treponemal antibody status was determined using the Architect® Syphilis TP CMIA (Abbott) as a screening test.
Results The TP-RT specificity was determined at 99.4% and the sensitivity at 97.0%. For 12.2% of the positive sera the TP-RT demonstrated only borderline findings. From a subset of 135 positive samples the TP-RT showed reactivity after 15 min in 121 (89.7%), 30 min in 129 (95.6%), 60 min in 131 (97.0%) and after 24 h in all of 135 (100%). More than 70% of the positive findings were related to past treponemal infections. In two cases of primary syphilis a borderline TP-RT result only occurred after 45 to 60 min.
Discussion The TP-RT is not able to differentiate active from past treponemal infections. Any reactive TP-RT finding has to be further tested by conventional syphilis tests. Negative TP-RT results after a reading time from 15 to 30 minutes does not exclude the presence of highly infectious early stages of syphilis. A minimum reading time of 1–2 hours is recommended. The high number of borderline findings even in active syphilis cases poses the risk of incorrect assessment of the test results. The routine use of rapid tests is not recommended for syphilis diagnosis in Germany.

P2.069* FACTORS ASSOCIATED WITH BIOLOGIC FALSE POSITIVE RAPID PLASMA REAGIN (RPR) SEROLOGIES IN HIV-1-INFECTED PERSONS

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Objectives The prevalence of biologic false-positive (BFP) nontreponemal tests ranges from 4–15% among HIV-infected persons. Abnormalities in B cell function are hypothesised to increase the probability of BFP in this population. Our aim was to determine the impact of combination antiretroviral therapy (cART) and the degree of immunosuppression on BFP Rapid Plasma Reagin (RPR) tests among HIV-infected persons.
Methods We conducted a retrospective study of 711 HIV-infected patients enrolled in the Johns Hopkins HIV Clinical Cohort. BFP RPR was defined as a reactive RPR and a non-reactive FTA-ABS. We conducted two analyses: (1) A cross-sectional analysis in which patients with BFP tests were compared to two control groups: HIV-infected patients (i) with syphilis and (ii) without syphilis. (2) A longitudinal analysis to determine the factors associated with BFP persistence over time. A persistent BFP test was defined as a BFP test at all visits in patients who had more than one visit with a documented RPR test. We used logistic regression and Generalized Estimating Equations for the analyses.
Results 96 participants (13.5%) had BFP tests and 273 (48.1%) had syphilis. Twenty-two of 96 (23%) had persistent BFP tests. cART use was associated with decreased odds of BFP tests compared to persons with syphilis [adjusted odds ratio (aOR) 0.31, 95% CI: 0.15–0.63] and without syphilis [aOR 0.42 (0.22–0.81)]. cART use was also associated with decreased odds of BFP persistence over time [OR 0.07 (0.01–0.33)]. Neither CD4 count nor HIV RNA was associated with BFP test results. Lower RPR titers, injection drug use and Hepatitis B were associated with increased odds of BFP.
Conclusions The use of cART appears to significantly decrease the odds of BFP RPR tests, independent of CD4 T-cell response. This may be the result of cART's effects on B-cell functions.

P2.070 NO MISCLASSIFICATION OF SYPHILIS CASES USING A REVERSE SEQUENCE ALGORITHM IN REACTIVE ENZYME IMMUNOASSAY AND REACTIVE RPR SAMPLES WHEN RPR TITER ABOVE 1:2

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Background Recent recommendations propose that serum samples reactive by both syphilis enzyme immunoassay (EIA) or chemoluminescent immonoassay (CLIA) and RPR may not need treponemal confirmatory testing. There is uncertainty regarding the confirmation rate of EIA/CLIA reactive and low titer RPR samples.
Methods Reactive samples for EIA/CLIA and low titer RPR from five Quebec diagnostic laboratories between December 14th 2011 and December 3rd 2012 were prospectively tested with TPPA and, if negative or inconclusive, with a line immunoassay (LIA). Syphilis infection confirmation was defined by a reactive TPPA or LIA.
Results Samples reactive for EIA/CLIA and RPR with titers ranging from 1:1 to 1:8 were submitted for confirmatory testing (N = 345). Of these, 335 (97.1%) were confirmed and 2.9% (95% CI 1.4–5.3%) were misclassified as syphilis cases. When stratifying by RPR titer, unconfirmed samples (misclassified cases) were found only in samples with RPR titer of 1:1 and 1:2. Samples with titers above 1:2 were classified as true syphilis cases. Proportion of confirmed cases increased with RPR titer (p = 0.01).

Abstract P2.070 Table 1 Confirmatory testing results in samples according to RPR titer

	N	TPPA reactive	LIA reactive	Unconfirmed	Confirmed
All titers	345	326/345	9/19	10 (2.9%)	335 (97.1%)
RPR 1:1	112	99/112	5/13	8 (7.1%)	104 (92.9%)
RPR 1:2	104	100/104	2/4	2 (1.9%)	102 (98.1%)
RPR 1:4	74	73/74	1/1	0	74 (100%)
RPR 1:8	55	54/55	1/1	0	55 (100%)

Conclusions In our setting, only patients with serum RPR titers ranging from 1:1 to 1:2 would have been misclassified as syphilis cases had a confirmatory test not been conducted. A safe and cost-effective approach, for EIA/CLIA reactive and RPR reactive samples management in a reverse sequence algorithm may be to submit only samples with low RPR titers (≤ 1:2) instead of all EIA/CLIA and RPR reactive samples for confirmation.

P2.071 SUPERIOR DETECTION OF SYPHILIS WITH THE RAPID TEST DETERMINE® COMPARED TO COMBINED CARDIOLIPIN AND TREPONEMAL SPECIFIC TESTS

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Objectives To quantify detection of syphilis with the DETERMINE® Syphilis test versus single or combined treponemal/cardiolipin tests in a Primary Care setting.
Methods The 107 positive DETERMINE® syphilis results obtained in 1898 samples were compared to combined RPR/VDRL and FTA results. True positives were defined as either serological confirmation by either cardiolipin and/or specific treponemal positive results at diagnosis or at 1 week follow-up, or signs and symptoms classically compatible with syphilis which resolved completely and rapidly on administration of single dose benzathine penicillin G. All positive cases showed a sustained positive

result in the DETERMINE® Syphilis test at follow-up. False positive tests with DETERMINE® Syphilis test were defined as being non-confirmed by combined cardiolipin and specific treponemal positive tests at baseline and negativity in the follow-up period.

Results Of all positive results with the DETERMINE® Syphilis test 14.0% were shown to be true positive results by fulfilling one or more of the aforementioned criteria, compared to combined conventional tests. Compared to the use of single cardiolipin tests, the DETERMINE® test detected 27.1% more cases. False positive tests with DETERMINE Syphilis TP test occurred 0.26% of those patients tested.

Conclusions The DETERMINE® syphilis test is superior to treponemal and cardiolipin tests alone or in combination in the detection of syphilis in Primary Care.

P2.072 SEEK AND YOU SHALL FIND - VALUE OF EXTRAGENITAL CHLAMYDIA AND GONORRHOEA TMA TESTING IN A COHORT OF MSM

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Background TMA (Aptima Combo II) is unlicensed for the detection of chlamydia and gonorrhoea at extragenital sites but is increasingly used to screen MSM reporting receptive oral or anal intercourse as data accumulates to support its performance. We reviewed its value in screening our MSM cohort.

Methods The TMA and culture results of MSM receiving extragenital screening between 01/01/12 and 30/06/12 were retrospectively reviewed.

Results 565 MSM were screened (1042 extra-genital samples); 95 tested positive for at least one infection at one site.

111 positive TMAs were extragenital (detection rate 10.7%) amongst 87 patients. 68 patients had isolated extragenital infection.

41 MSM (8.5%) had rectal chlamydia, only 5 of whom had genital chlamydia; 7 were confirmed LGV.

8 (1.4%) MSM had pharyngeal chlamydia. 4 had concurrent rectal infection; none had urethral infection.

Urethral chlamydia was detected in 16 MSM (2.8%).

27 (5.6%) MSM had rectal gonorrhoea via TMA; 11 were positive on culture.

35 (6.2%) MSM had pharyngeal gonorrhoea via TMA; 8 were positive on culture.

12 (2.1%) MSM had urethral gonorrhoea; 11 were positive on culture.

Conclusion 15.4% MSM attending for tests had extragenital infection. 71.6% testing positive had isolated extragenital infection. Without extragenital TMA tests 49 chlamydia infections would have been missed or suboptimally treated, including 7 LGV.

25/52 cases of gonorrhoea would have remained undiagnosed had screening been by 3 site culture and urethral TMA.

Undiagnosed extragenital infection has implications regarding onward transmission of that STI and may result in missed/suboptimal treatment and partner notification. Failure to screen effectively may provide false reassurance and reinforce popular myths that the pharynx is not vulnerable to infection. This data supports our current practise of TMA testing at extragenital sites.

P2.073 EXTRAGENITAL SCREENING IN WOMEN - IS TMA VALUE FOR MONEY?

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Background Transcription mediated amplification (TMA, Aptima Combo II) is currently unlicensed for the detection of chlamydia and gonorrhoea at extragenital sites. Accumulating evidence suggests TMA has high sensitivity and specificity for pharyngeal and rectal infection. We have offered pharyngeal and rectal TMAs to all patients presenting since April 2009 reporting receptive oral or anal intercourse.

Methods The TMA and culture results of heterosexual women receiving extragenital screening between 01/01/12 and 30/06/12 were retrospectively reviewed.

Results 1315 women were screened (1520 extra-genital samples), 79 tested positive for at least one infection at one site. 62 (4.7%) patients had genital chlamydia. 9 (0.7%) patients had genital gonorrhoea.

33 positive results were extragenital (detection rate 2.17%) with 10 patients having isolated extragenital infection.

Rectal chlamydia detection rate was 3.8%. Of the 8 patients with rectal chlamydia, 7 had co-existing genital infection.

14/1309 (1.1%) patients had pharyngeal chlamydia, 5 had isolated pharyngeal infection.

6/211 (2.8%) patients had rectal gonorrhoea, 1 had isolated rectal infection.

5/1309 (0.4%) patients had pharyngeal gonorrhoea, 3 had isolated pharyngeal infection.

There were no positive extragenital gonorrhoea cultures and no cases of extragenital dual infection.

Conclusion Detection rates for extragenital chlamydia (both sites) and rectal gonorrhoea exceeded that of genital gonorrhoea.

Without extragenital screening we would have failed to treat 10 women with isolated pharyngeal or rectal infection, i.e. 12.7% of all women testing positive.

Regarding the 8 women with rectal chlamydia, 7 could have been suboptimally treated with azithromycin and one would have been missed.

This has implications for onward transmission, enhanced transmission of other STIs, and missed opportunities for partner notification.

Failure to screen women extragenitally may reinforce the misconception that these sites are not as significant in STI transmission and encourage risk taking behaviour.

P2.074 COMPARISON OF SPECIMEN TYPE FOR THE DIAGNOSIS OF *TRICHOMONAS VAGINALIS* (TV) USING THE VIPER™ SYSTEM IS EXTRACTED MODE

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Background TV is the most common curable STI worldwide and is associated with adverse consequences including preterm birth and acquisition/transmission of HIV. Yet, until recently, testing options for this infection were limited and had suboptimal sensitivity. Recently, nucleic acid amplification test systems (NAATS) for diagnosis of TV have been developed. Various types of specimens were studied in this process. We now report on the agreement of these specimen types for the diagnosis of TV using this NAATS assay.

Methods Eight centres participated in this study. Specimens were collected from subjects presenting with symptoms of trichomoniasis or for routine visits. Specimens were collected in the following order: (1) first void urine, (2) patient-collected vaginal swab, (3) three clinician-collected vaginal swabs, (4) endocervical swab. Urine was aliquotted into a Viper neat and UPT tube for BD ProbeTec™ *Trichomonas vaginalis* (TV) Q^x Amplified DNA Assay (TVQ) testing. The three clinician-collected vaginal swabs were used for wet mount, culture, and comparator testing. Sensitivity and specificity for the specimen