

**Supplementary Table 1: Association between type-specific HPV antibodies and risk of lung cancer by seropositivity threshold**

Seropositivity	Study specific threshold		Higher threshold		Two times threshold <sup>^</sup>	
	OR (95% CI)*	P- value	OR (95% CI)*	P- value	OR (95% CI)*	P- value
HPV16 L1	1.75 (1.38- 2.21)	<b>3E-06</b>	1.76 (1.39-2.22)	<b>3E-06</b>	1.57 (1.13-2.18)	<b>0.01</b>
HPV16 E6	1.56 (0.9- 2.69)	0.11	1.31 (0.88-1.93)	0.18	1.39 (0.81-2.38)	0.23
HPV16 E7	1.86 (1.41- 2.46)	<b>2E-05</b>	1.68 (1.28-2.19)	<b>0.0002</b>	2.02 (1.41-2.90)	<b>0.0001</b>
HPV18 L1	1.37 (1.12- 1.69)	<b>0.002</b>	1.40 (1.13-1.72)	<b>0.002</b>	1.26 (0.96-1.66)	0.10
HPV18 E6	1.44 (0.77- 2.69)	0.25	1.53 (0.88-2.66)	0.13	1.85 (0.86-3.99)	0.12
HPV18 E7	2.09 (1.24- 3.54)	<b>0.006</b>	1.89 (1.28-2.79)	<b>0.001</b>	1.90 (1.11-3.24)	<b>0.02</b>
HPV31 L1	1.52 (1.18- 1.95)	<b>0.001</b>	1.33 (1.01-1.74)	0.04	1.20 (0.80-1.80)	0.37
HPV31 E6	2.24 (1.47- 3.41)	<b>0.0002</b>	1.55 (1.14-2.11)	<b>0.006</b>	1.65 (1.12-2.42)	<b>0.01</b>
HPV31 E7	1.92 (1.19- 3.12)	<b>0.01</b>	1.49 (0.96-2.29)	0.07	1.62 (0.84-3.12)	0.15
HPV6 L1	1.55 (1.33- 1.81)	<b>2E-08</b>	1.67 (1.41-1.98)	<b>3E-09</b>	1.92 (1.51-2.45)	<b>1E-07</b>
HPV6 E6	3.42 (1.66- 7.04)	<b>0.001</b>	3.34 (1.66-6.70)	<b>0.001</b>	1.57 (0.61-4.03)	0.35
HPV6 E7	2.27 (1.14- 4.50)	<b>0.02</b>	2.20 (1.16-4.14)	<b>0.02</b>	1.99 (0.85-4.63)	0.11
HPV11 L1	1.45 (1.2- 1.76)	<b>0.0002</b>	1.64 (1.29-2.09)	<b>6E-05</b>	1.68 (1.17-2.43)	<b>0.006</b>
HPV11 E6	2.82 (1.72- 4.63)	<b>4E-05</b>	2.39 (1.48-3.86)	<b>0.0004</b>	3.09 (1.58-6.05)	<b>0.001</b>
HPV11 E7	2.76 (1.35- 5.64)	<b>0.005</b>	2.22 (1.16-4.25)	<b>0.02</b>	3.54 (1.44-8.71)	<b>0.01</b>

The retrospective case-control studies were included in this analysis

<sup>^</sup>Twice the highest threshold was applied in definition of type-specific HPV seropositivity

\*ORs were adjusted for age, sex, country and smoking. Corresponding IPV seronegative category was considered the reference