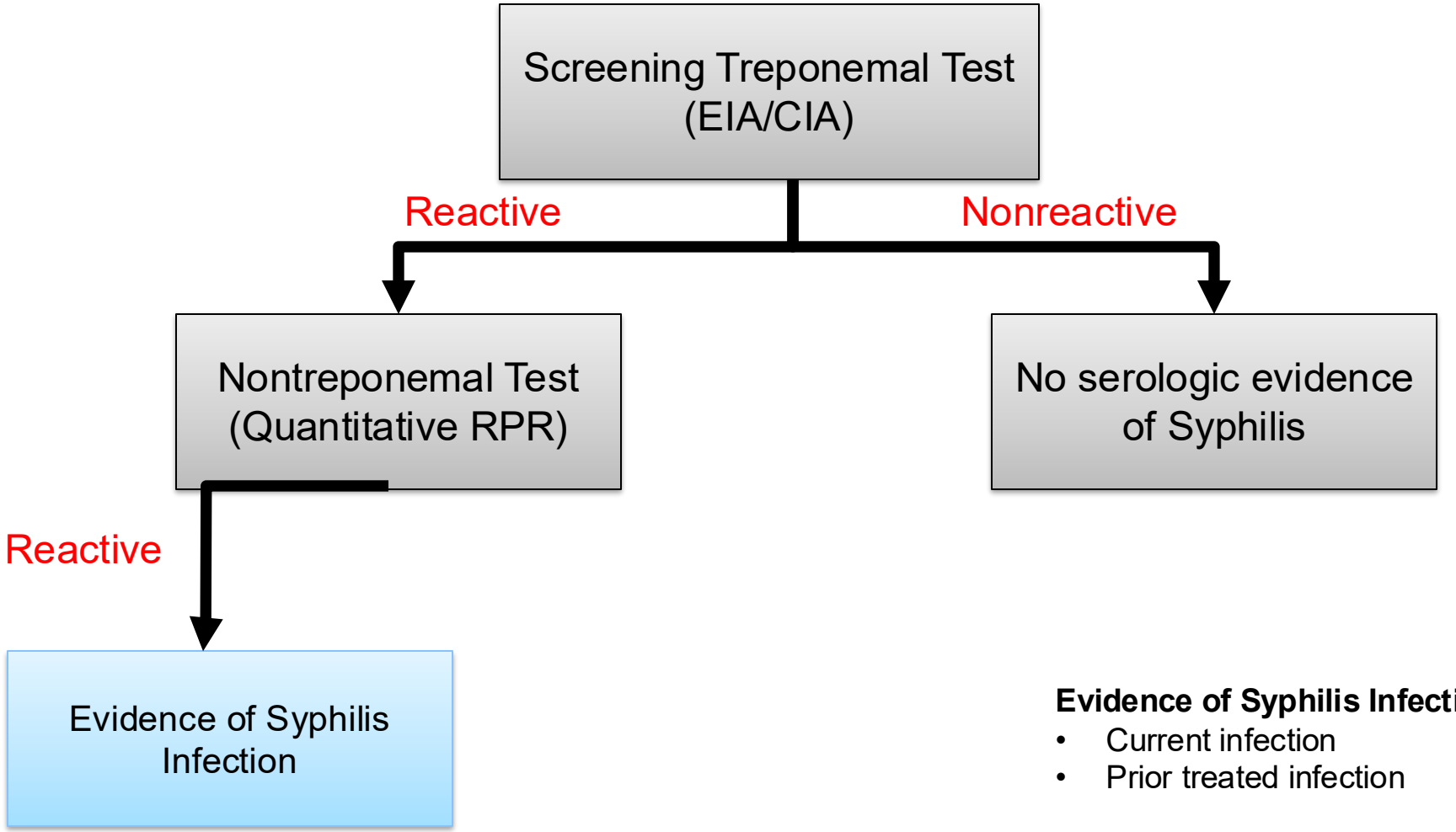

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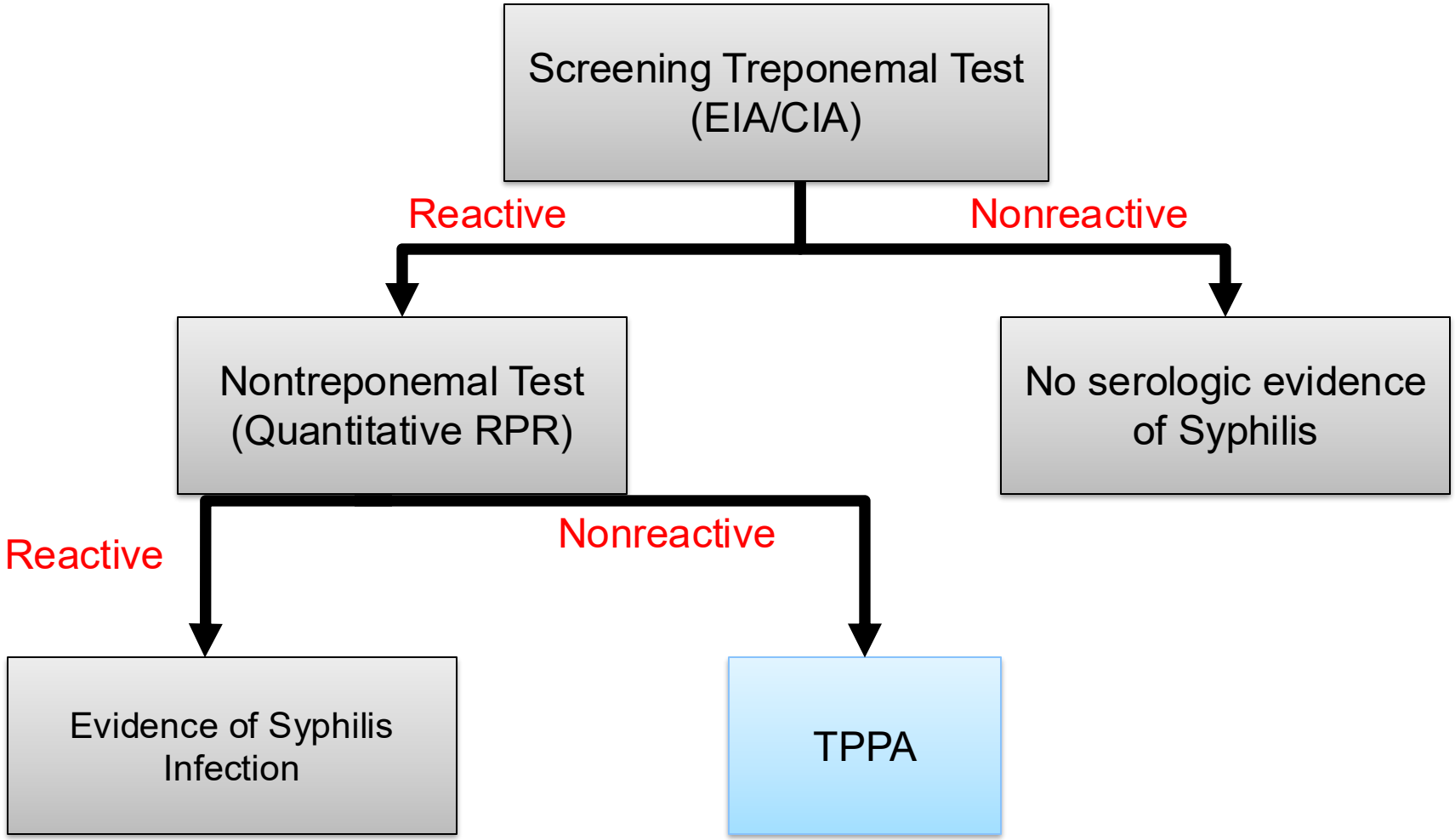

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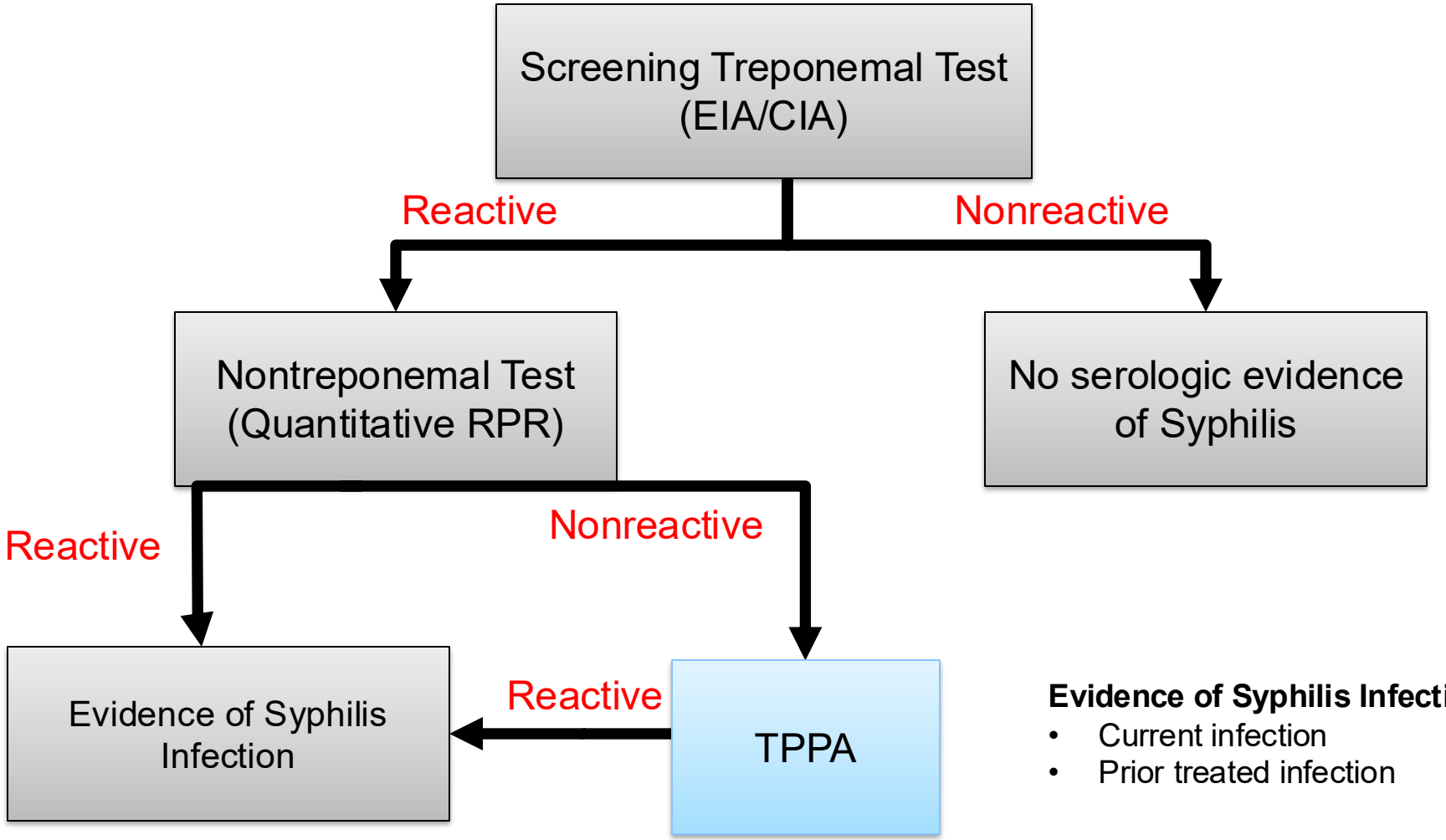

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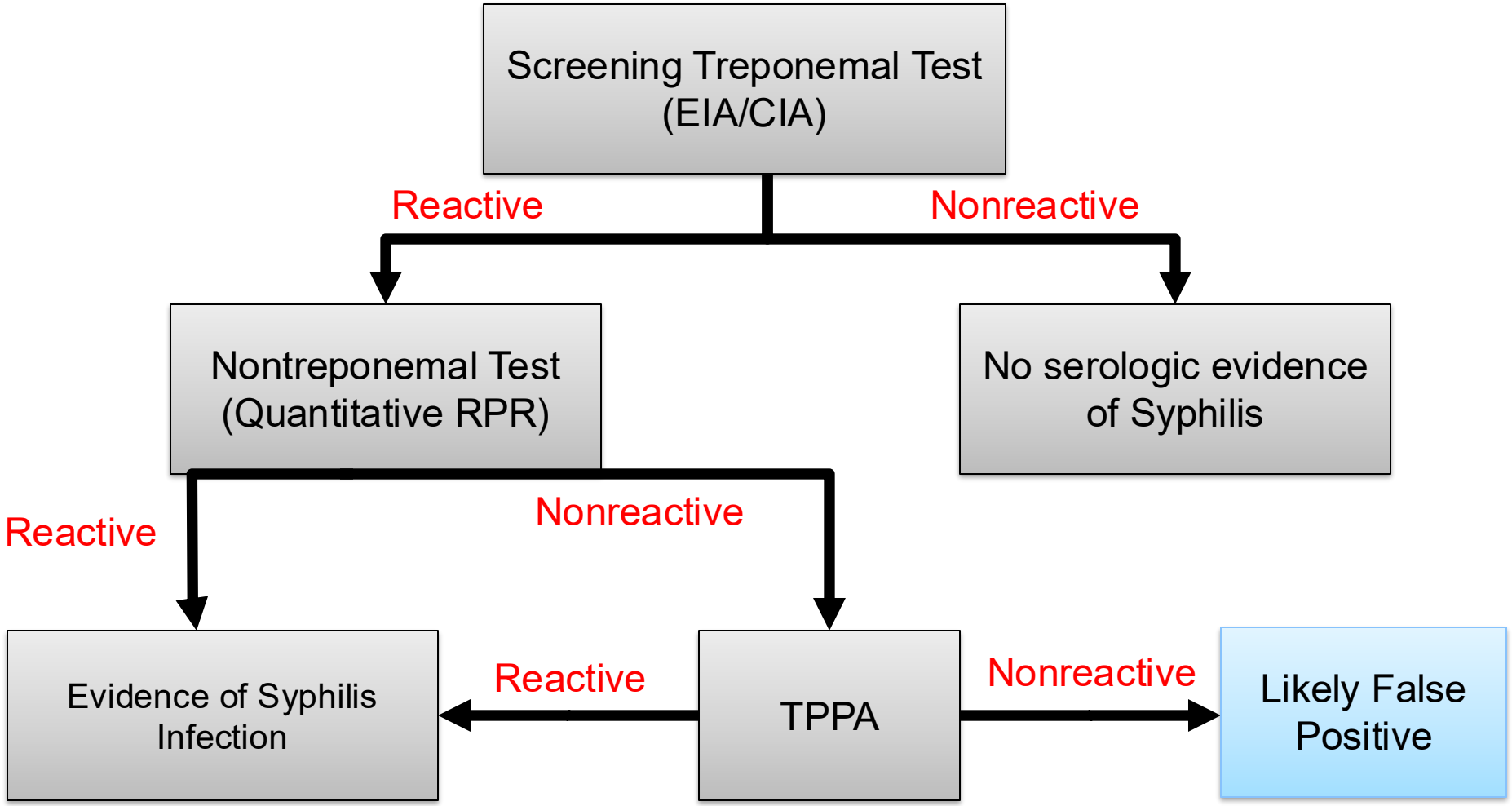

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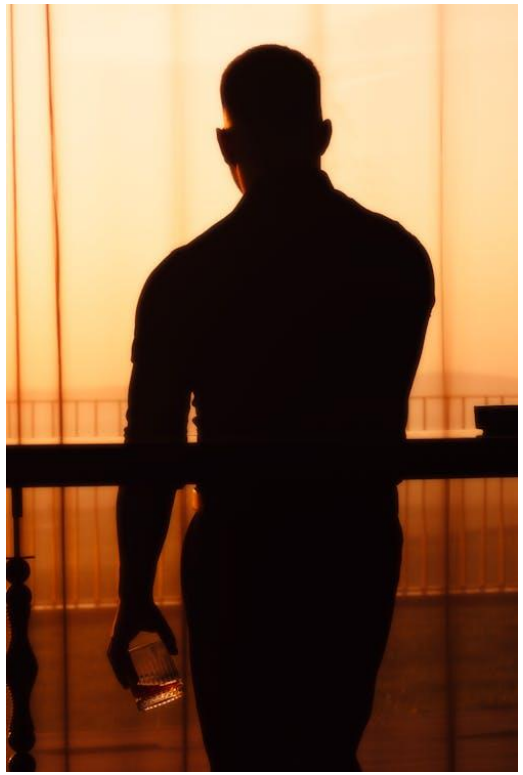
FAQ: What about people with prior syphilis?

- Treponemal tests typically remain positive for life following syphilis infection, and RPR sometimes remains reactive as well
- Comparing RPR titers is an important way to evaluate for re-infection
- Sta

FAQ: What about CNS disease?

- Neurological disease previously always required diagnosis with CSF studies
- Hallmark CSF abnormalities include
  - Pleocytosis
    - >5 cells/mL in most patients
    - >20 cells/mL in people with HIV
  - Elevated protein
    - Limited sensitivity and specificity
  - Reactive CSF VDRL
    - Less than 80% sensitive, but specific



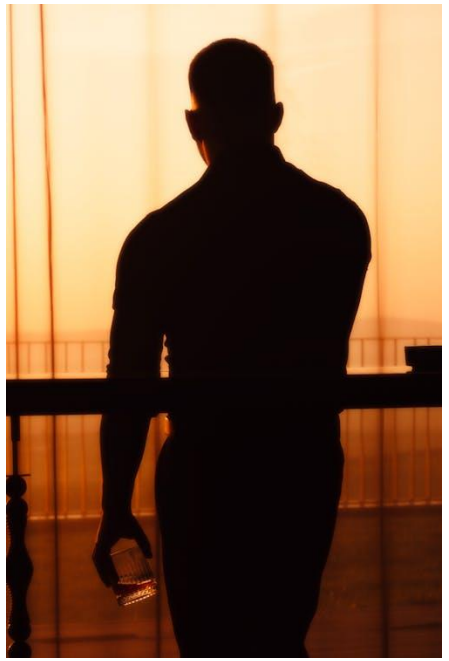
2021 Updates

Fewer Lumbar Punctures

- Isolated ocular symptoms and no cranial nerve dysfunction
  - CSF exam is not necessary

- Otic syphilis
  - CSF exam is not necessary

- Neuro syphilis
  - No repeat CSF exam at 6 months with adequate RPR response (HIV - and HIV+/ART)

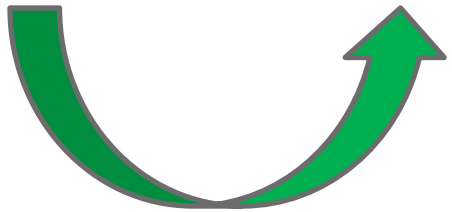


FAQ: When Do I Need to Report This?

- Processes for reporting new syphilis diagnoses vary by state/locality
- **Always check with your local Department of Health regarding reporting requirements and processes**

Treatment

talk | test | treat



stage

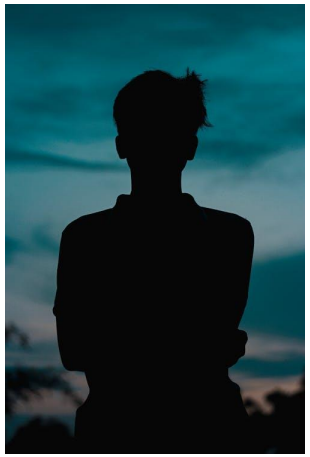
Finally, treatment!

- Treatment continues to rely on penicillin, to which resistance has not been observed
- Long-acting benzathine penicillin-G sustains treponemocidal drug levels for 7-10 days
- Due to long generation times (33 hours), sustained drug levels are felt to be necessary for bacterial elimination
- Due to a recent shortage of this drug, doxycycline has been introduced as an alternative, supported primarily by retrospective studies
- On 1/16 the FDA announced that it would allow importation of Extencilline (an equivalent penicillin manufactured in Italy)

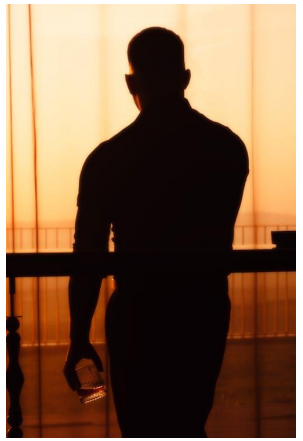
Syphilis Treatment – Early (uncomplicated)

Stage	Treatment	Alternative
Incubation	Benzathine penicillin G 2.4 million units intramuscular injection once	Doxycycline 100mg twice daily for 14 days
Primary		
Secondary		
Syphilis, early non-primary non-secondary		

Incubation

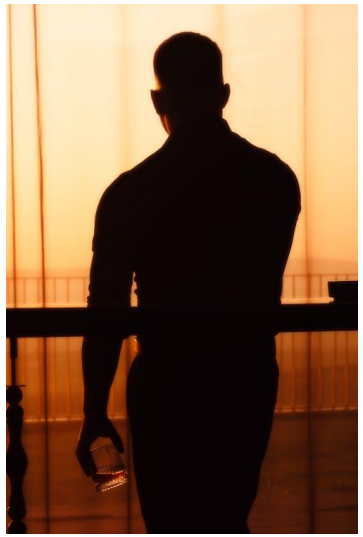


Primary



Secondary/ early latent

Syphilis Treatment – CNS disease



Neurosyphilis, Ocular, or Otic Syphilis	Aqueous crystalline penicillin G 18–24 million units per day, administered as 3–4 million units intravenously every 4 hours, or by continuous infusion, for 10–14 days	Procaine penicillin G 2.4 million units IM once daily *PLUS* Probenecid 500mg 4 times daily for 10–14 days
Tertiary		

- Workowski KA, Bachmann LH, Chan PA, et al. Sexually Transmitted Infections Treatment Guidelines, 2021. MMWR Recomm Rep. 2021;70(4):1-187. Published 2021 Jul 23. doi:10.15585/mmwr.rr7004a1

Syphilis Treatment – Late Latent

Syphilis, unknown duration or late	**Benzathine penicillin G 2.4 million units intramuscular injection 3 times at one week intervals**	**Doxycycline 100mg twice daily for 28 days**

FAQ

- How many days between injections is acceptable for latent syphilis?
  - **General Population**
    - "If a person receives a delayed dose of penicillin in a course of weekly therapy for late latent syphilis or syphilis of unknown duration, the course of action that should be recommended is unclear"
    - Interval of 7–9 days **preferred**
    - An interval of 10–14 days between doses of benzathine penicillin for latent syphilis "**might**" be acceptable before restarting the sequence of injections
      - **Check with local health departments for their policies**
  - **Pregnant women**
    - Optimal Interval is 7 days
    - Missed doses >9 days between doses are **not acceptable**
    - Missed doses = repeat the full course of therapy

Follow up and treatment failure

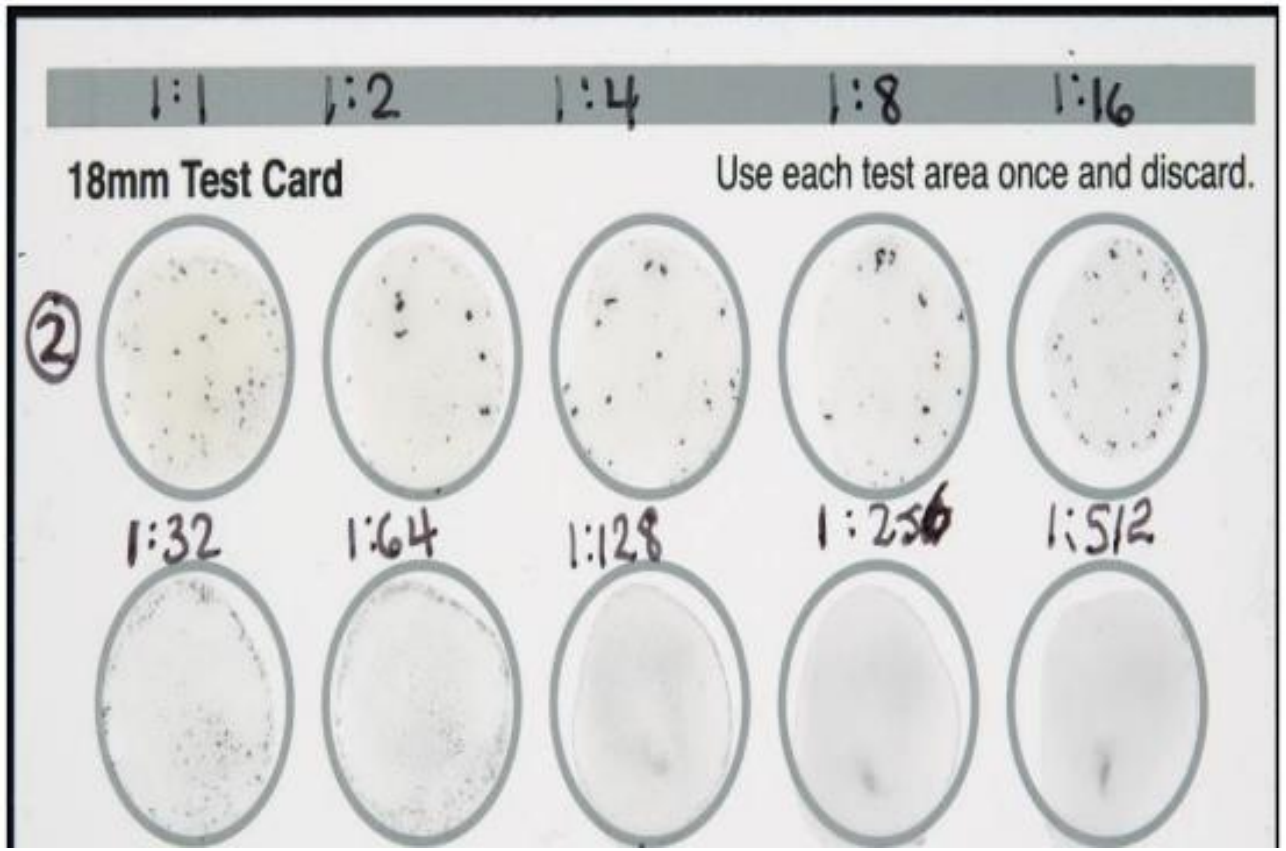
- Quantitative nontreponemal serologic tests should be repeated at least at:
  - 6 months
  - 12 months
  - 24 months (for latent disease)

- An inadequate serologic response after treatment is failure for titers to decrease by 4x:
  - 12 months after treatment for primary, secondary
  - 24 months after treatment for latent disease

Syphilis – Interpreting RPR Titers

1:2048
1: 1024
1:512
1: 256
1:128
1: 64
1:32
1: 16
1:8
1: 4
1:2
1: 1
Nonreactive

What Do Titers Mean?



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Nonreactive

- https://www.cdc.gov/nchs/data/nhanes/nhanes_01_02/l36_b_met_syphillis_rapid_plasma_reagin.pdf

Syphilis – Interpreting RPR Titers

2 dilution change =
4 x increase or
decrease in titers

1:2048

1: 1024

1:512

1: 256

1:128

1: 64

1:32

1: 16

1:8

1: 4

1:2

1: 1

Nonreactive

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2 x increase or
decrease in titers

Syphilis – Interpreting RPR Titers

1:2048

1: 1024

1:512

1: 256

1:128

1: 64

1:32

1: 16

1:8

1: 4

1:2

1: 1

Nonreactive

Syphilis – Interpreting RPR Titers

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1: 4

1:2

1: 1

Nonreactive

FAQ: Which partners to notify?

- Transmission
  - "Microscopically abraded" **skin**
  - **Mucous membrane** lesions
- Skin and mucous membrane lesions occur during the first year after infection and can be easily missed

STAGE OF INFECTION	MAXIMUM PERIOD OF INFECTIOUSNESS * (Prior to symptom onset or first serologic evidence of infection/reinfection)	MANAGEMENT OF CONTACTS AT RISK FOR EXPOSURE
Incubating Infection	Persons being treated presumptively for incubating infection following a known exposure, who lack any exam or serologic evidence of syphilis, are **not** considered infectious—but will become infectious if left untreated. Therefore, contacts of persons treated for incubating infection are not at risk of exposure but may benefit from syphilis/STI screening.	N/A
Primary Syphilis	**3 months**	**Evaluation and presumptive treatment** of contacts exposed *within 3 months* prior to the onset of symptoms or signs in the case patient.
Secondary Syphilis	**6 months**	**Evaluation and presumptive treatment** of contacts exposed *within 6 months* prior to the onset of symptoms or signs in the case patient.
Early Latent Syphilis	**12 months** Since skin and mucous membrane lesions, which often go unrecognized by patients, occur predominately during the first year of infection, persons diagnosed with early latent syphilis are potentially infectious to contacts despite their lack of symptoms or exam findings at the time of treatment.[23]	**Evaluation and presumptive treatment** of contacts exposed *within 12 months* of first serologic evidence of infection or re-infection, in the case-patient.
Late Latent Syphilis	Persons diagnosed with late latent infection (ie, acquired > 1 year prior to treatment) are not considered to be infectious to current/recent sexual or needle-sharing contacts.	Long-term ongoing partners exposed to the case-patient more than 1 year ago may benefit from syphilis screening.
Latent Syphilis of Unknown Duration	If there is insufficient information to determine the duration of latent infection, the case-patient may have been infectious over the past year. Patients with latent syphilis of unknown duration who have high nontreponemal serologic titers (ie, > 1:32) have an increased likelihood of recent acquisition and of being infectious.[23]	**Evaluation and presumptive treatment** of contacts exposed *within 12 months* of first serologic evidence of infection, or re-infection in the case-patient.
Ocular, Otic, or Neurosyphilis	Central nervous system, ocular and otic infection are not sexually transmissible.	If the case-patient also meets the diagnostic criteria for primary, secondary, early latent, or latent of unknown duration, contacts should be managed as noted above.
Tertiary Syphilis	Not considered infectious.	

- New York City Department of Health and Mental Hygiene, and the New York City STD Prevention Training Center. The Diagnosis and Management of Syphilis: An Update and Review. March 2019. A PDF version is available at https://www.publichealth.columbia.edu/file/15568/download?token=exDNYpJ-
- Bolan G, Workowski. Sexually Transmitted Diseases Treatment Guidelines, 2015 MMWR Recomm Rep 2015;64. Available at https://www.cdc.gov/std/tg2015/default.htm

FAQ: Partner management

- Primary, secondary, **or** early latent syphilis (not incubation period)
  - Partners exposed in the last 90 days: empiric therapy
- Secondary syphilis
  - Partners exposed 90 days-6 months+ symptom duration: serologies, treat if positive
- Early latent
  - Partners exposed 90 days-12 months: serologies, treat if positive
- Late latent
  - Long term sex partners should be tested, treat if positive

- **Important!!** Patients treated for primary, secondary, or early latent syphilis should abstain from sex until 7 days after they (and partners) start treatment

- https://www.health.ny.gov/publications/3807/#:~:text=If%20you%20have%20been%20treated.he%20or%20she%20finishes%20treatment.
- https://www.cdc.gov/std/syphilis/stdfact-syphilis-detailed.htm#:~:text=Persons%20who%20receive%20syphilis%20treatment,and%20receive%20treatment%20if%20necessary.

Summary

- Syphilis case rates are still high!
- Think about testing your patients
  - If vulnerable to infection (take a good history)
  - When screening for other sexually transmitted infections
- Knowing which syphilis testing algorithm is in use at your institution is important for diagnosis and staging
- Treatment is based on the stage of disease
  - Remember to screen for neurologic, ocular, and otic manifestations
- Identifying syphilis cases requires a high index of suspicion

NYC STD Prevention Training Center

The CDC-funded NYC STD Prevention Training Center at Columbia University provides a continuum of education, resources, consultation and technical assistance to health care providers, and clinical sites.
www.publichealth.columbia.edu/nycptc

Didactic Presentations

Webinars, conferences, trainings and grand rounds presentations to enhance and build knowledge

Clinical Consultation Warmline

Clinical guidance regarding STD cases; no identifying patient data is submitted
https://stdccn.org/

Technical Assistance

Virtual and on-site technical assistance regarding quality improvement, clinic implementation and best practices around sexual health provision

For more information please contact:
Gowri Nagendra Soman MPH
gn103@cumc.columbia.edu

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Resources

Clinical guidance tools regarding the STD treatment guidelines, screening algorithms and knowledge books, such as the **Syphilis Monograph**.
To download a copy please visit:
https://www.publichealth.columbia.edu/file/15568/download?token=exDNYpJ-