Victoria Mobley, MD MPH

Medical Epidemiologist

North Carolina Public Health

nc department of health and human services

Syphilis – “The Great Imitator”

Wake AHEC requires all speakers to disclose any relevant financial conflicts of interest.

Victoria Mobley has no relevant financial conflicts of interest to disclose.

Learning Objectives

- When to suspect syphilis
- Typical & atypical clinical presentations of syphilis
- Diagnosing syphilis
- How to treat syphilis
- Other clinical considerations

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When should you suspect syphilis infection

ALWAYS

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Warning: The next several slides have some graphic pictures - though, let's be honest, if you are a public health clinician this is nothing you haven't seen before…

Typical Presentations of Primary Syphilis

Atypical Presentations of Primary Syphilis

Typical Presentations of Secondary Syphilis

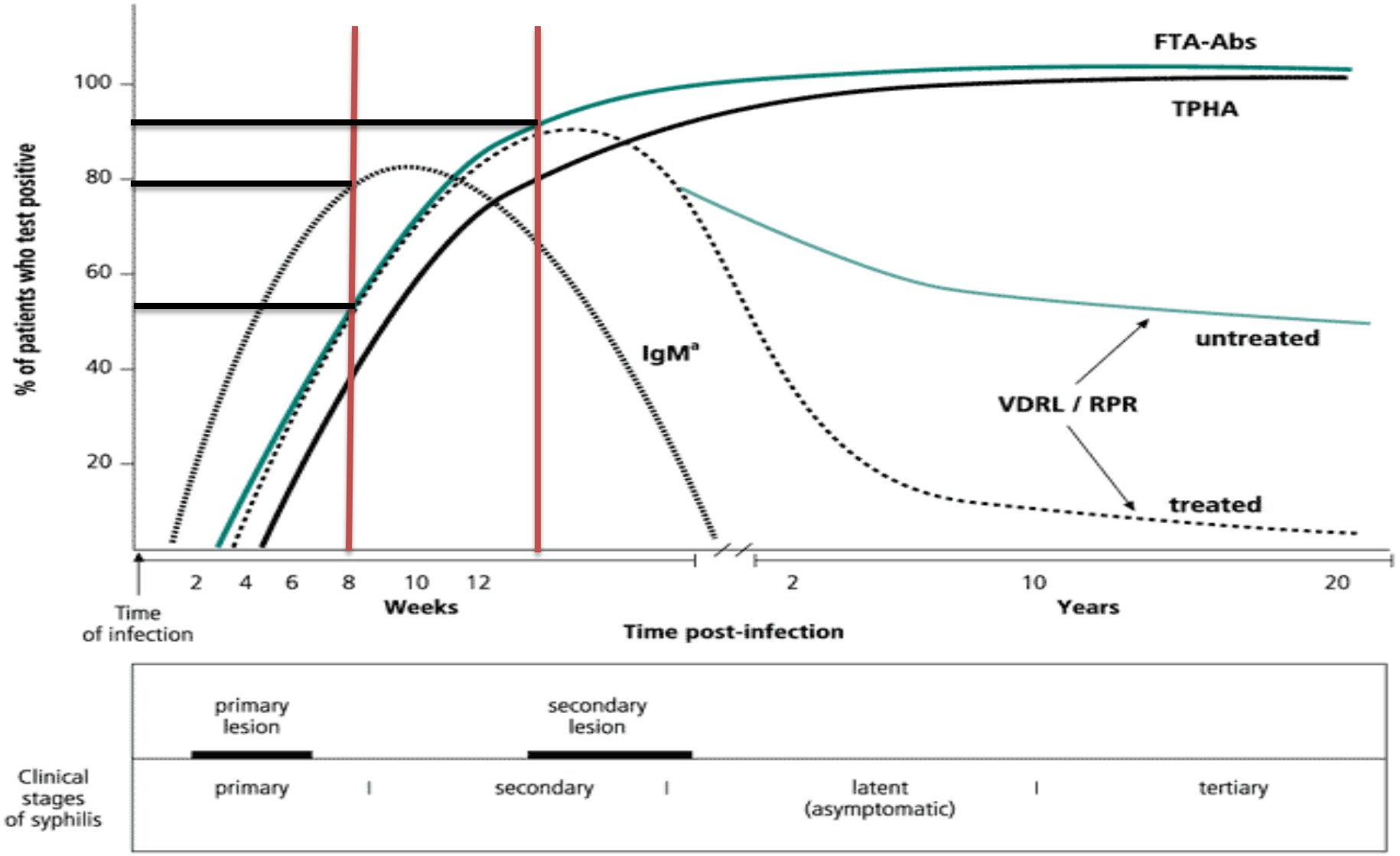
Atypical Presentations of Secondary Syphilis

Other Atypical Presentations of Early Syphilis Infection

Stage	Symptom Onset	Clinical Features HIV negative	Clinical Features HIV positive
Primary	2-3 weeks	Single chancre	Multiple chancres
Secondary	3-6 weeks (after chancre heals)	Rash Condylomata lata, Alopecia LAD Viral-like syndrome	Overlap of P&S symptoms Malignant lues Ocular symptoms
Early Latent Late Latent	<1 year >1 year	Asymptomatic	Asymptomatic
Tertiary Late benign	4-10 years	Gummas: skeleton, spine, mucosa	Gummas may form in months vs. years
Cardiovascular	15-20 years	Endarteritis obliterans CAD involvement Aortic insufficiency	Rapidly progressing aortitis
Neurosyphilis	Anytime	Asymptomatic→ varied neuro deficits	More rapid sxs progression

Syphilis Serologies

Fig. 1. **Common patterns of serological reactivity in syphilis patients**

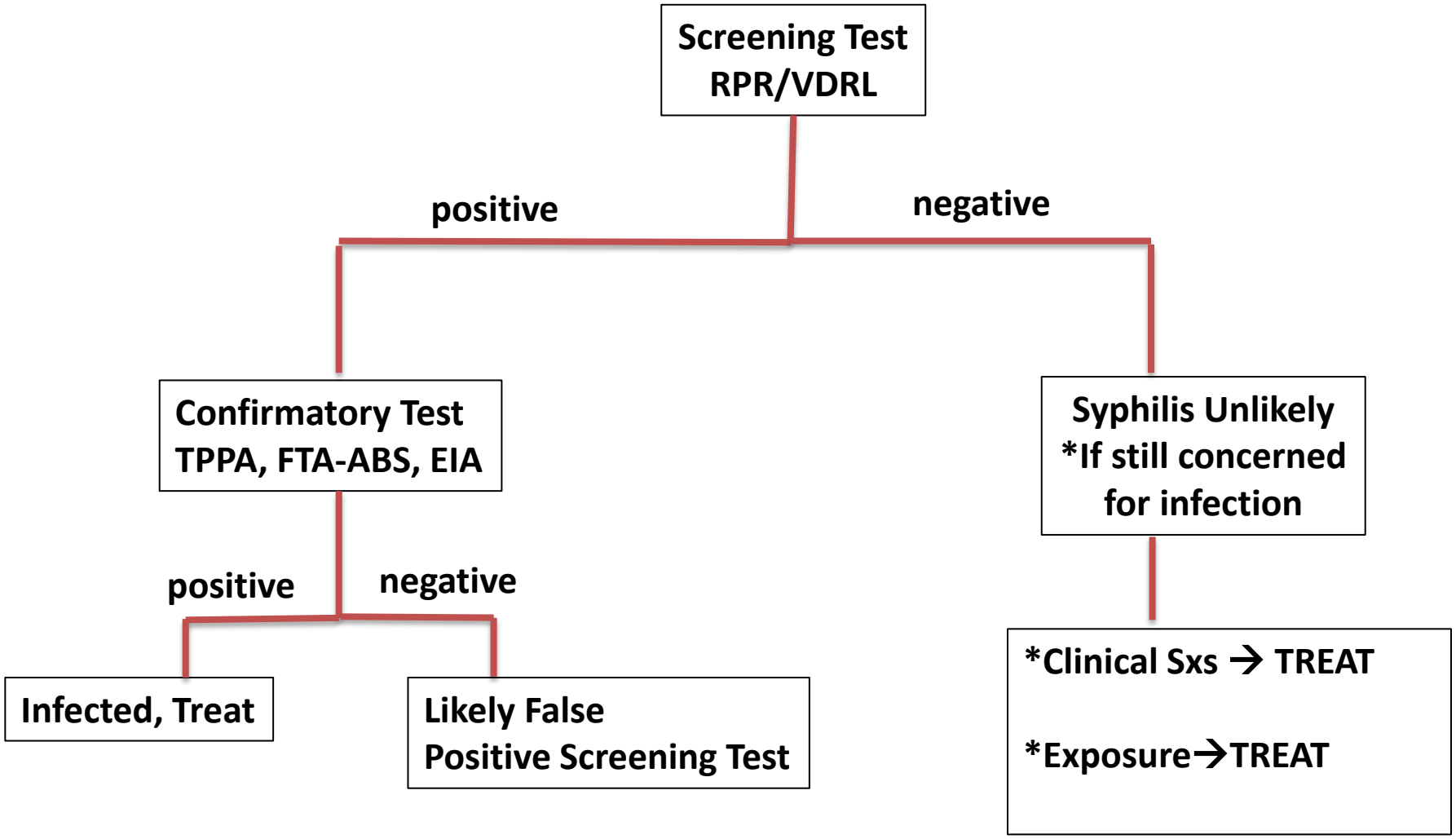


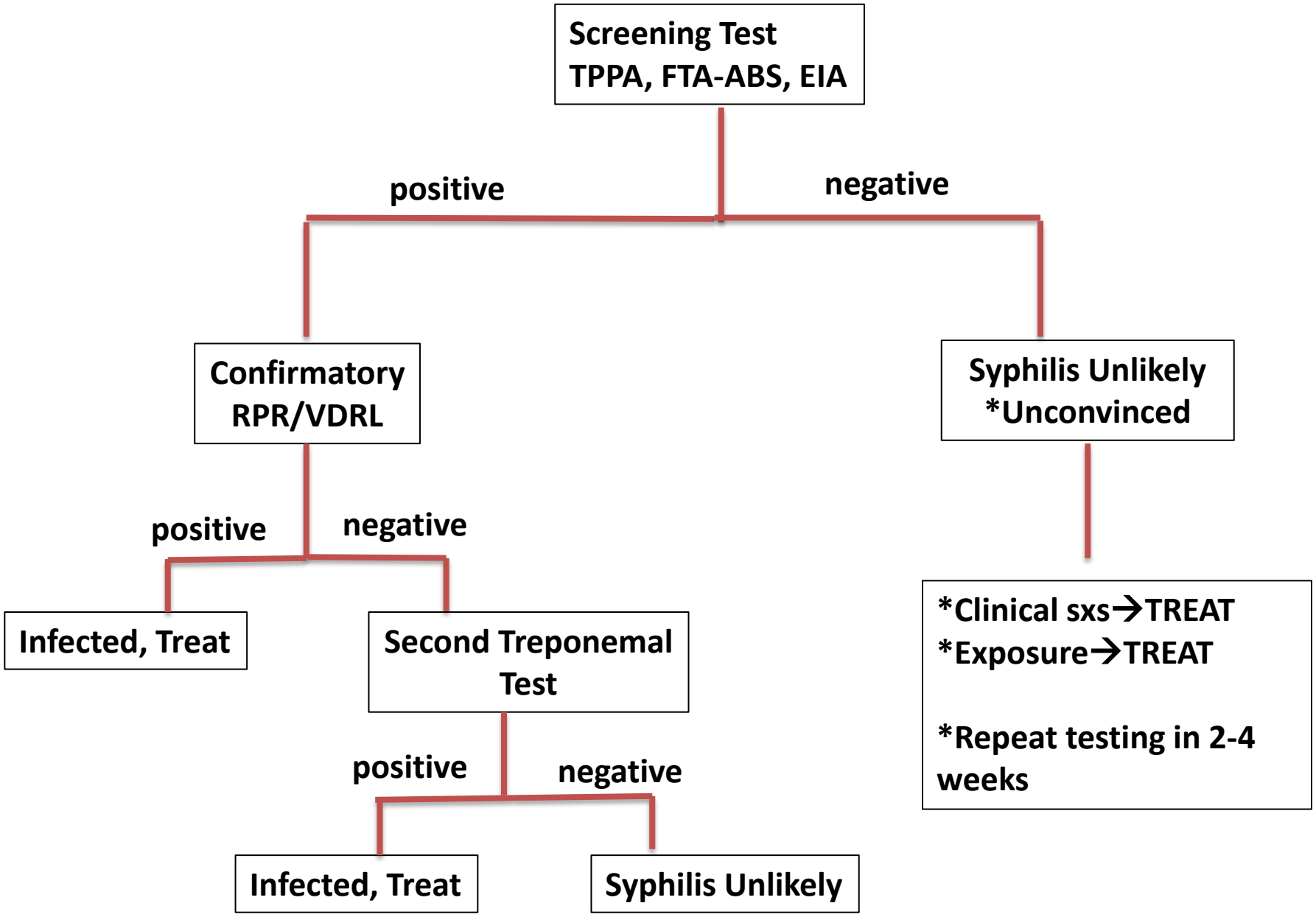
[a] IgM by ELISA or FTA-ABS 195 or immunoblot

WHO 04.69

Sensitivity of Syphilis Diagnostic Tests

Test	Primary	Secondary	Latent
VDRL/RPR	75-85%	100%	95-98%
FTA-ABS	84-86%	100%	100%
TPPA	84-86%	100%	100%
EIA/CIA	93-98%	100%	100%


Screening Test
RPR/VDRL
positive
negative
Confirmatory Test
TPPA, FTA-ABS, EIA
Syphilis Unlikely
*If still concerned
for infection
positive
negative
Infected, Treat
Likely False
Positive Screening Test
*Clinical Sxs → TREAT
*Exposure→TREAT


Screening Test
TPPA, FTA-ABS, EIA
positive
negative
Confirmatory
RPR/VDRL
Syphilis Unlikely
*Unconvinced
positive
negative
Infected, Treat
Second Treponemal
Test
*Clinical sxs→TREAT
*Exposure→TREAT
*Repeat testing in 2-4
weeks
positive
negative
Infected, Treat
Syphilis Unlikely

Stage	Treatment (regardless of HIV status)	Alternative Treatments	Follow-up
Primary, Secondary & Early Latent	Benzathine penicillin G 2.4 million units IM X 1 dose	• Doxycycline 100 BID x 7 days • Tetracycline 500 QID x 7 days	• Clinical f/u 2-4 weeks • Lab f/u: 6, 12 and 24 months *HIV positive: 9 and 12 months also
Latent or unknown duration	Benzathine penicillin G 7.2 million units IM split into 3 weekly doses	• Doxycycline 100 BID x 28 days • Tetracycline 500 QID x 28 days Ceftriaxone (CTX)-dose unknown- under specialist's care	• Clinical f/u 2-4 weeks • Lab f/u: 6, 12 and 24 months *HIV positive: 9 and 12 months also
Neurosyphilis *ocular syphilis	Aqueous crystalline penicillin G 18–24 million units per day X 10–14 days	• Procaine PCN G 2.4 million units IM daily PLUS Probenecid 500 mg QID x 10-14 days • CTX 2 gms IV/IM daily x 10-14 days	• Clinical f/u every 6 months up to 2 years until CSF abnl resolve

Other Considerations

- **Beware of the PROZONE effect**
- **Always use same testing method for f/u i.e. RPR=RPR; RPR≠VDRL**
- **True serologic difference is ≥4-fold change in RPR titer**

  i.e. 1:2→1:4 

  1:2→1:8 
- **Not all PCN preparations are equal (i.e.Billicin C-R)**
- **When/Who to retest for syphilis**
  - Every 3-6 months in high-risk individuals
- **HIV testing should be performed in all patients diagnosed with syphilis, unless they are already known to be positive**

Questions??????