

**Supplementary Table S4** Logistic regression analysis of HPV and HPV + 3-gene methylation markers for predicting HSIL cytology

Variable	Coefficient ( $\beta$ )	SE	z	P>z	OR	95% CI	
<b>Univariable model</b>							
HPV <sup>a</sup>	1.41	0.32	4.42	0.00	4.09	2.19	to 7.65
constant	-3.95	0.90	-4.37	0.00	0.02	0.00	to 0.11
<b>Multivariable model</b>							
HPV <sup>a</sup>	1.55	0.37	4.19	0.00	4.72	2.28	to 9.74
<i>ADCY8</i> <sup>b</sup>	1.16	0.48	2.40	0.02	3.17	1.24	to 8.15
<i>CDH8</i> <sup>c</sup>	1.04	0.46	2.26	0.02	2.82	1.15	to 6.95
<i>ZNF582</i> <sup>d</sup>	1.36	0.46	2.98	0.00	3.91	1.59	to 9.59
constant	-5.78	1.13	-5.12	0.00	0.00	0.00	to 0.03

HPV, human papillomavirus; HSIL, high-grade squamous intraepithelial lesion; LSIL, low-grade squamous intraepithelial lesion; ZNF, *ZNF582* gene; SE, standard error; z, z-score.

<sup>a</sup>The HPV genotype identified in each sample was coded accordingly: HPV undetected (0), not classifiable (1), possibly carcinogenic (2), and carcinogenic (3).

<sup>b</sup>The quantified promoter methylation value (%) of *ADCY8* gene at CpG-position 7 of each sample was binarized accordingly: <5.8 (0),  $\geq$ 5.8 (1).

<sup>c</sup>The quantified promoter methylation value (%) of *CDH8* gene at CpG-position 3 of each sample was binarized accordingly: <3.0 (0),  $\geq$ 3.0 (1).

<sup>d</sup>The quantified promoter methylation value (%) of *ZNF582* gene at CpG-position 3 of each sample was binarized accordingly: <1.1 (0),  $\geq$ 1.1 (1).