

# HIV / STD Testing

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# Syphilis Testing Algorithm



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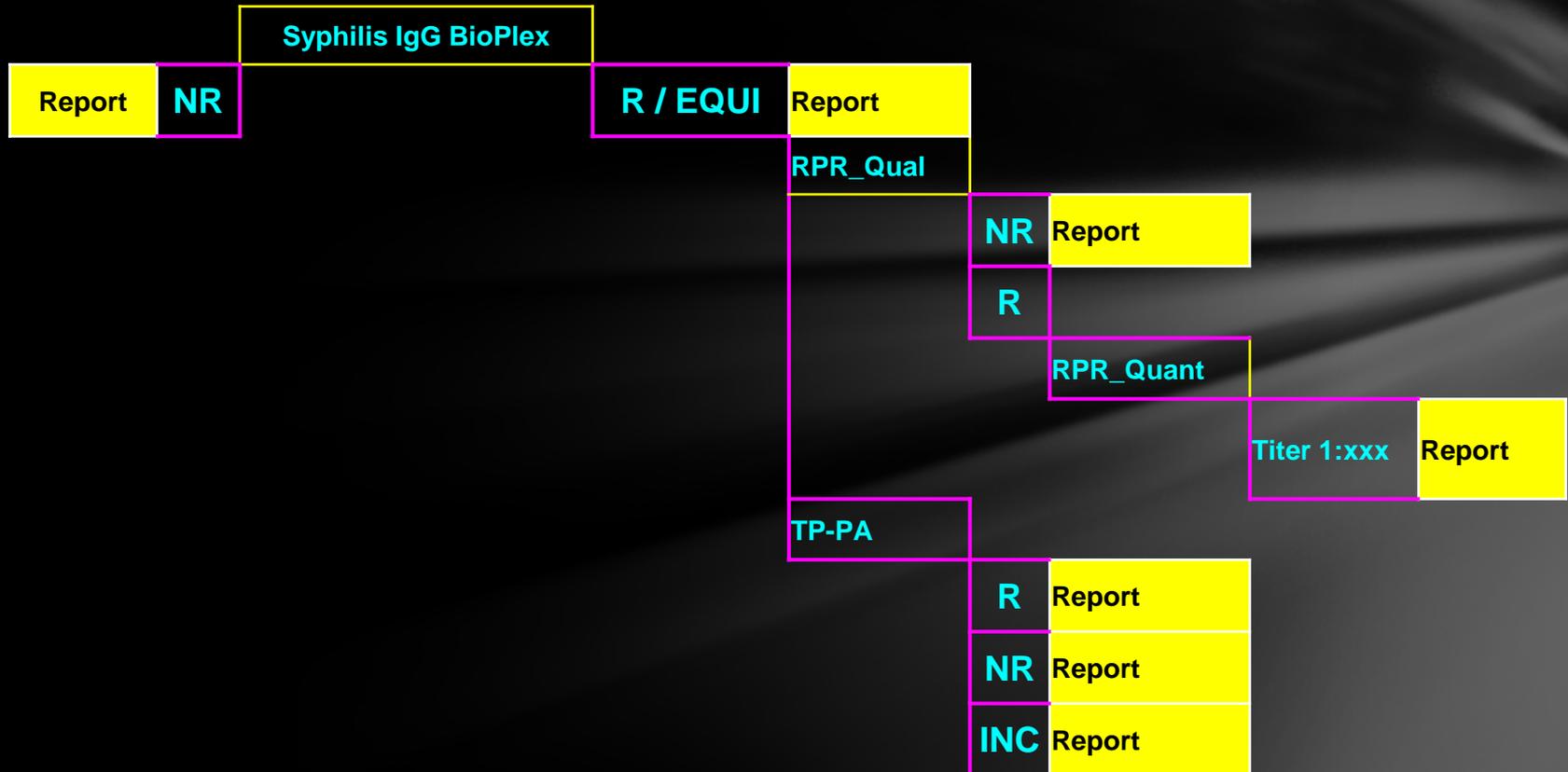
## MMWR

*Weekly*

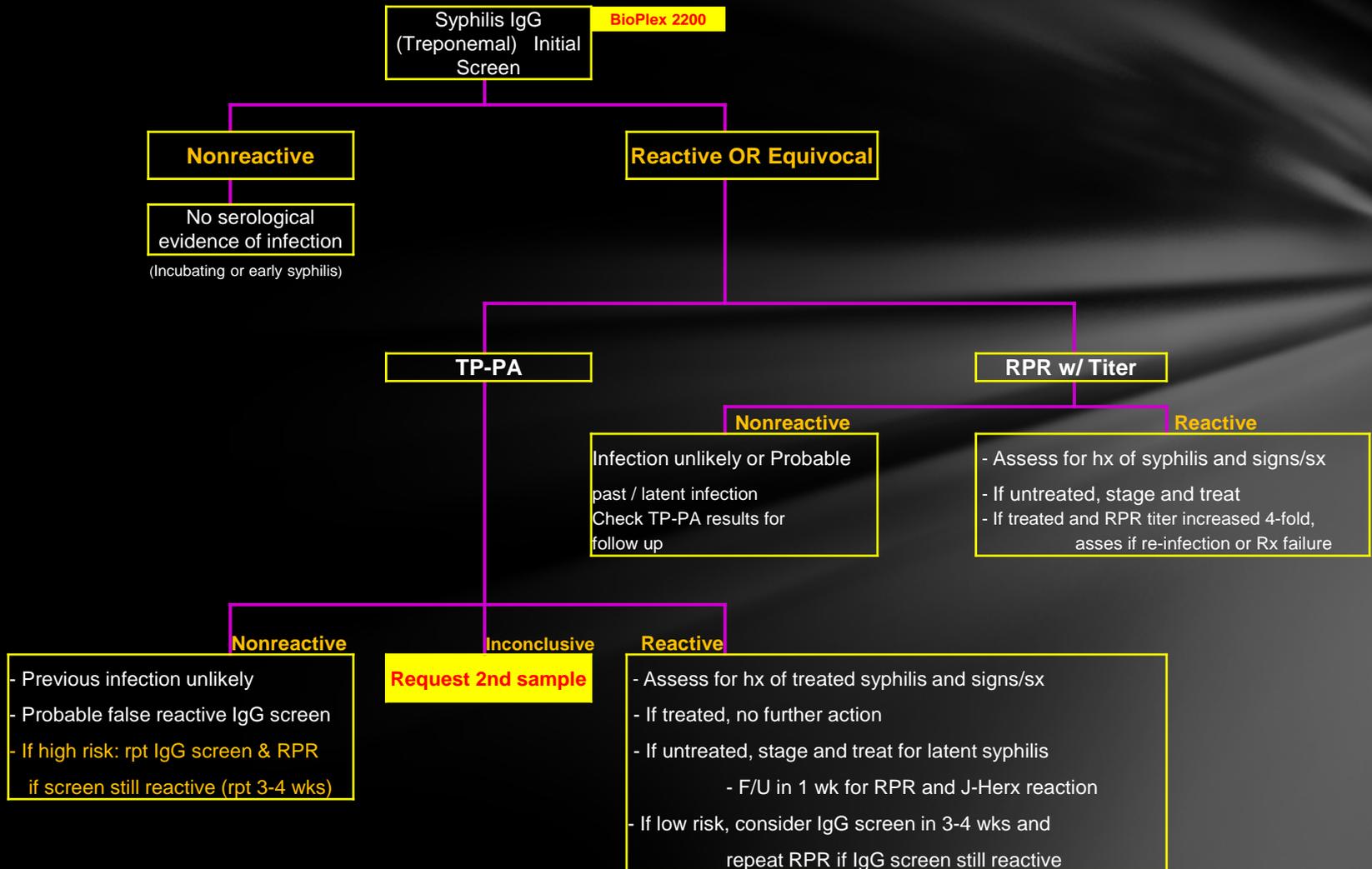
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**Syphilis Testing Algorithms Using Treponemal Tests for  
Initial Screening --- Four Laboratories, New York City, 2005--2006**

# Syphilis Workflow



# Syphilis Reverse Algorithm



# Syphilis Report

Syphilis IgG\_BioPlex

Reactive

RPR\_Qualitative

Reactive

RPR\_Quantitative

1:16

TP-PA (T. pallidum particle agglutination)

++ Reactive

Note:

1. Reference Ranges = Nonreactive
2. The Syphilis IgG test is not, in and of itself, diagnostic for syphilis and should be considered in conjunction with other laboratory test results, clinical presentation and patient history. Only a physician should interpret the results.
3. The performance characteristics have not been established for cord blood testing and neonates.
4. Contaminated, icteric, lipemic, hemolyzed or heat inactivated sera may cause erroneous results and should be avoided.

## BioPlex 2200 Syphilis IgG, TP-PA IgG and non-treponemal RPR results interpretation:

Syphilis IgG	RPR QUAN	TP-PA	Interpretation
Nonreactive	(not performed)	(not performed)	No serologic evidence of infection with T. pallidum. Cannot exclude incubating or early syphilis. Submit second sample in 3-4 weeks if clinically indicated.
Reactive/Equivocal	Nonreactive	Reactive	<b>Probable past or latent infection:</b> Based on IgG, RPR, and TPPA results, probable past or treated or latent infection with T. pallidum.
Reactive/Equivocal	Nonreactive	Nonreactive	<b>T. pallidum infection unlikely:</b> Based on IgG, RPR, and TPPA results, previous T. pallidum infection unlikely. Submit second sample in 3-4 weeks if clinically indicated.
Reactive/Equivocal	Nonreactive	Inconclusive	<b>Request second sample:</b> Based on IgG, RPR, and TPPA results, a second sample should be sent. Repeat testing in 3-4 weeks if high risk of acquiring syphilis infection.
Reactive/Equivocal	Reactive (1:X)	Reactive	<b>Presumptive evidence of current infection:</b> Based on IgG, RPR, and TPPA results, probable active T. pallidum infection.
Reactive/Equivocal	Reactive (1:X)	Nonreactive	<b>Possible infection with T. pallidum or biological false positive:</b> Based on IgG, RPR, and TPPA results, possible infection or biological false positive. Submit second sample in 3-4 weeks if clinically indicated.
Reactive/Equivocal	Reactive (1:X)	Inconclusive	<b>Request second sample:</b> Based on IgG, RPR, and TPPA results, a second sample should be sent for repeat testing in 3-4 weeks.

# BioPlex 2200 Implementation:

## BioPlex 2200 Instrumentation

				Serology				
				STD	VPD	Infectious Diseases		
Current	Syphilis, HIV, Hep C			MMRV, Hep B & A		Arbo, Toxo, CMV, Lyme QuantiFERON-TB Rick/Ehrl, CSD, QF, Legion Tular, Bruc, Plag, Fungal		
	RPR/TP-PA/IFA, EIA, & WB			EIA, IFA		MIA, EIA, IFA, Agg, ID/CFT		
	2012-2013	Syphilis IgG		MMRV - IgG		Rubella IgG Quant (ToRC)		
2013-2014	Hep B & C ? Syphilis IgM?		R-IgM Quant, MM-IgM?		Toxo/CMV IgG, IgM			
2014-2015	HIV-1/2 Ag/Ab		Hep B & Hep A		Lyme ? as needed ?			
Future	Syphilis HIV Hep C			MMRV Hep B Hep A		Toxo CMV Lyme		
	HSV 1 and 2 IgG ???							

# 4<sup>th</sup> Gen HIV Combo Ag/Ab EIA – (Sep 4, 2012)

