

## ED Handbook: Syphilis

At TUH, there are three parts to our "syphilis antibody cascading reflex":

1. **Syphilis Antibody:** Treponemal test that tests antibodies specific to *Treponema pallidum*.
  - a. This serves as the screening and is the first result that comes back.
  - b. If negative, you can say the patient is negative for syphilis and no further testing is recommended.
  - c. If positive, it reflexes to an RPR and TP-PA (see below)
2. **Rapid Plasma Reagin (RPR):** If the initial syphilis antibody is positive, an RPR is performed. It is a common, non-treponemal serologic test for syphilis that detects nonspecific anticardiolipin antibodies.
  - a. It is important to note, if the patient has a known history of active or treated syphilis, you can just order an RPR (since we know they will be antibody positive already)
3. ***T. pallidum* particle agglutination (TP-PA):** If the RPR is negative, a TP-PA is performed. This test measures antibodies directed against *T. pallidum* antigens by enzyme immunoassay immunofluorescence.

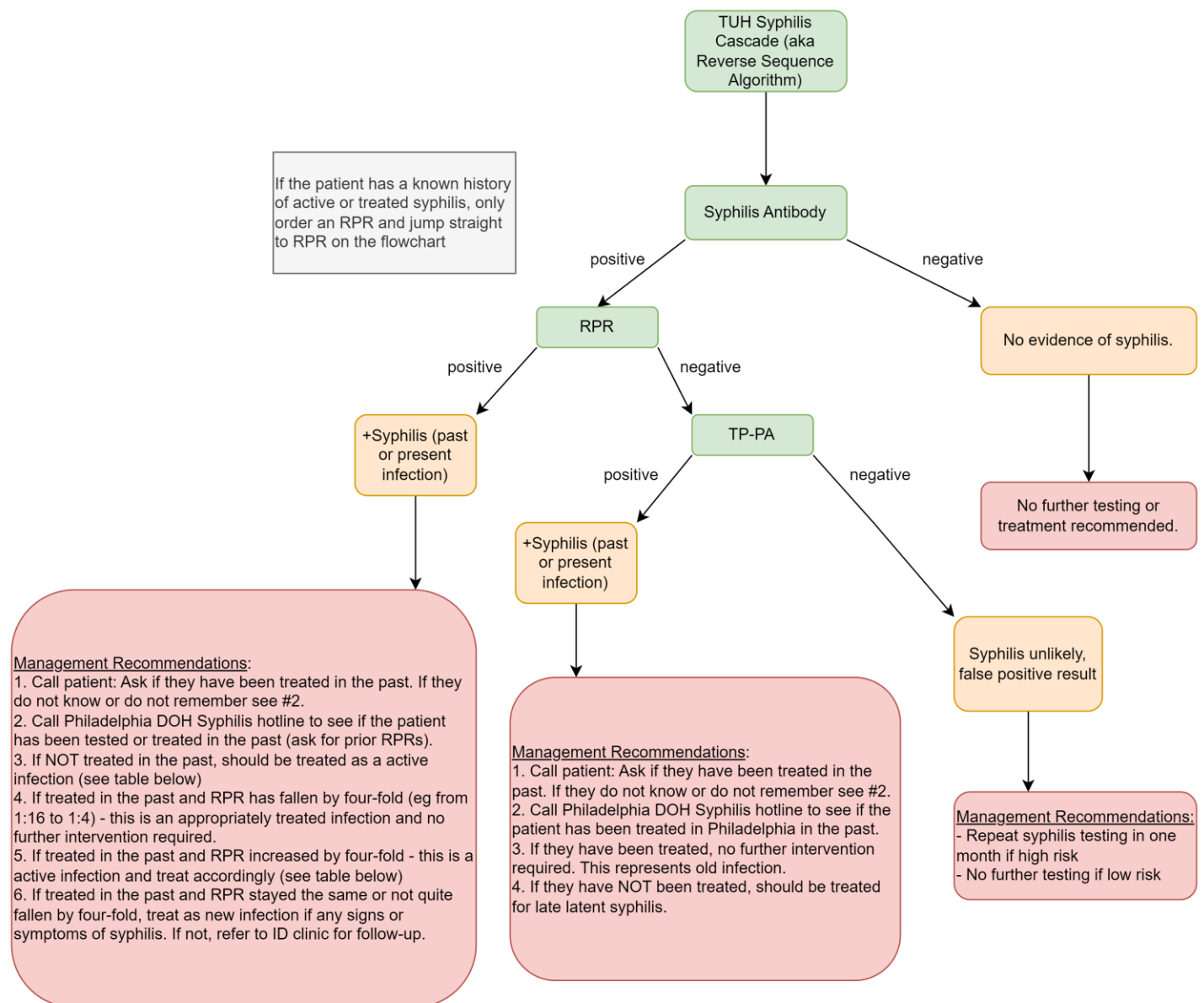


Chart 1

Syphilis Ab	RPR	TPPA	Interpretation	Next Steps
Negative	Negative	Negative	1. Negative 2. False negative in early infection	Repeat in 1 month if high risk Empirically treat if known contact
Positive	Negative	Negative	1. False positive	Repeat in 1 month if high risk
Positive	Negative	Positive	1. Previously treated syphilis 2. Late latent syphilis	Treated with PCN x 3 if not previously treated
Positive	Positive	Positive	1. Active infection 2. Previously treated infection	If treated, look at prior RPRs for appropriate decline

Table 1: Credit to Dr. Stephanie Spivack.

Disease Stage	Definition	Preferred Treatment	Alternative Treatment
Primary	Clinical symptoms (chancre, regional LAD) +/- serology	Benz PCN 2.4 million units IM x1	Doxycycline 100mg BID x14d
Secondary	Clinical symptoms (rash, disseminated lymphadenopathy) + serology	Benz PCN 2.4 million units IM x1	Doxycycline 100mg BID x14d
Early latent	Positive lab findings but no symptoms, negative testing less than 1 year ago	Benz PCN 2.4 million units IM x1	Doxycycline 100mg BID x14d
Late latent	Positive lab findings with no symptoms, negative testing more than 1 year ago or no prior testing	Benz PCN 2.4 million units IM qWeekly x3	Doxycycline 100mg BID x28d
Tertiary	Clinical symptoms (cardiovascular or gummatous disease) + serology	Benz PCN 2.4 million units IM qWeekly x3	Consult with ID physician recommended
Neurosyphilis	Clinical symptoms (vision changes, eye pain, hearing loss, tinnitus, meningovascular sequelae) + serology	IV PCN G 18-24 million units daily x10-14d	Consult with ID physician recommended

Table 2

#### Additional Resources:

1. Philadelphia Department of Health Syphilis Hotline: 215-685-6737, 215-685-6585, jamesj.williams@phila.gov
2. On-Call ID Fellow: Can be found on Amion
3. TUH ID Outpatient Scheduling: 215-707-1982 (p), 215-707-4414 (f)