

**PERFORMANCE OF
DETERMINE COMBO AND
OTHER POINT-OF- CARE HIV
TESTS AMONG SEATTLE MSM**

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Determine Combo provided by Alere

Rapid test comparison study: Methods

Objective: compare POC HIV tests and determine their abilities to detect early HIV infection in real time.

HIV-negative MSM seeking HIV testing at PHSKC STD Clinic, Gay City Health Project, UW Primary Infection Clinic

POC tests (each test on separate fingerstick)

OraQuick (oral fluids and fingerstick)

Uni-Gold or INSTI

Determine HIV-1/2 Ag/Ab

EIA

PHSKC: 3rd gen Genetic Systems HIV-1/HIV-2 Plus O EIA

PIC: 4th gen Abbott ARCHITECT HIV Ag/Ab Combo assay

NAAT

PHSKC: 27-specimen master pools (3x3x3 matrix)

Abbott RealTime HIV-1 RNA assay

McNemar's exact tests compared numbers of cases detected

Rapid test comparison study: Results: 3438 MSM (2/2010-8/2014)

	STD Clinic & Gay City n=3404
Concordant Positive POC Tests	82 (77%)
Discordant POC Antibody Tests	10 (9%)
All POC Negative/EIA Positive	6 (6%)
Acute (EIA Neg / NAAT Pos)	9 (8%)
Total HIV Positive	107 (3.1%)

Discordant rapid test results

Last neg HIV test	OraQuick OF	OraQuick FS	Uni-Gold	INSTI	Determine Aa/Ab	3 rd or 4 th gen EIA	WB results	HIV RNA (copies/mL)
1 2mo	—	—	—	ND	+/-	3 rd —	negative	5.8 million
2 4yr	+	+	—	ND	ND	3 rd +	24, 31, 40, 55, 120	141,000
3 2yr	—	+	+	ND	ND	3 rd +	24, 31, 40, 55, 160	128,000
4 2yr	—	+	+	ND	ND	3 rd +	18, 24, 31, 40, 51, 55, 120, 160	25,000
5 NA	—	—	+	ND	ND	3 rd +	24, 51, 55, 160	12.8 million
6 NA	—	—	+	ND	-/+	3 rd +	24, 40, 55, 160	21,000
7 1yr	—	+	—	ND	-/+	4 th Ab+	24, 51, 55	719,000
8 1yr	—	+	+	ND	-/+	4 th Ab+	24, 31, 55, 160	436,000
9 6mo	—	+	+	ND	-/+	4 th Ab+	24, 55, 160	33,000
10 2mo	—	+	+	ND	-/+	4 th Ab+	24, 55, 160	9000
11 3mo	—	+	+	ND	-/+	4 th Ab+	18, 24, 55, 160	32,000
12 2mo	—	+	+	ND	-/+	4 th Ab+	24, 160	94,000
13 2mo	—	—	+	ND	-/+	3 rd +	18, 24, 31, 41, 51, 55, 65, 120, 160	ND
14 2yr	—	—	+	ND	-/+	3 rd +	18, 24, 31, 40, 51, 55, 65, 120, 160	ND
15 4mo	—	—	ND	+	-/+	3 rd +	24, 55, 160	ND
16 3mo	—	—	ND	+	-/+	3 rd +	24, 51, 55, 160	347,000
17 7mo	—	—	ND	+	-/+	3 rd +	18, 24, 65, 160	110,000
18 5mo	—	—	ND	+	-/+	3 rd +	24, 51, 55, 160	62,000
19 4mo	—	+	ND	+	-/+	3 rd +	18, 24, 31, 41, 51, 55, 65, 120, 160	7000
20 8mo	—	+	ND	+	-/+	4 th Ab+	24, 51, 55, 65, 120, 160	70,000
21 NA	—	+	ND	+	-/+	4 th Ab+	24, 55, 160	7000
22 2mo	—	+	ND	+	-/+	4 th Ab+	negative	323,000
23 2mo	—	+	ND	+	-/+	4 th Ab+	160	316,000
24 NA	—	—	ND	+	-/+	4 th Ag+	24	4.4 million