

1 **Supplementary Table 1 Demographic and clinical data analysed by HPV status**

	HPV Negative	HPV Positive	Total	P
	N (%)	N (%)	N (%)	
Age				
19-26	13 (14.6)	64 (10.2)	77 (10.7)	0.002
27-34	21 (23.6)	237 (34.6)	258 (35.9)	
35-42	46 (51.7)	218 (34.6)	264 (36.7)	
43-50	9 (10.1)	111 (17.6)	120 (16.7)	
Vaginal pH				
3.8-4.5	77 (86.5)	535 (84.9)	612 (85.1)	0.692
>4.5	12 (13.5)	95 (15.1)	107 (14.9)	
Bacterial vaginosis				
Negative	73 (82.0)	510 (81.0)	583 (81.1)	0.716
Intermediate	11 (12.4)	70 (11.1)	81 (11.3)	
Positive	5 (5.6)	50 (7.9)	55 (7.6)	
Aerobic Vaginitis				
Negative	78 (87.6)	549 (87.1)	627 (87.2)	0.895
Positive	11 (12.4)	81 (12.9)	92 (12.8)	
Vaginal Trichomoniasis				
Negative	89 (100.0)	629 (99.8)	718 (99.9)	1.000*

Positive	0 (0.0)	1 (0.2)	1 (0.1)	
Vulvovaginal Candidiasis				
Negative	89 (100.0)	609 (96.7)	698 (97.1)	0.095*
Positive	0 (0.0)	21 (3.3)	21 (2.9)	

2 * Fisher's exact test.

3 HPV, human papillomavirus.

4 **Supplementary Table 2 Comparison of negative rate, single positive rate and**
5 **multiple positive rates of 10 STI pathogens in different HPV infection types**

HPV infection type	STI infection type			
	Negative	Single	Multiple	Total
	N (%)	infection	infection	N (%)
		N (%)	N (%)	
Negative	44 (16.9)	31 (9.8)	14 (9.9)	89 (12.4)
Single HPV infection	135 (51.7)	161 (50.9)	51 (35.9)	347 (48.3)
Multiple HPV infections	82 (31.4)	124 (39.2)	77 (54.2)	283 (39.4)
Total	261 (36.4)	316 (43.9)	142 (19.7)	100 (100.0)
X ²		24.406		
P		0.000		

6 STI, sexually transmitted infection; HPV, human papillomavirus.

7 **Supplementary Table 3 Comparison of the positive rates of detected STI pathogens**
8 **between groups with or without HPV16/18 infection**

STIs	Total /N	HPV 16/18 positive N=204	HPV 16/18 Negative N=411	X ²	P
<i>C. trachomatis</i>	75	25 (12.3%)	50 (12.2%)	0.001	1.000*
<i>U. urealyticum</i>	85	21 (10.3%)	64 (15.6%)	3.188	0.083
<i>M. hominis</i>	37	9 (4.4%)	28 (6.8%)	1.390	0.282
<i>M. genitalium</i>	9	5 (2.5%)	4 (1.0%)	2.065	0.166
<i>U. parvum</i> serovar 1	49	16 (7.8%)	33 (8.0%)	0.006	1.000*
<i>U. parvum</i> serovar 3	119	46 (22.5%)	73 (17.8%)	2.002	0.160
<i>U. parvum</i> serovar 6	132	45 (22.1%)	87 (21.2%)	0.064	0.835
<i>U. parvum</i> serovar 14	5	1 (0.5%)	4 (1.0%)	0.394	1.000*
<i>N. gonorrhoeae</i>	7	5 (2.5%)	2 (0.5%)	4.675	0.043
HSV-2	35	7 (3.4%)	28 (6.8%)	2.904	0.098*
Single infection	277	99 (48.5%)	178 (43.3%)	1.502	0.472
Multiple infection	126	39 (19.1%)	87 (21.2%)		

9 * Fisher's exact test. Multiple infections double counting.

10 HR-HPV, high-risk human papillomavirus; STIs, sexually transmitted infections; *C.*
11 *trachomatis*, *Chlamydia Trachomatis*; *U. urealyticum*, *Ureaplasma urealyticum*; *M.*

- 12 *hominis*, *Mycoplasma hominis*; *M. genitalium*, *Mycoplasma genitalium*; *U. parvum*,
- 13 *Ureaplasma parvum*; *N. gonorrhoeae*, *Neisseria Gonorrhoeae*; HSV-2, herpes simplex
- 14 virus 2.