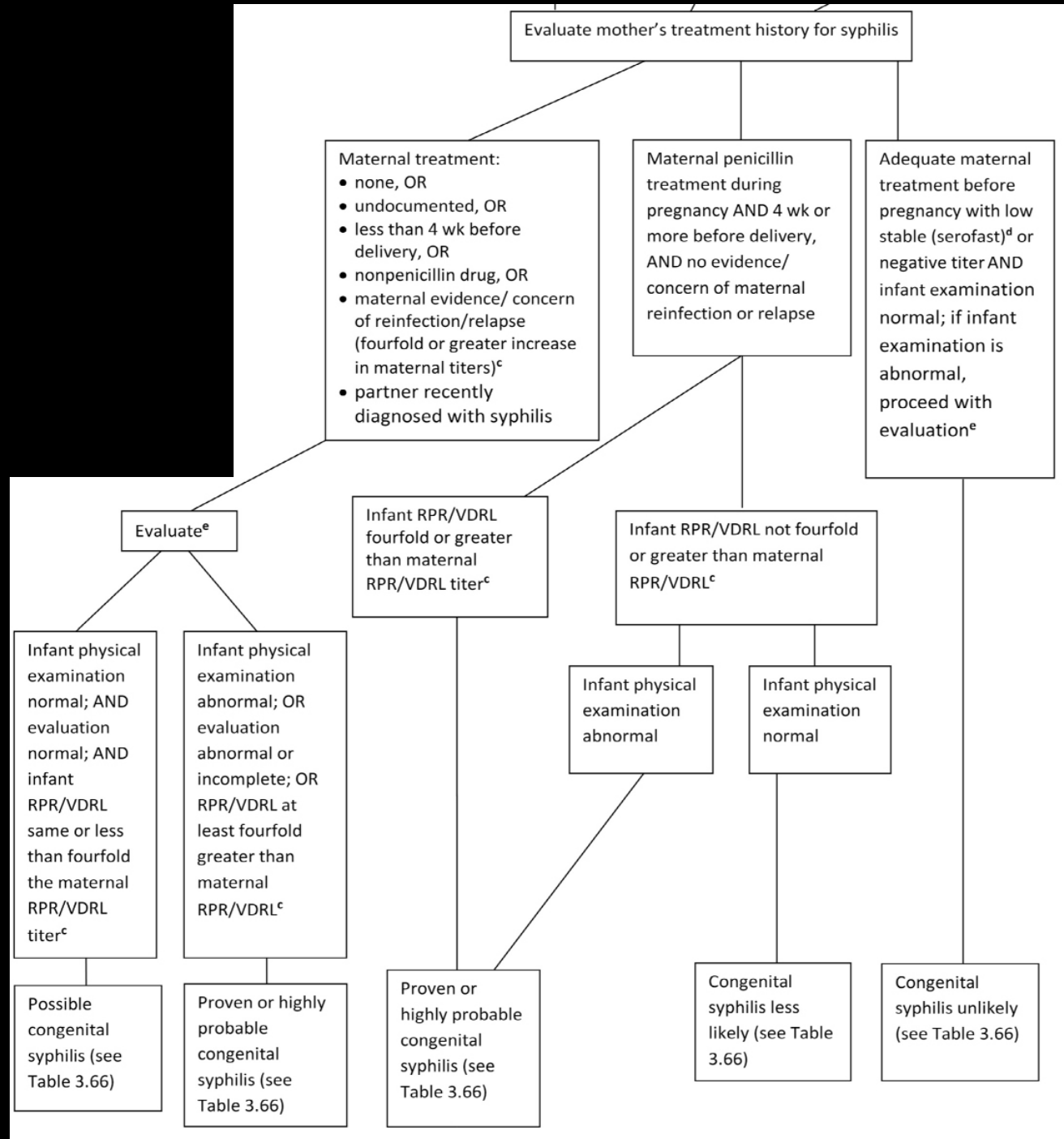


# Objectives

- 2.) 1.) Be able to name at least 3 requirements for successful treatment of syphilis in pregnancy
- Understand when 10 days of IV penicillin is required, and when a one-time dose of IM penicillin may be used in a syphilis exposed neonate
- 3.) Be able to work through all branches of the AAP's flowchart for treatment and evaluation of syphilis exposed infants



Evaluate mother's treatment history for syphilis

Maternal treatment:

- none, OR
- undocumented, OR
- less than 4 wk before delivery, OR
- nonpenicillin drug, OR
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Evaluate<sup>e</sup>

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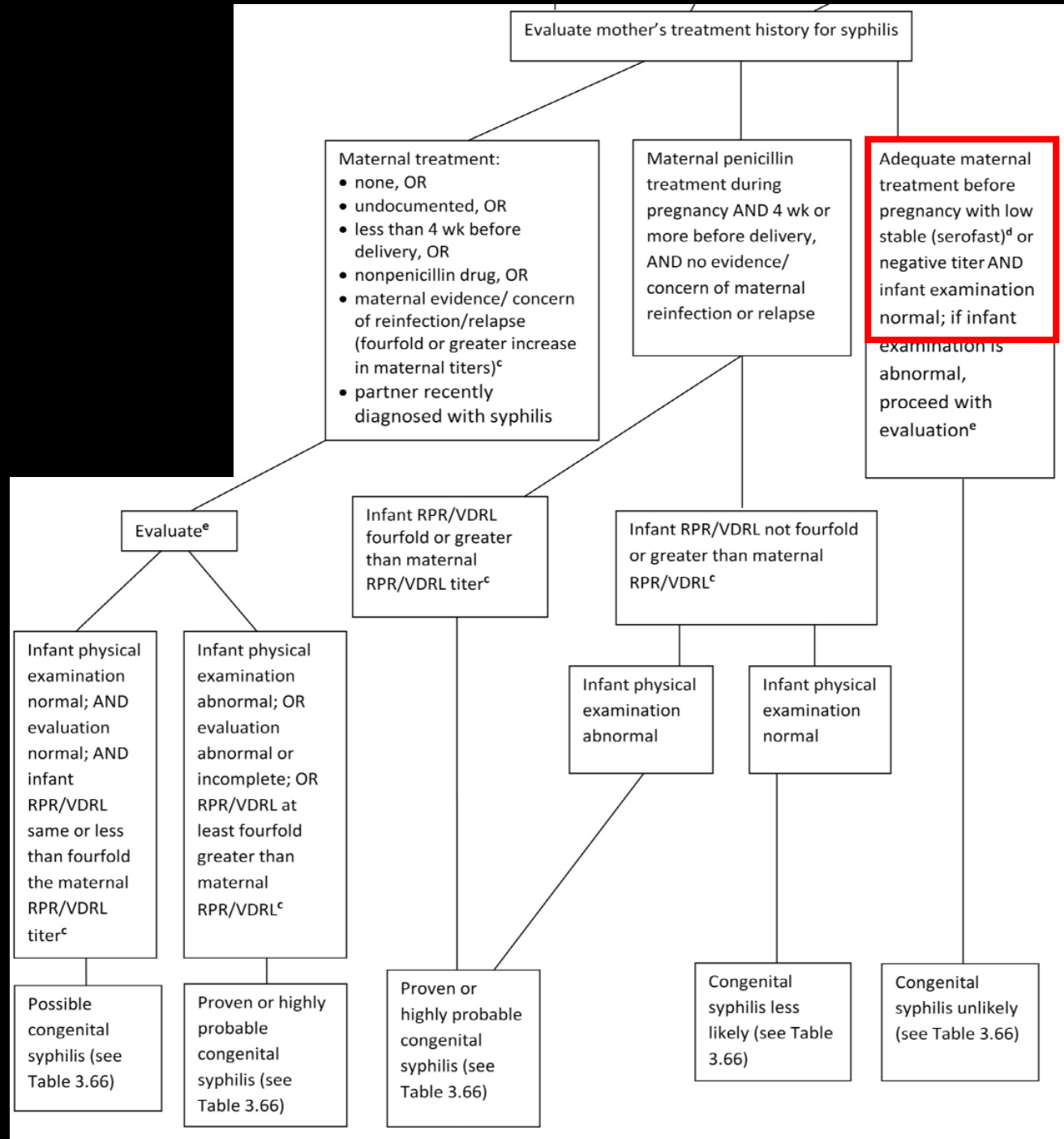
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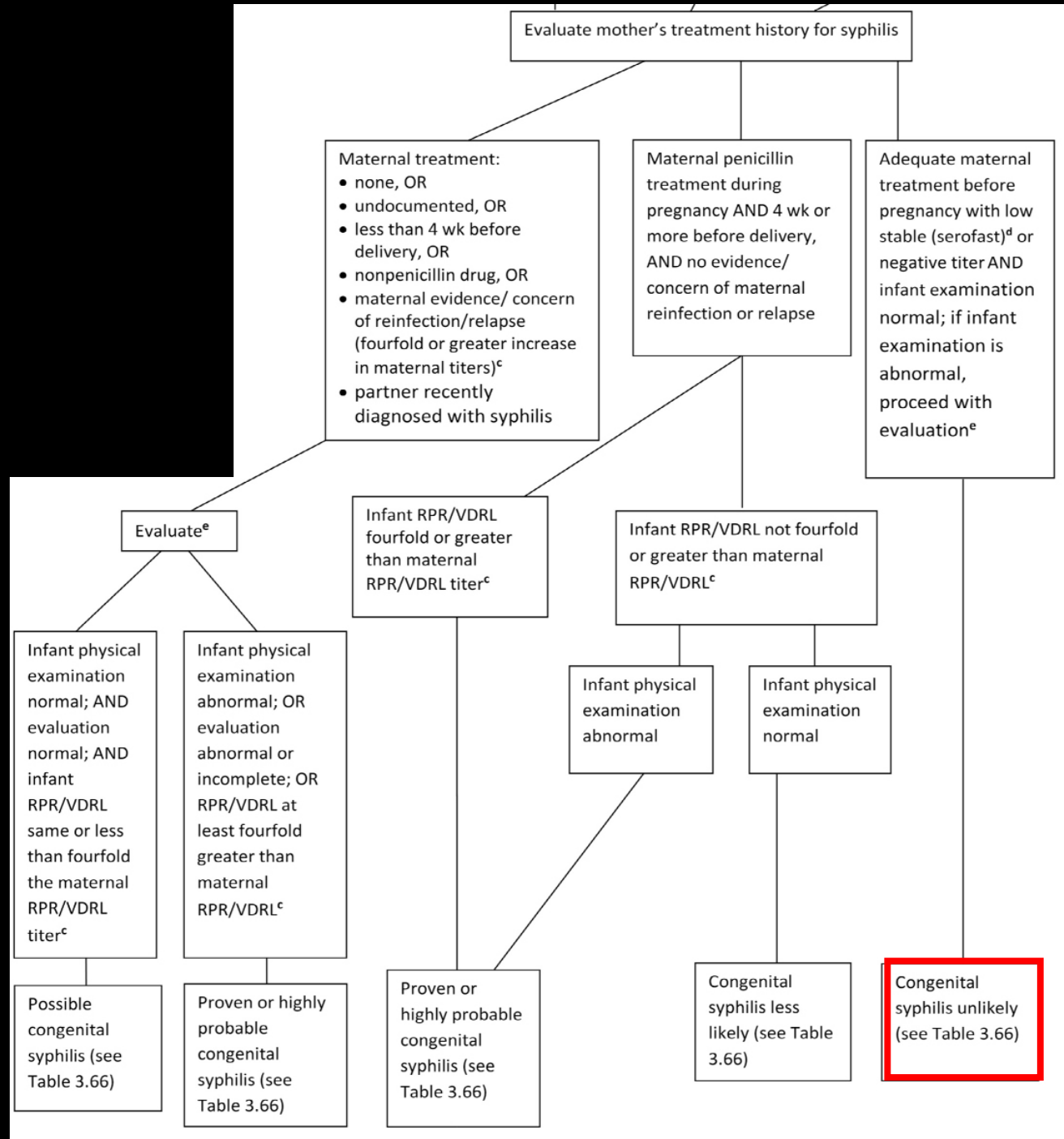
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Infant physical examination abnormal

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Infant physical examination normal

Congenital syphilis unlikely (see Table 3.66)



Congenital syphilis unlikely (see Table 3.66)

## **No Treatment required**

Some experts would provide a one-time IM dose of penicillin if follow-up is unreliable and infant's RPR was reactive

# Adequate Maternal Treatment

- **Appropriate for stage of syphilis (e.g. 3 injections for late latent disease)**

# Adequate Maternal Treatment

- Appropriate for stage of syphilis (e.g. 3 injections for late latent disease)
- **Multiple injections must be 7-9 days apart**



# Decline in Penicillin Concentrations Over Time in Pregnant Women/Fetuses

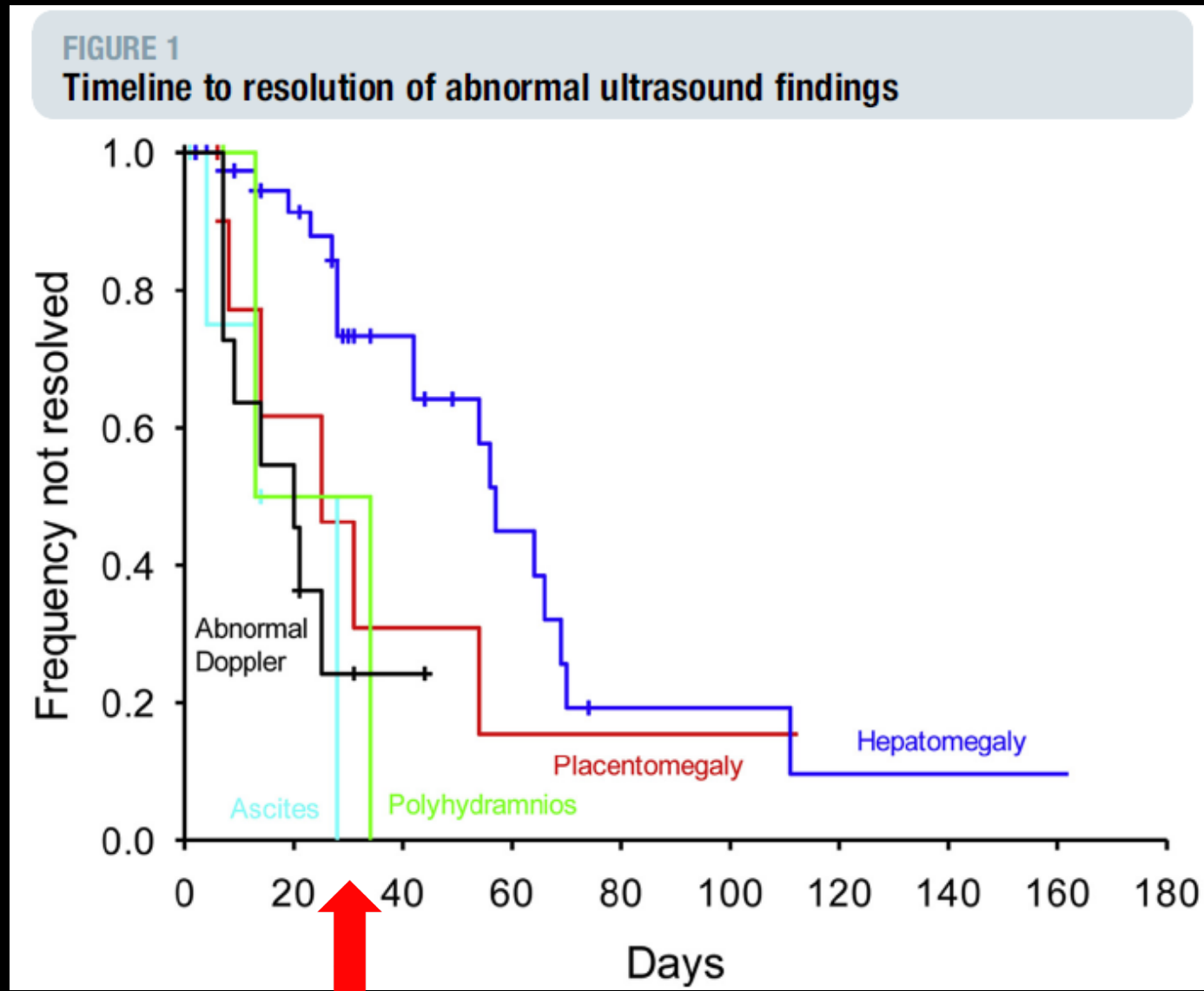
Source	Day 1	Day 3	Day 7	Beyond
Cord Blood	0.09	0.02	0.02	?
Amniotic Fluid	0.10	0.03	0.02	?

Concentration of 0.018  $\mu\text{g}/\text{mL}$  therapeutic goal  
Concentrations shown are lowest predicted (- SD)

# Adequate Maternal Treatment

- Appropriate for stage of syphilis (e.g. 3 injections for late latent disease)
- Multiple injections must be 7-9 days apart
- **Completed at least 4 weeks prior to delivery**

- **Mothers treated <30 days prior to delivery**
  - May not be enough time prior to delivery to treat a fetal infection

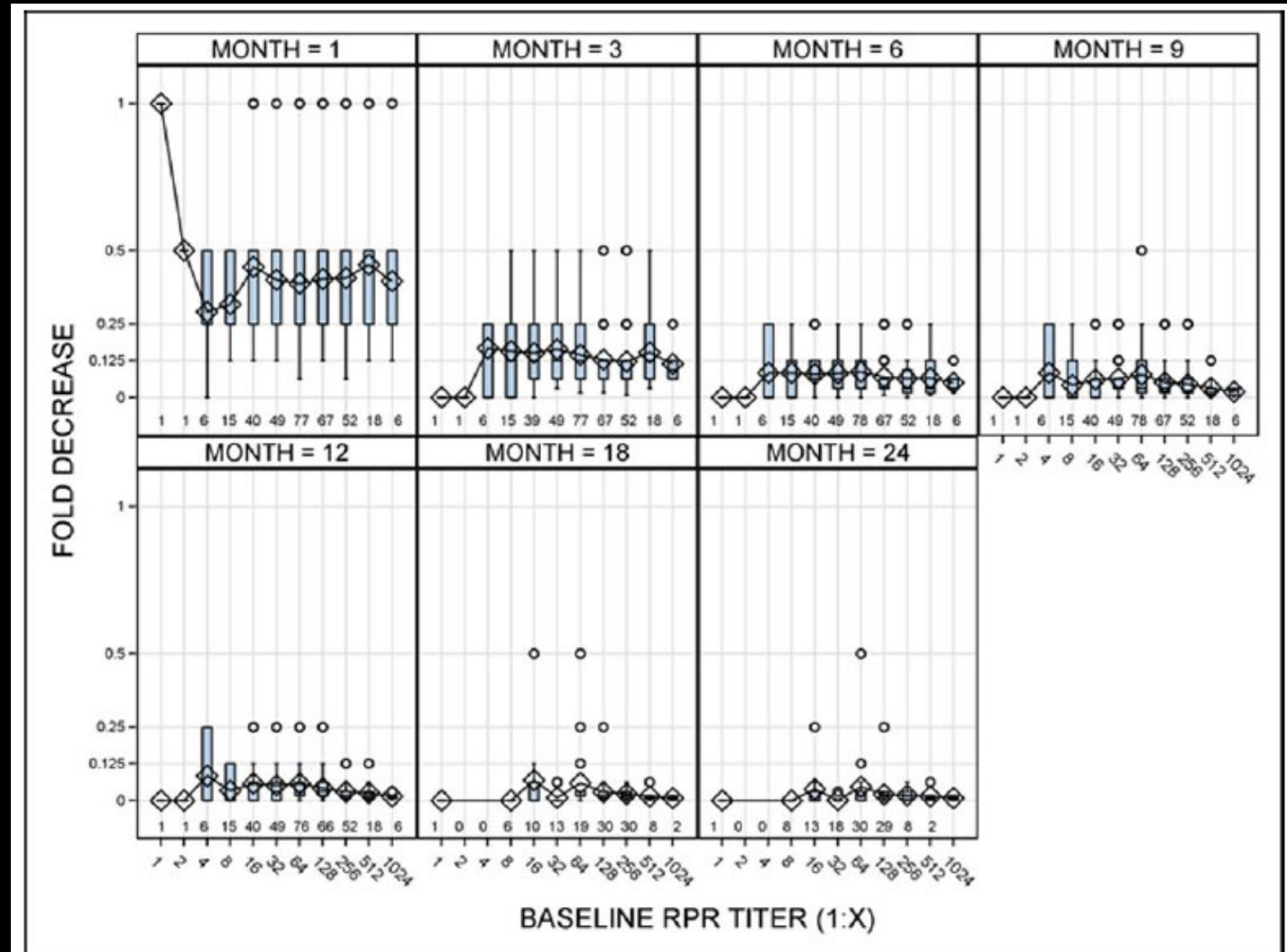


# Adequate Maternal Treatment

- Appropriate for stage of syphilis (e.g. 3 injections for late latent disease)
- Multiple injections must be 7-9 days apart
- Completed at least 4 weeks prior to delivery
- **Must be penicillin (not enough data on other antibiotics in pregnancy)**

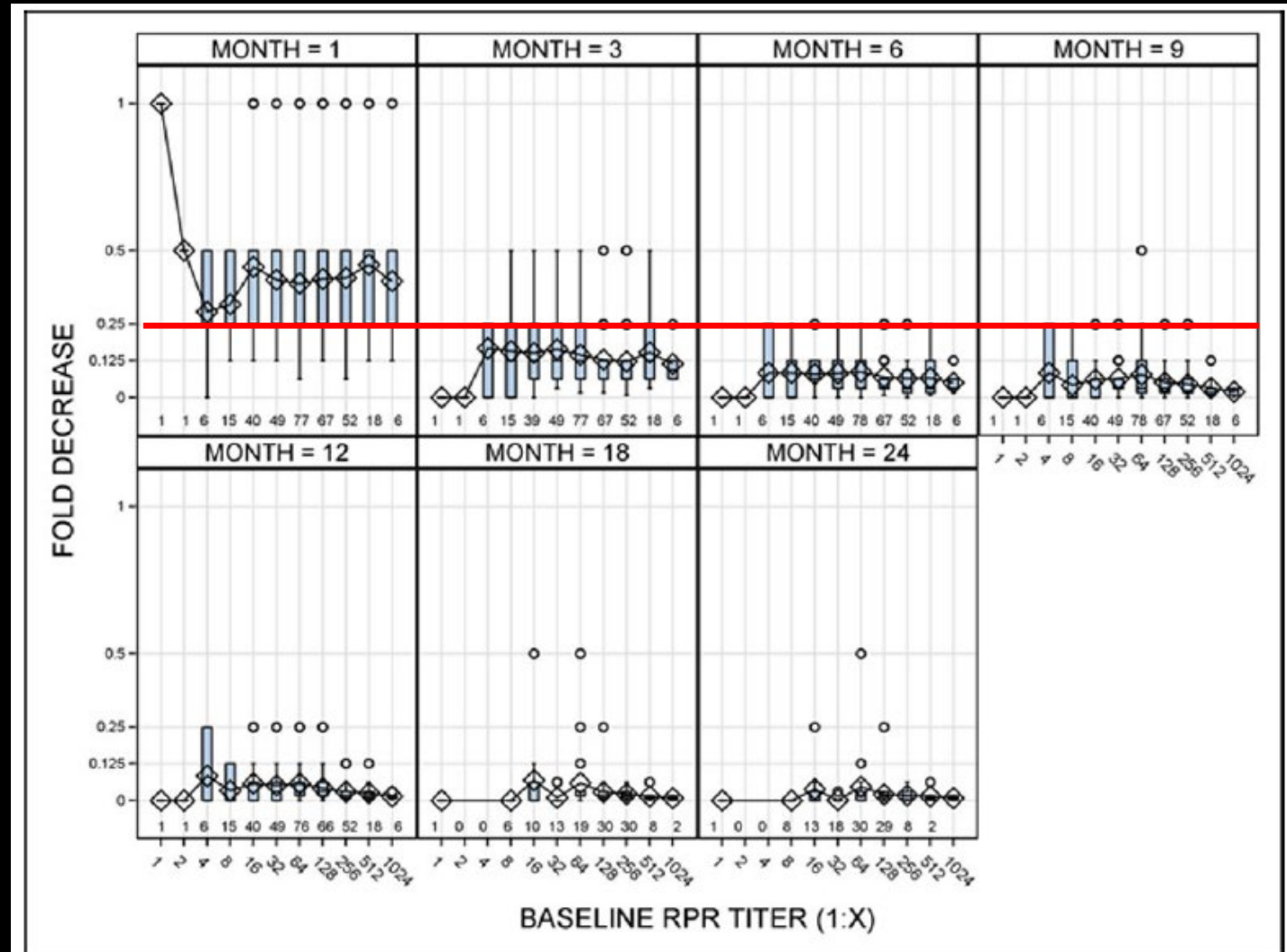
- **Maternal RPRs may not decrease 4-fold prior to delivery**

This does not necessarily prove a treatment failure

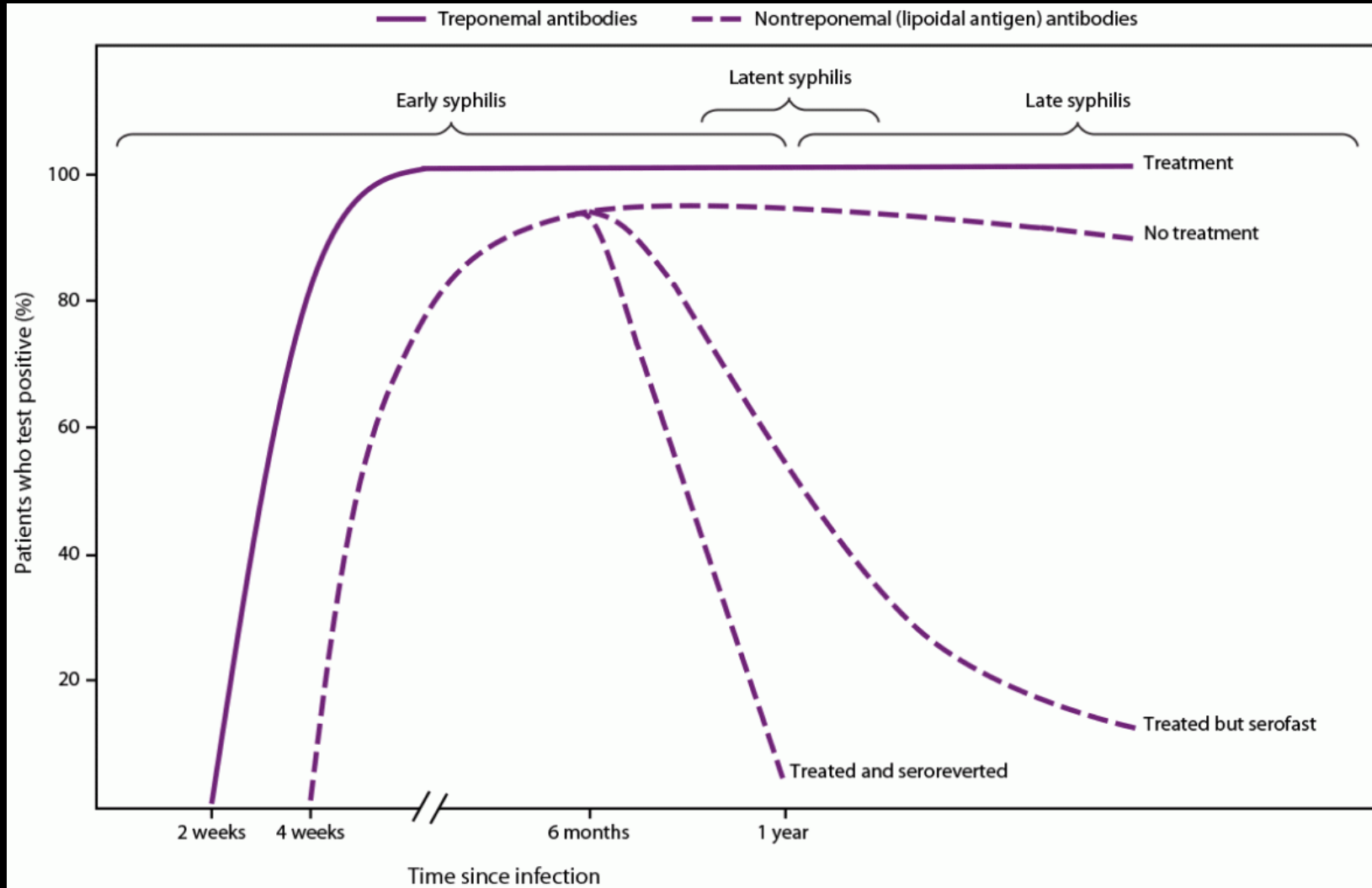


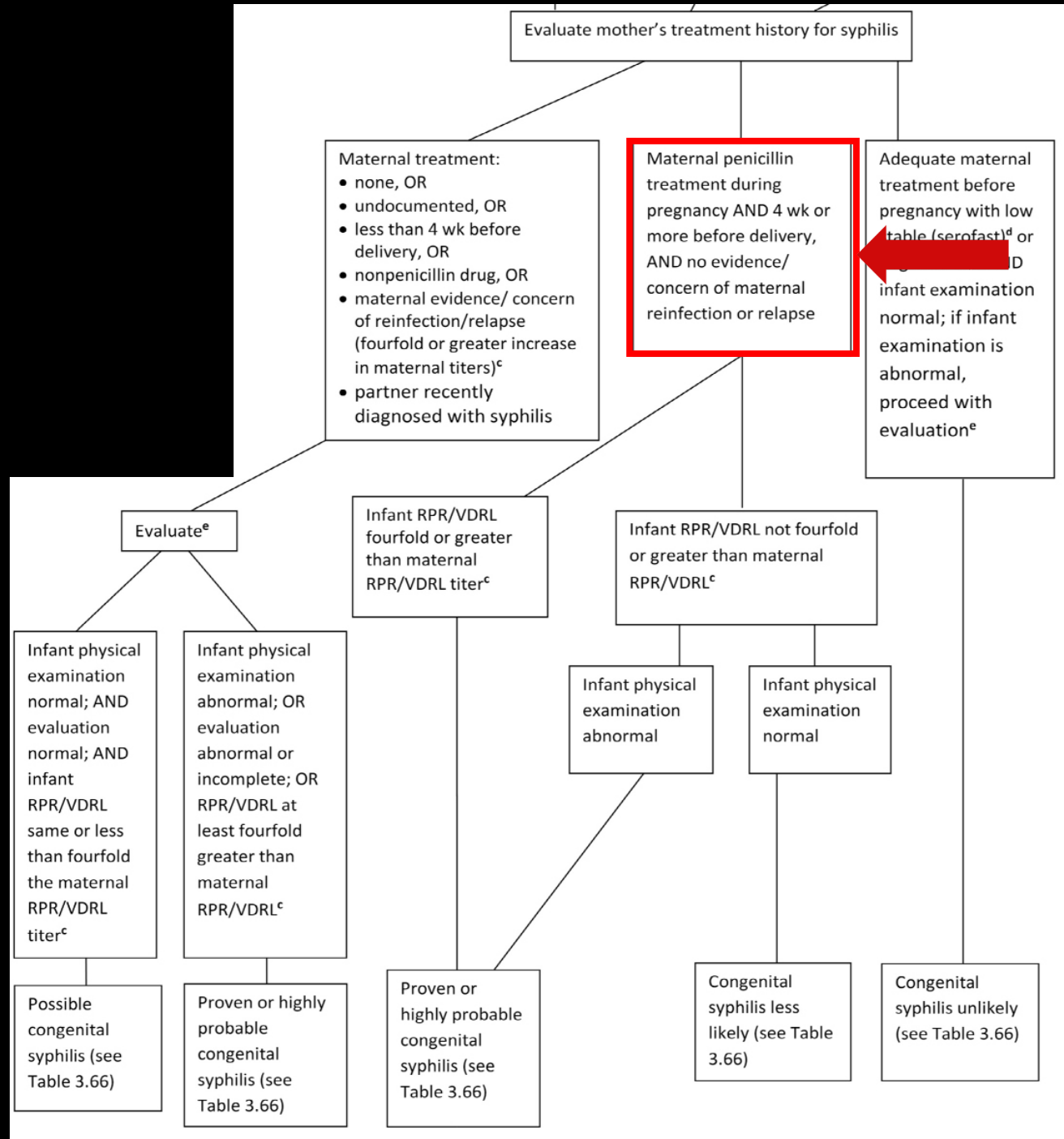
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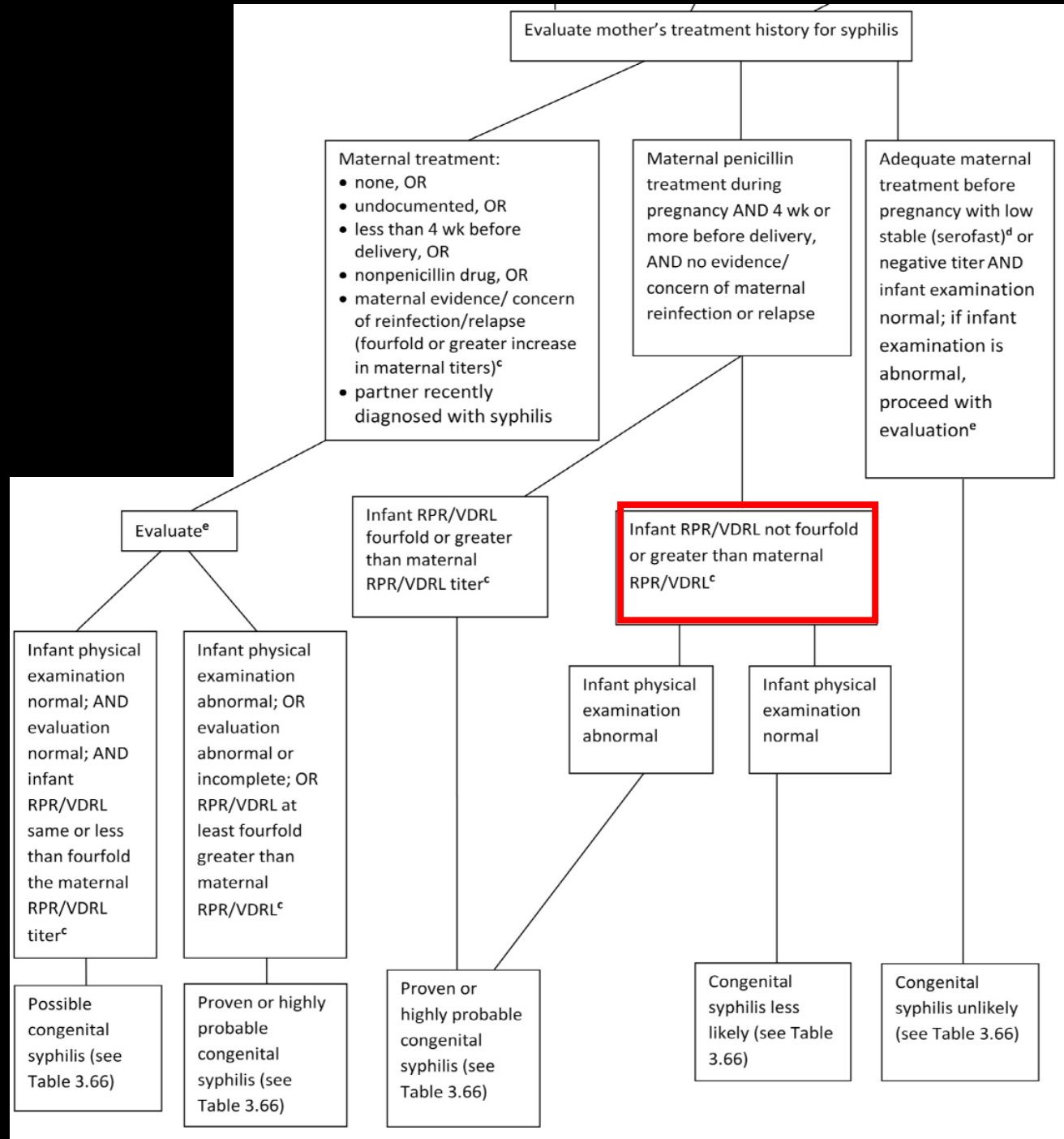


# Time to Resolution of Syphilis Serologies





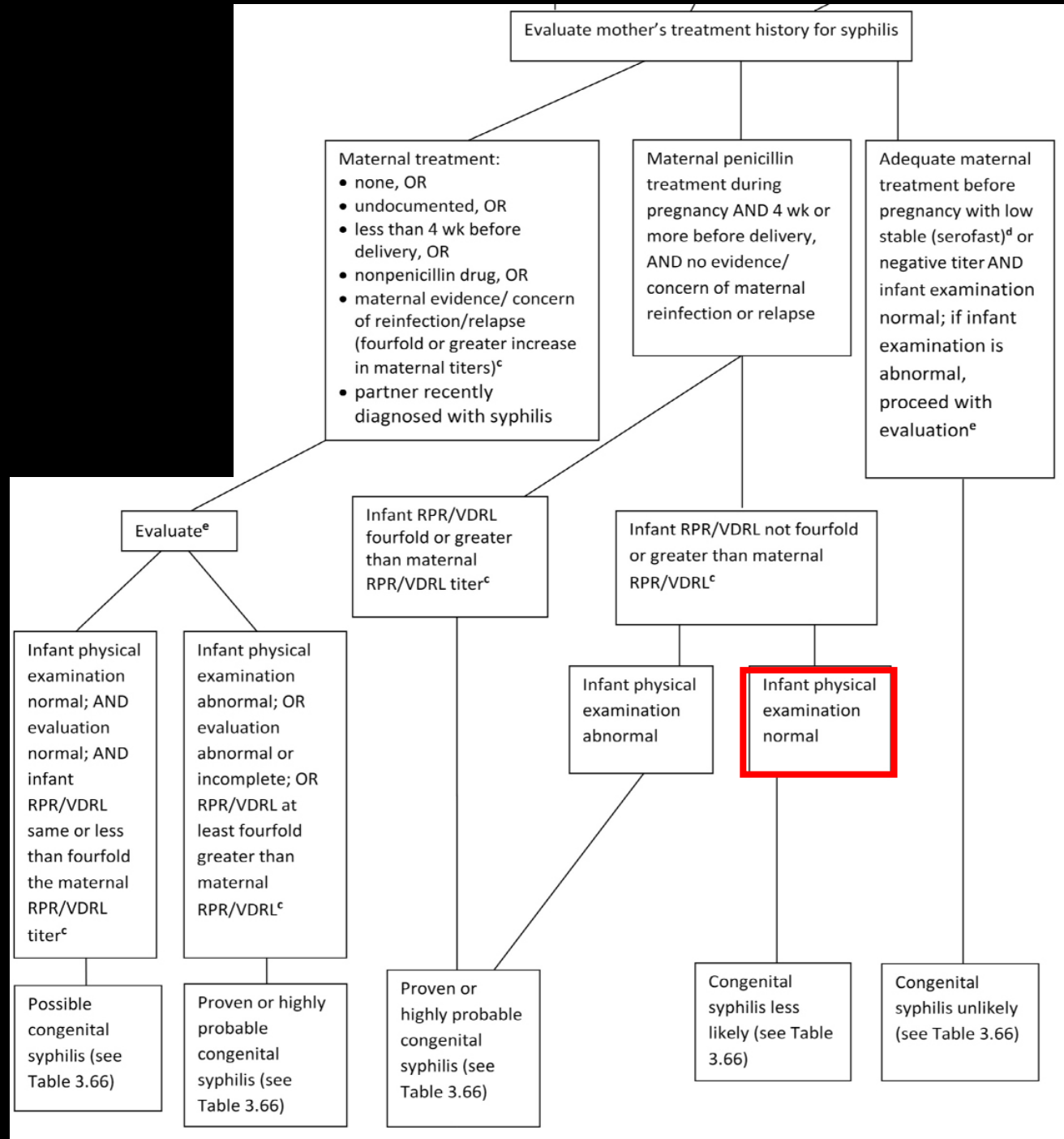


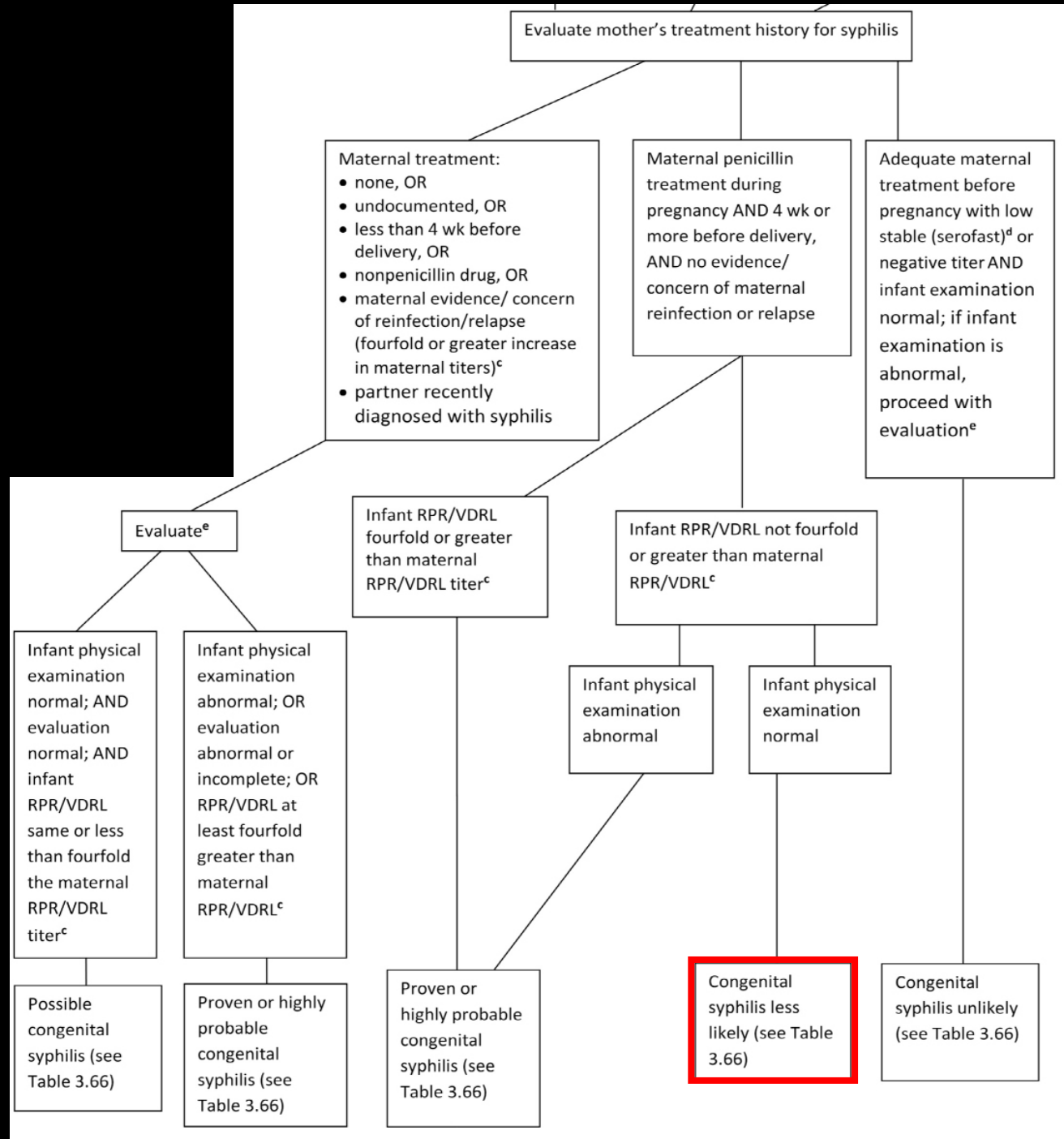


- RPR antibodies will pass through the placenta to the baby
- Maternal RPR 1:2 and infant RPR 1:2 or 1:4 suggest transplacental passage only

- Infant's RPR > 4-fold higher than mom's RPR suggest the baby is **making their own RPR and hence infected**
- Note: not 4 dilutions higher but **4-FOLD higher**

	4-Fold increase	4-dilution increase
Mom's RPR	1:2	1:2
Baby's RPR	1:8	1:32





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- none, OR
- undocumented, OR
- less than 4 wk before delivery, OR
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Evaluate<sup>e</sup>

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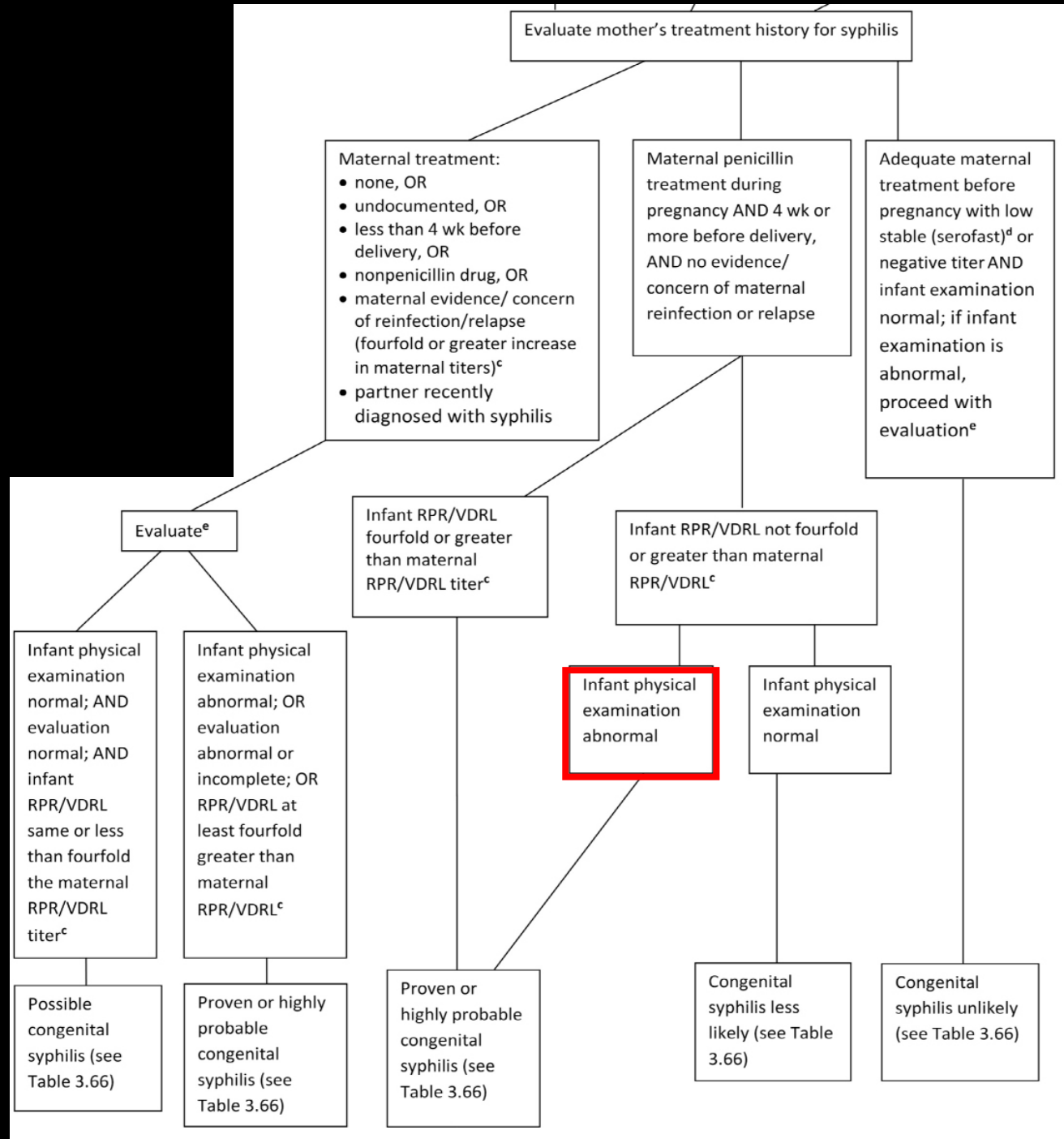
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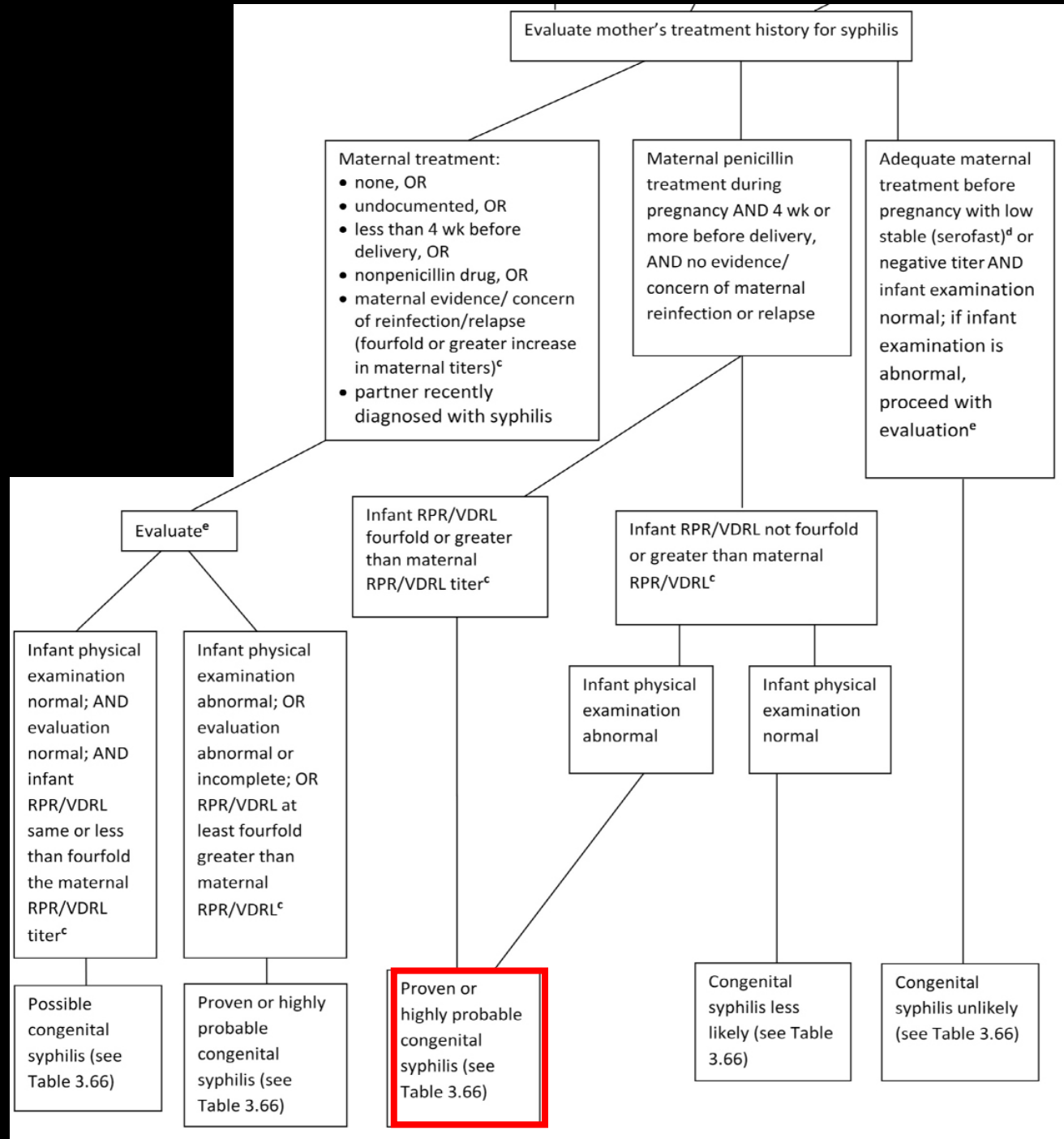
- Most experts (AAP preferential recommendation)=one dose of IM penicillin



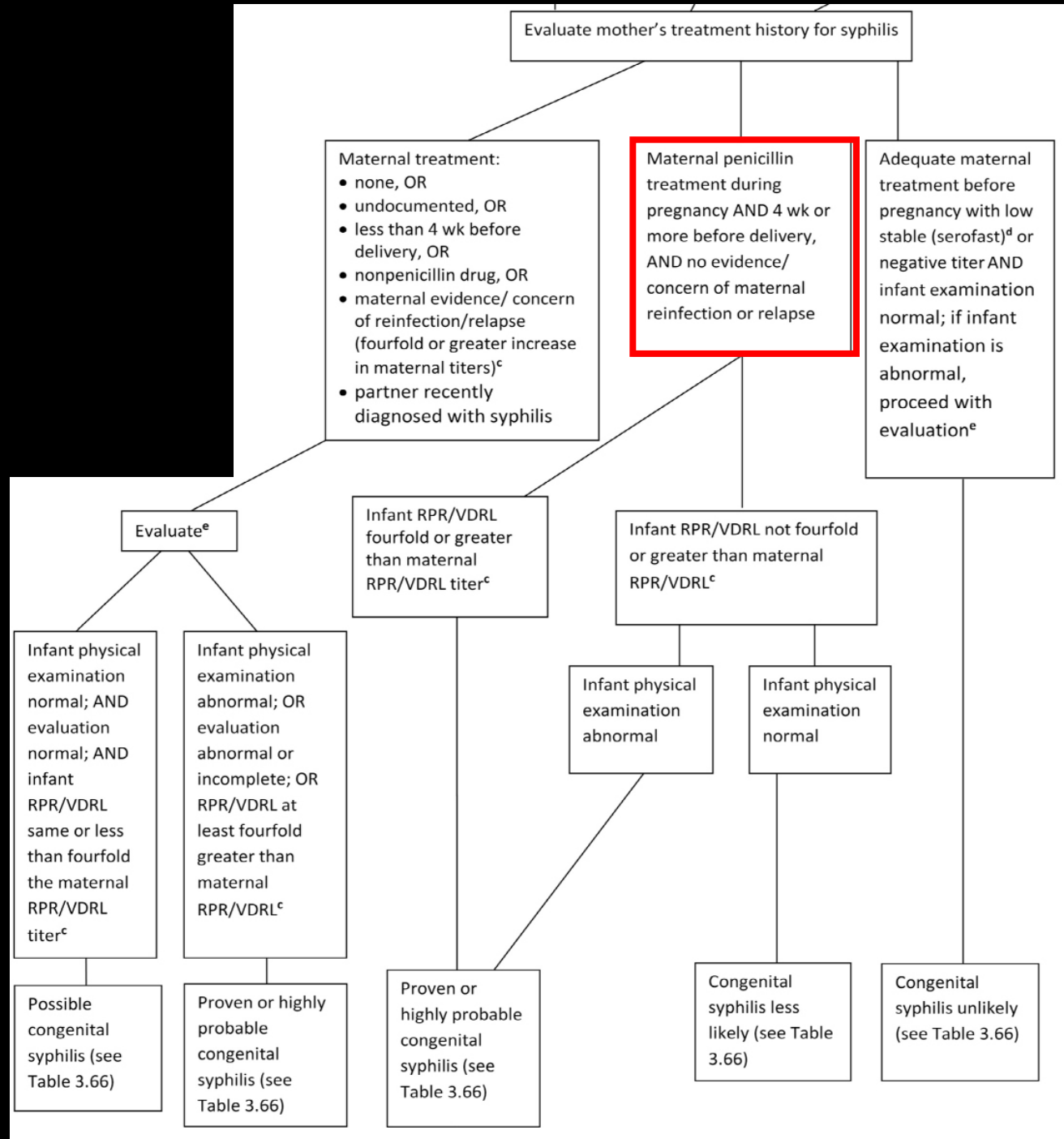
# Exam Findings in Congenital Syphilis

- Hepatosplenomegaly
- Snuffles (excessive runny nose)
- Lymphadenopathy
- Mucosal lesions
- Pneumonia
- Extremity edema
- Rashes
- Bone pain





**Full 10-day course of IV penicillin**



Evaluate mother's treatment history for syphilis

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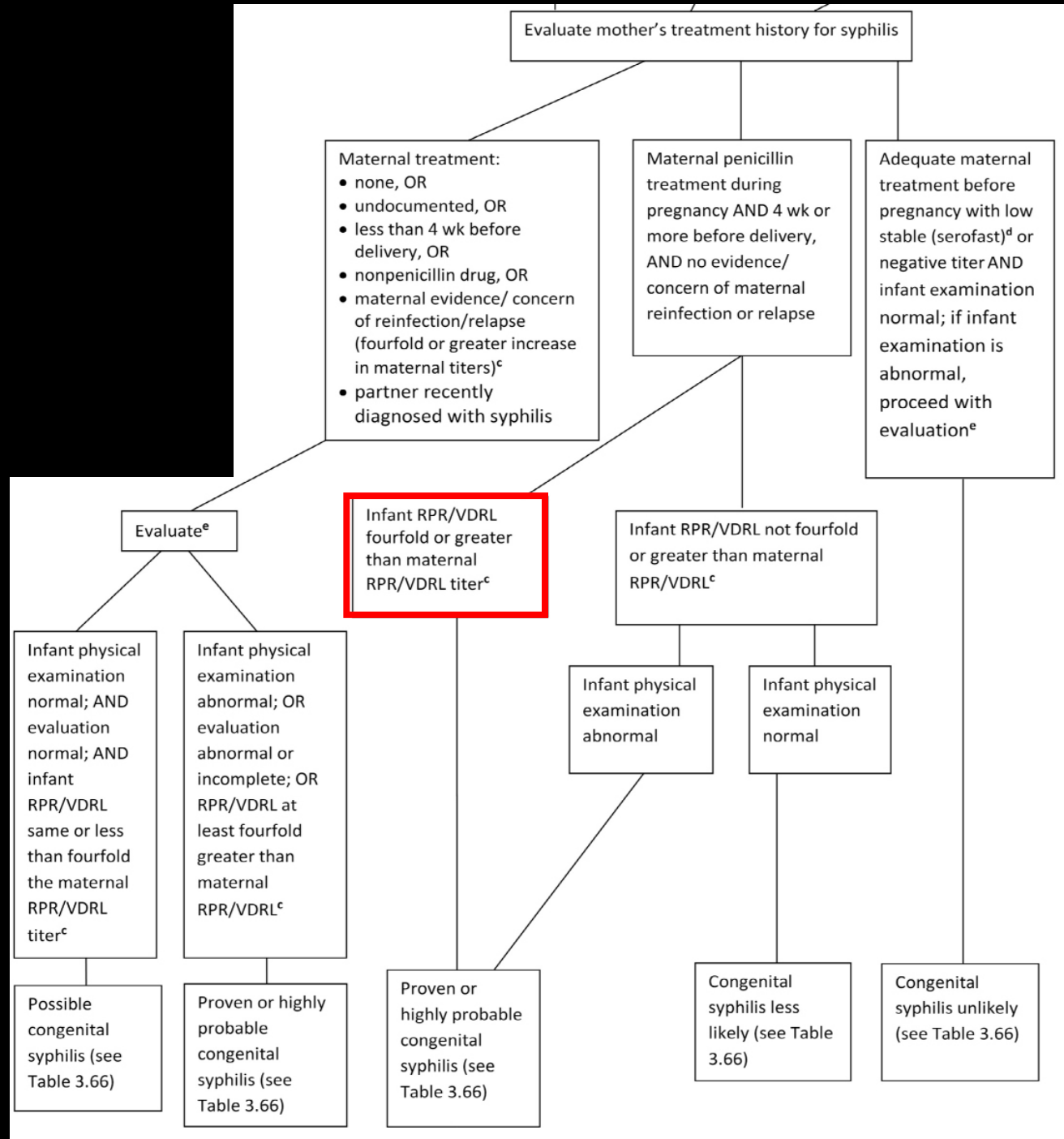
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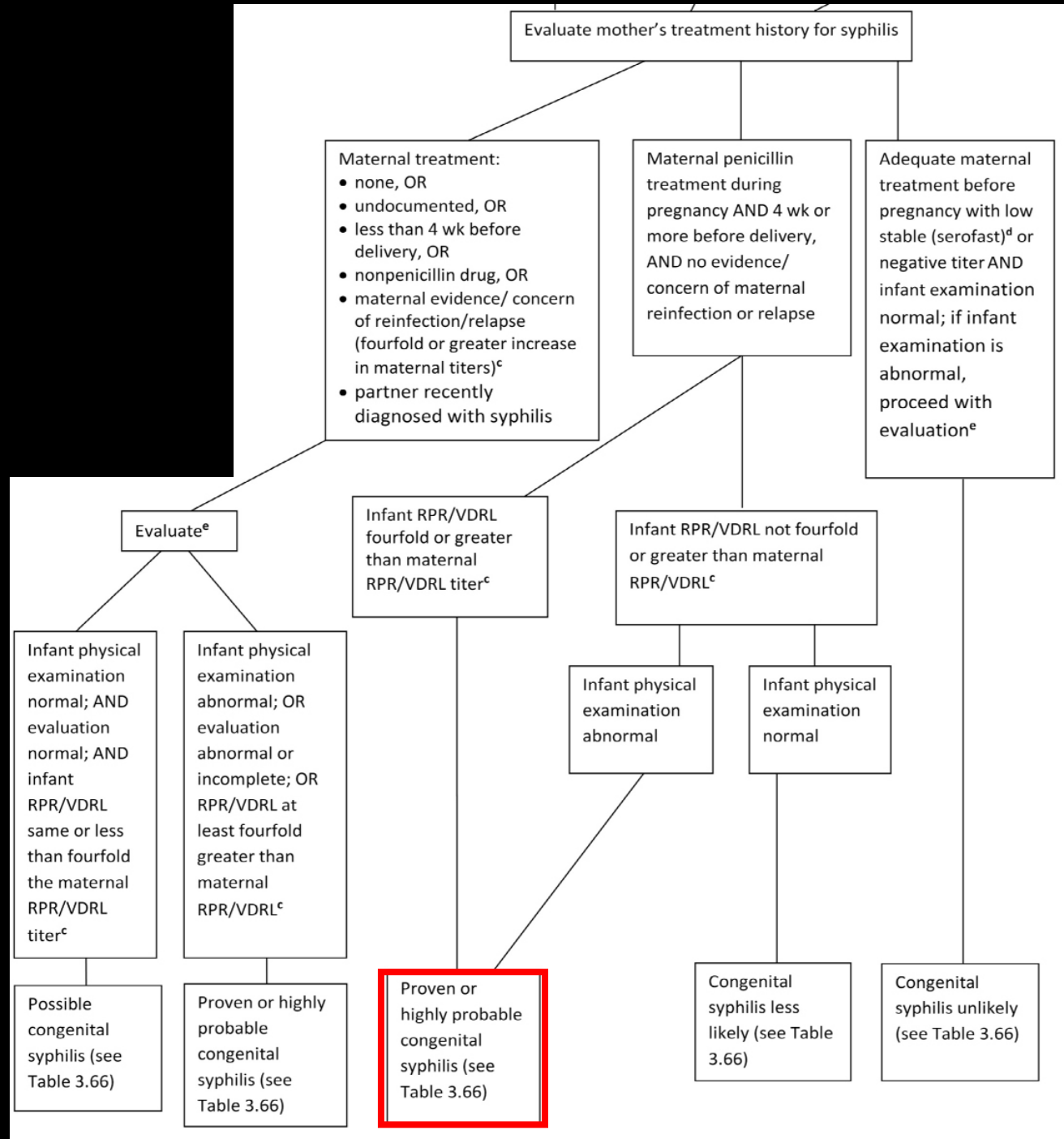
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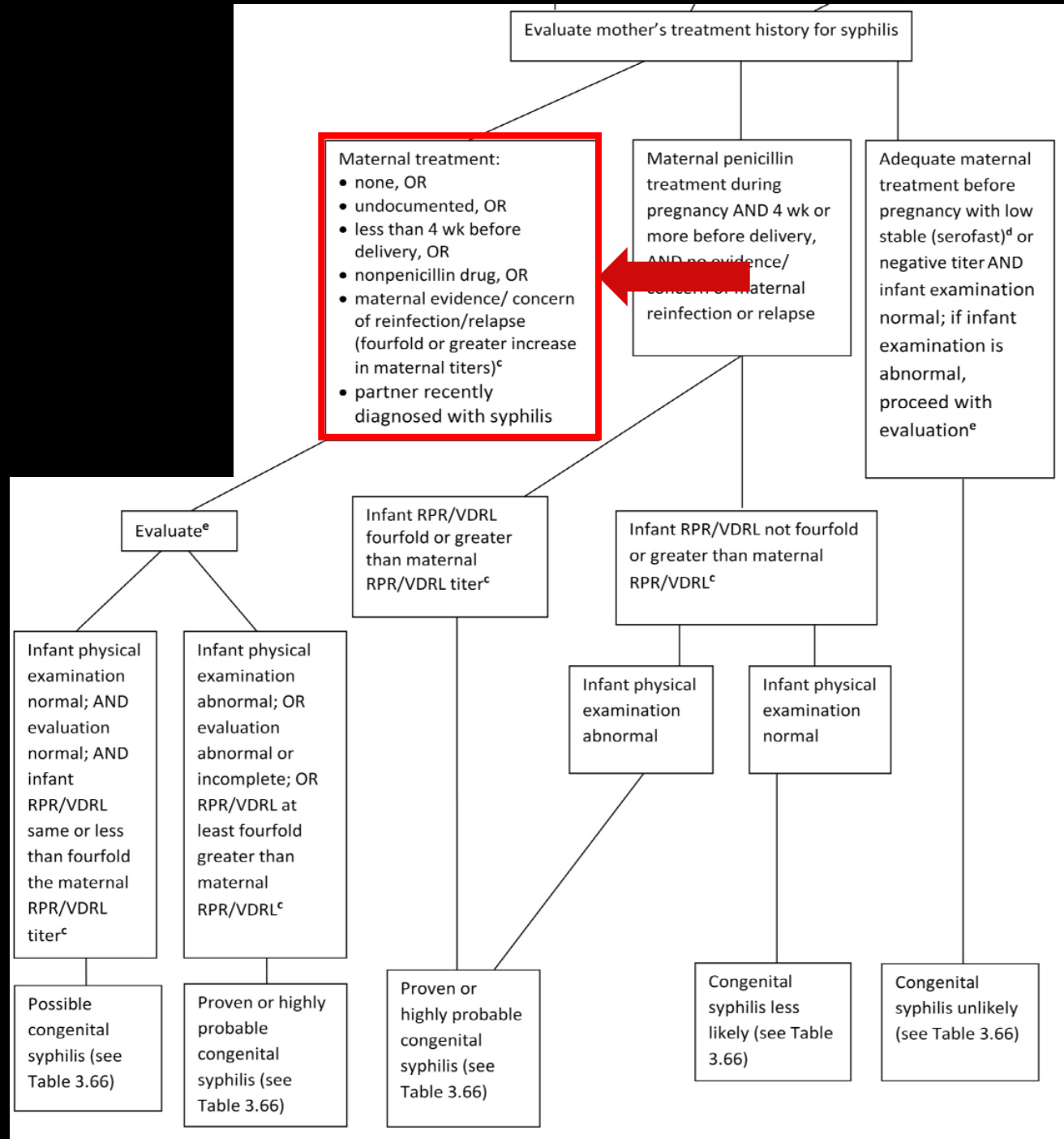
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**Full 10-day course of IV penicillin**



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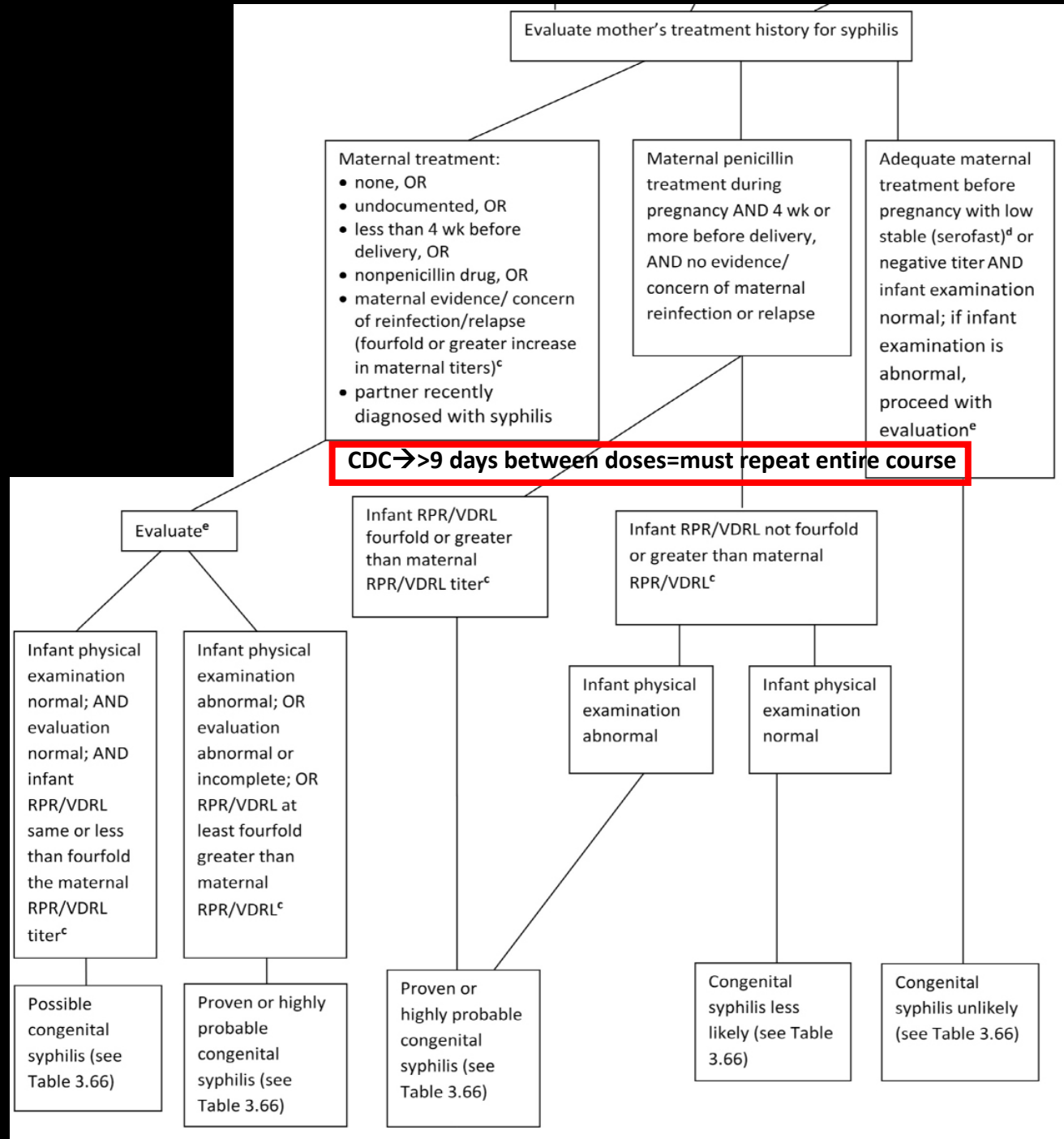
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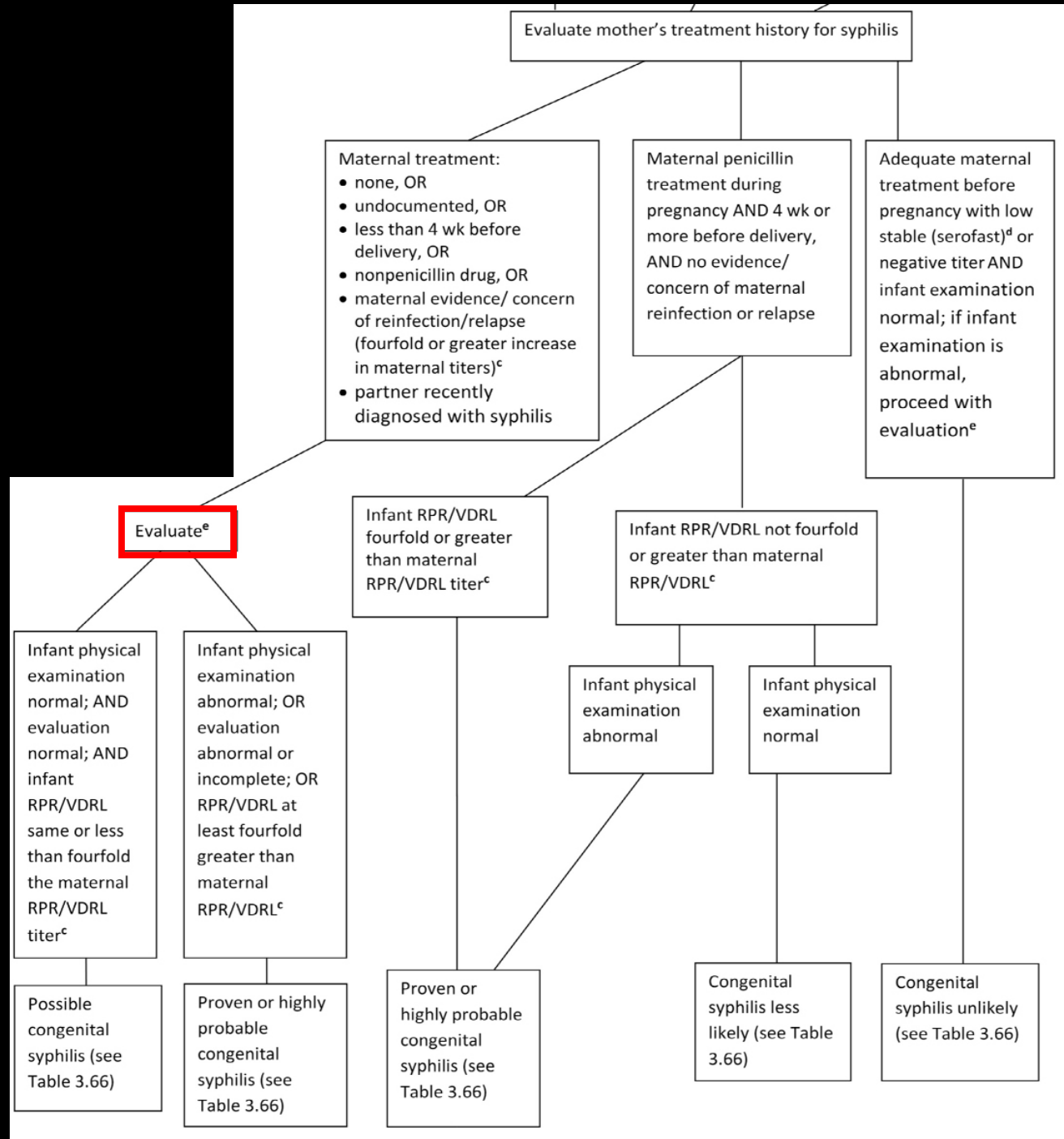
Congenital syphilis unlikely (see Table 3.66)

# Beware new partners with syphilis!

- Incubation period for syphilis may be up to 90 days
- RPR may take 4 weeks to seroconvert
- **Newly infected mothers may be missed**







Evaluate mother's treatment history for syphilis

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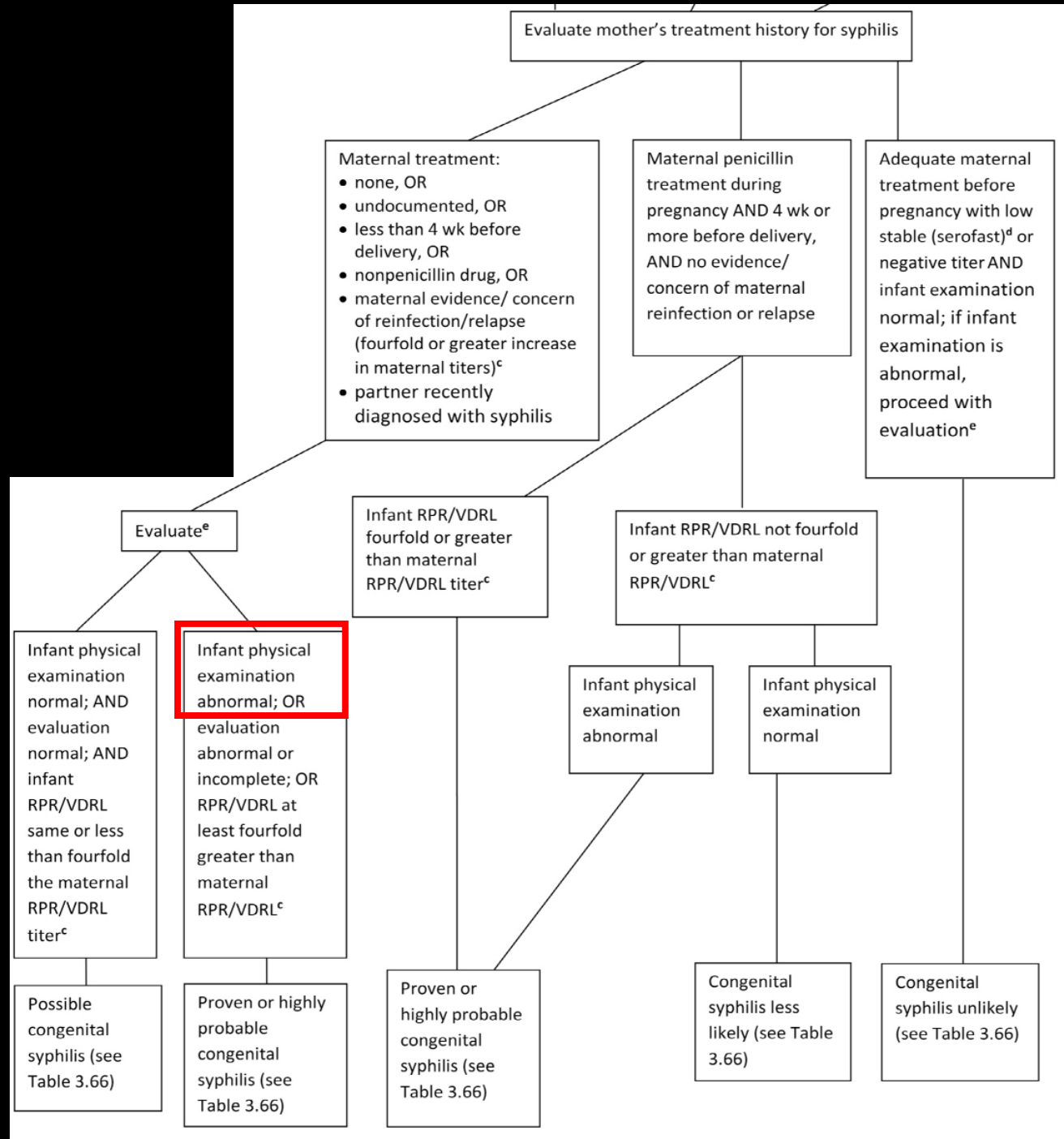
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# Infant Evaluation

- CBCD
- Hepatic panel
- Long bone films
- Lumbar puncture
- Eye exam
- Hearing test

- Note that LP, long bone x-rays, etc. are not required if you are treating for 10 days, but they may provide useful information



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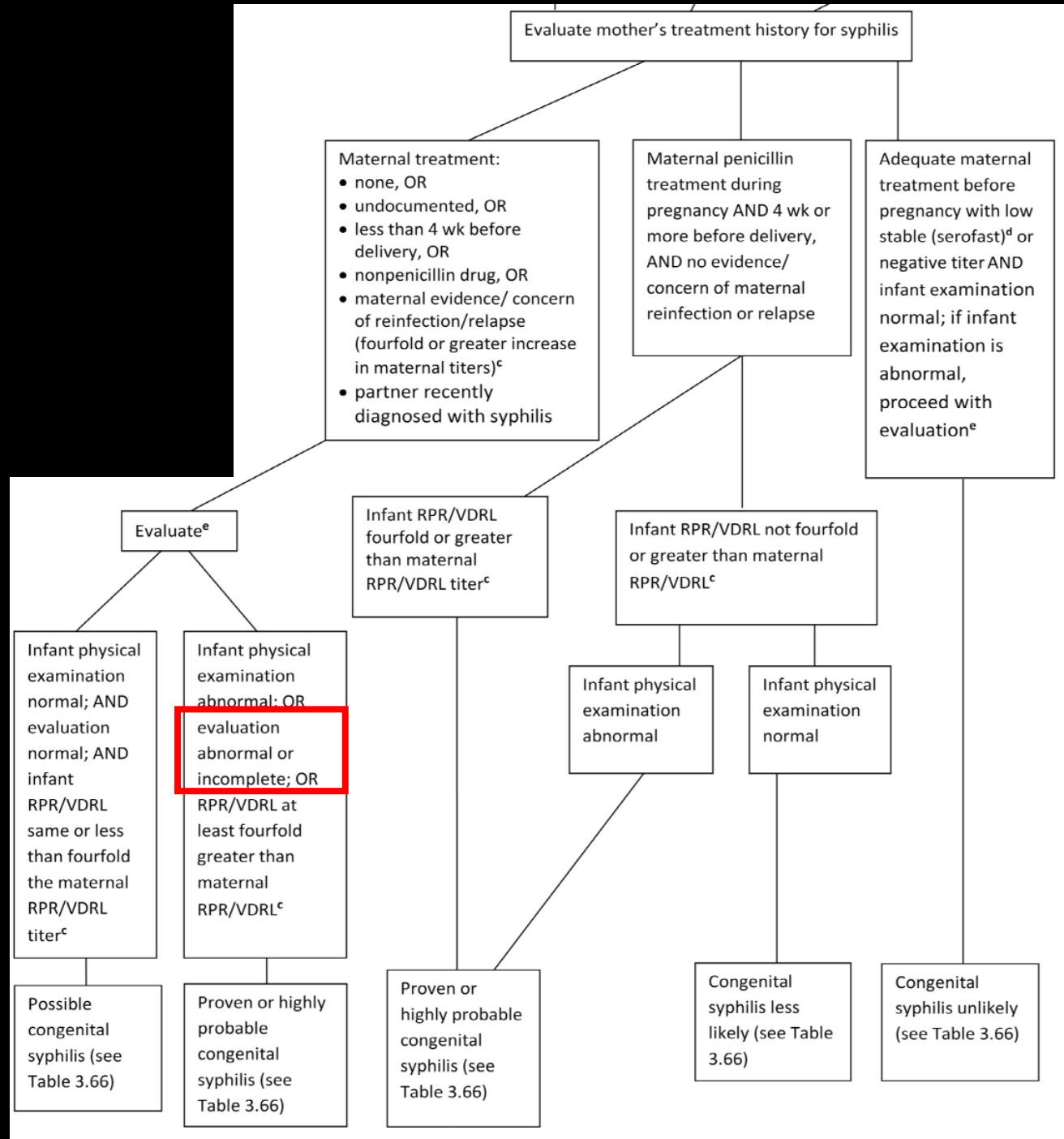
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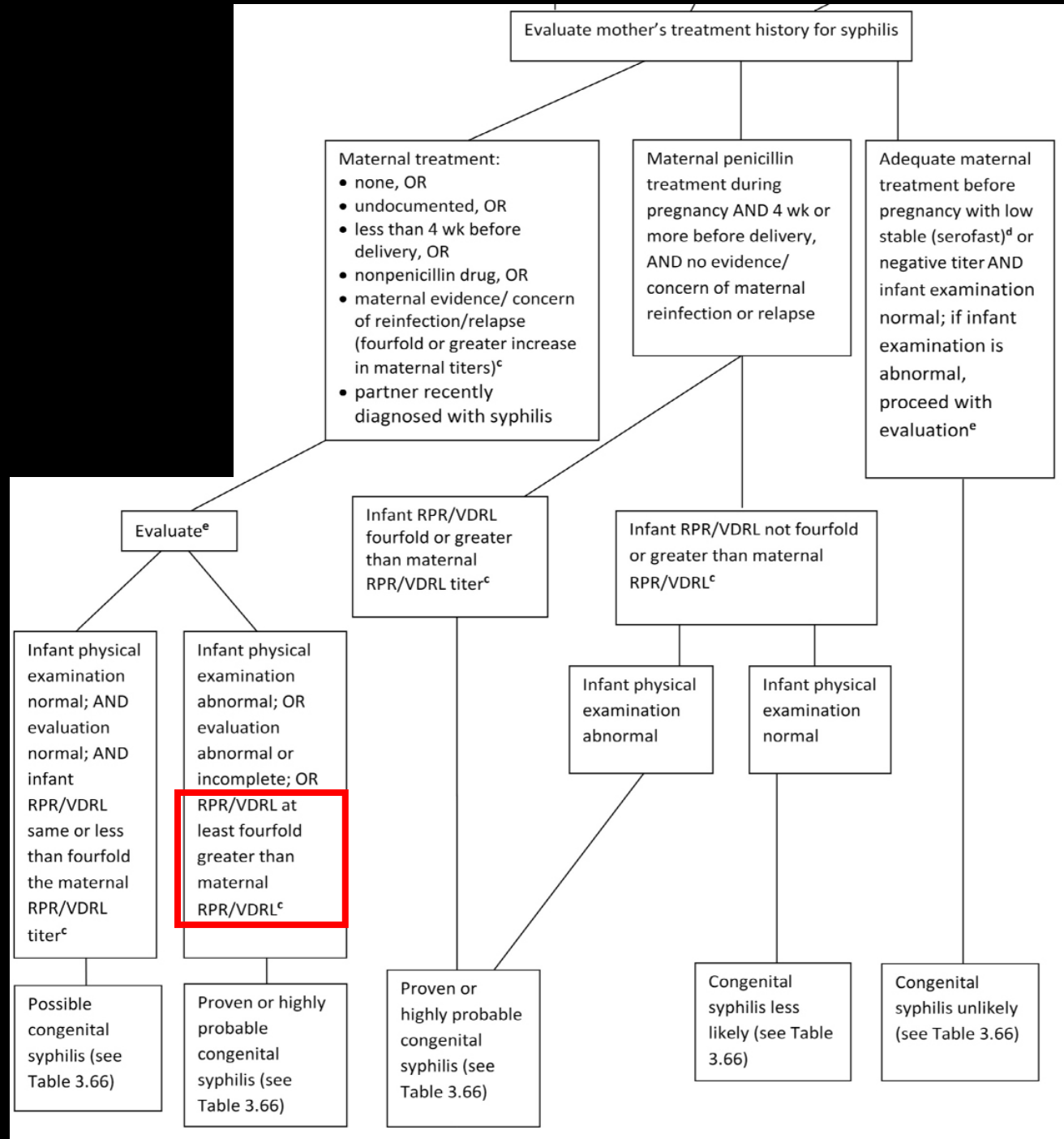
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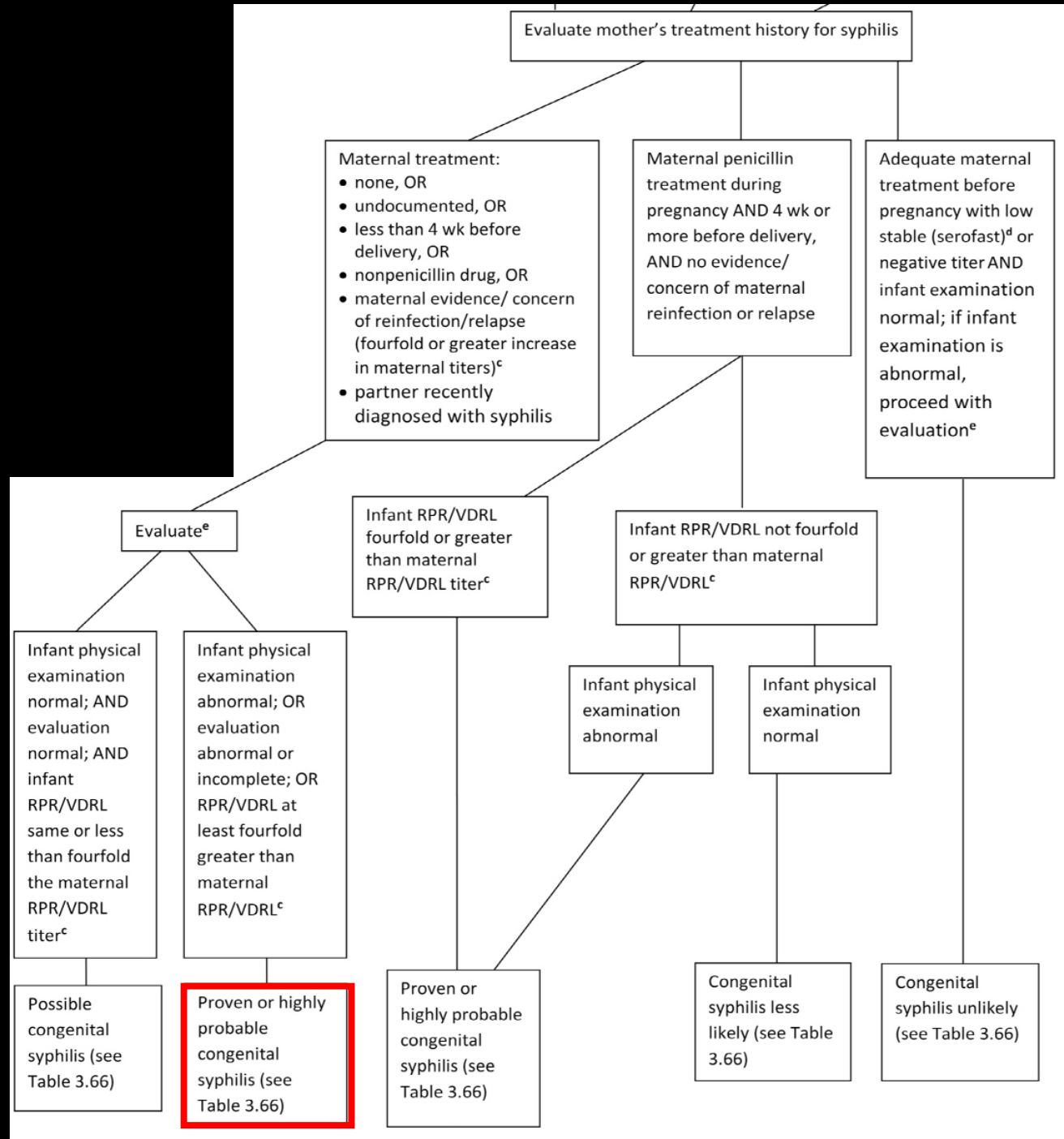
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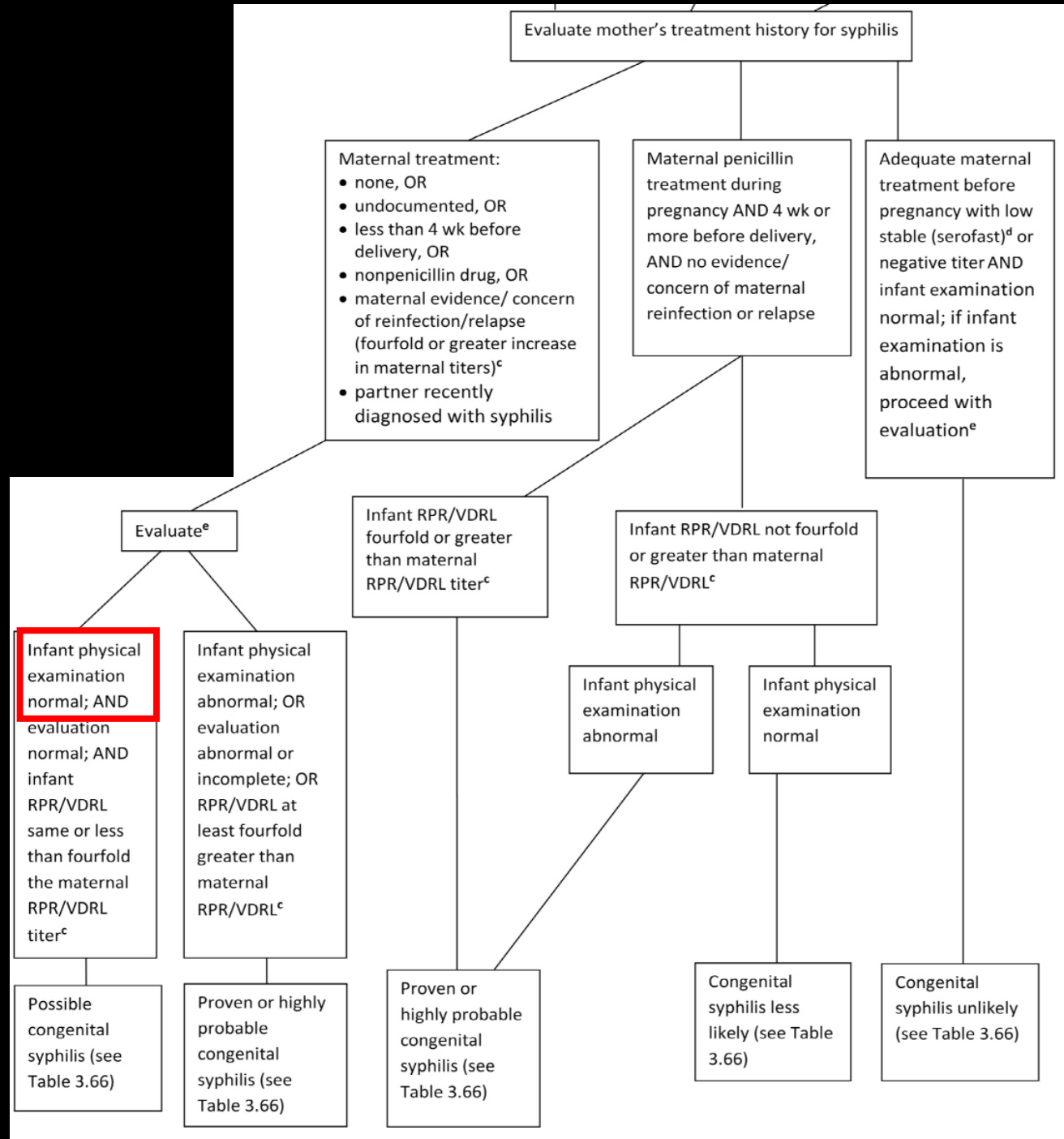
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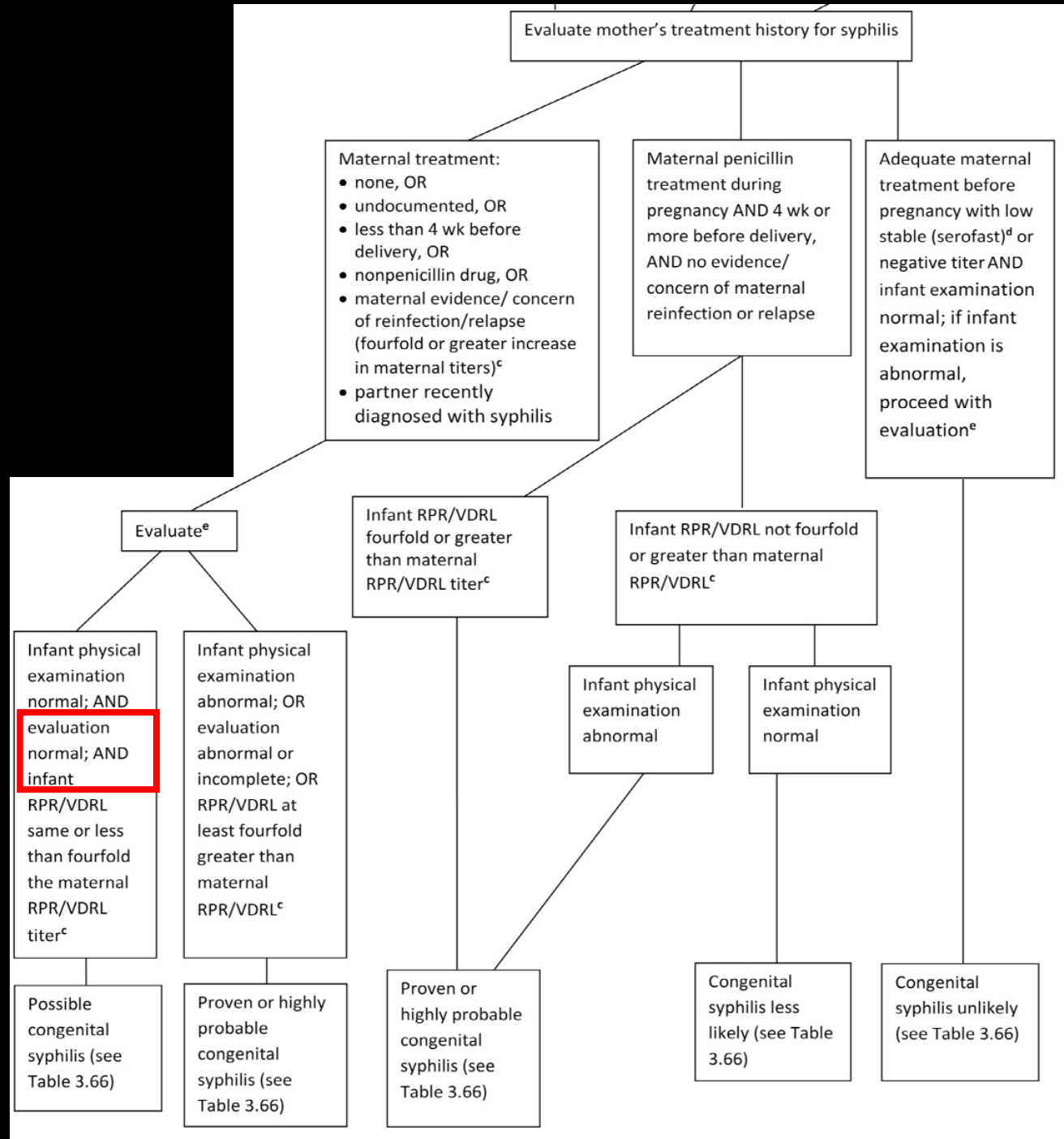
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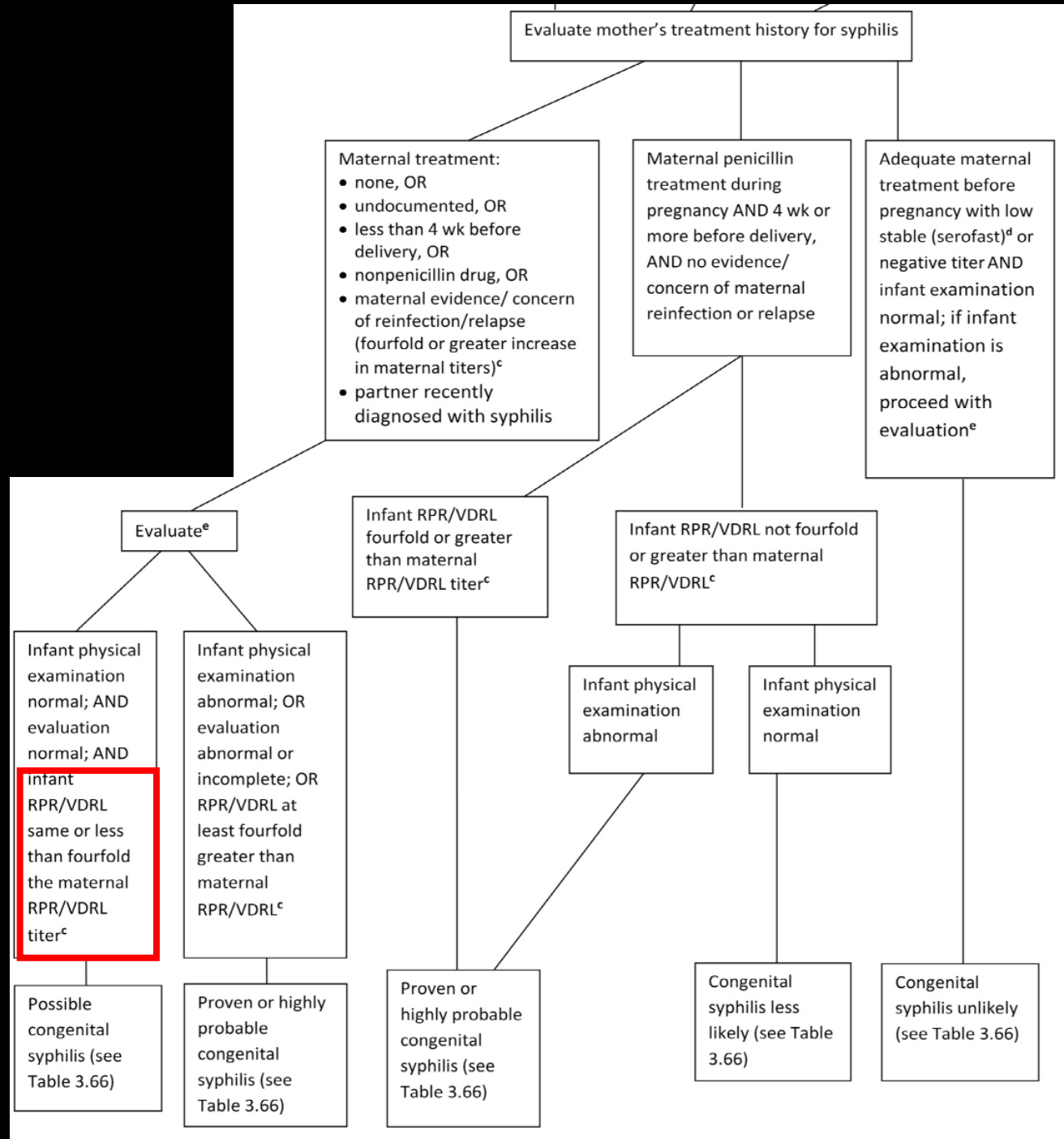




**Full 10-day course of IV penicillin**







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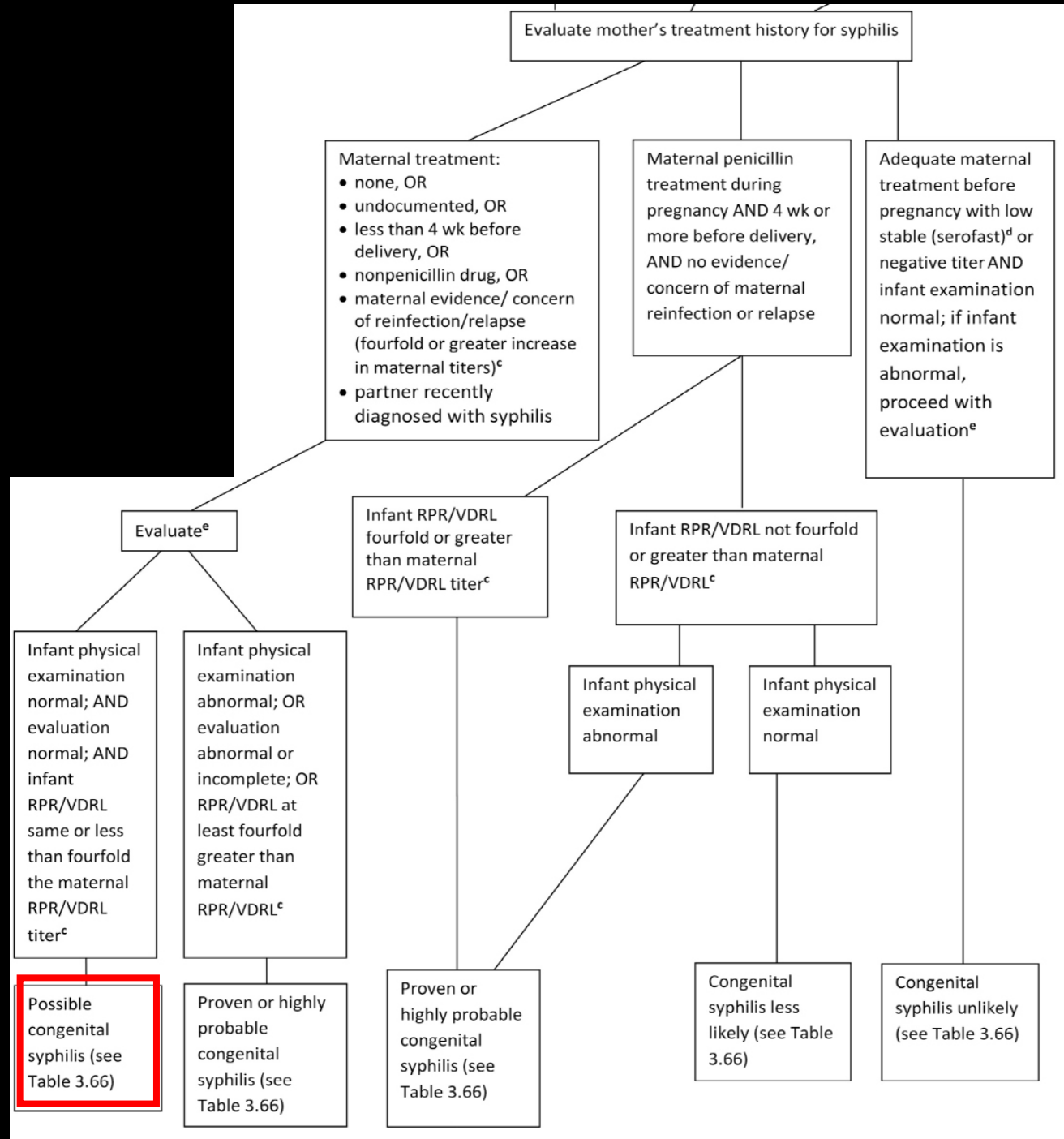
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- **Possible congenital syphilis**

- Preferred=full 10-day IV treatment course
- 'Some experts'= IM dose x 1 if all work up done and normal and follow-up ensured

- Infants RPR's should be decreasing by 3 months of age and non-reactive by 6 months of age.
- If not sero-reverted by 6 months, need to repeat full workup and re-treat with 10 days IV penicillin