

**Table 2.19 Case-control studies of HPV prevalence and anal cancer**

Reference, study location	Method of detection	No. of cases	No. of controls	Sites included	HPV prevalence (%)		Odds ratio (95% CI)	Comments
					Cases	Controls		
Frisch <i>et al.</i> (1997), Denmark & Sweden	PCR GP5+/6+ and specific genotyping for HPV6, 11, 16, 18, 31 & 33	324 (262 SCC and 62 <i>in situ</i> SCC in women)	343 women controls	Anal canal	N=282/304 (92.7%)	N=0 (0%)	–	HPV tested in both (cases and controls) on formalin-fixed paraffin-embedded tissue samples
		93 (87 SCC and 6 <i>in situ</i> SCC in men)	191 men controls		N=58/84 (69%)	N=0 (0%)	–	
Carter <i>et al.</i> (2001), USA	Seropositivity to HPV16 and HPV18 capsid proteins by ELISA (L1)	77 Female	1326	Sera	N=30/77 (39%) HPV16 L1 Ab	N=202/1326 (15.2%) HPV16 L1 Ab	3.8 (2.3–6.3)	Sera
					N=15/30 (50%) HPV16 L1 Ab + HPV16 DNA +	N=202/1326 (15.2%) HPV16 L1 Ab + HPV16 DNA +	5.9 (2.8–12.4)	
					N=22/77 (28.6%) HPV18 L1 Ab	N=204/1322 (15.4%) HPV18 L1 Ab	2.1 (1.2–3.6)	
					N=0/2 (0%) HPV18 L1 Ab + HPV18 DNA +	N=204/1322 (15.4%) HPV18 L1 Ab + HPV18 DNA +	–	
		47 Male	218	Sera	N=19/47 (40.4%) HPV16 L1 Ab	N=34/218 (15.6%) HPV16 L1 Ab	3.6 (1.8–7.3)	Sera
					N=7/14 (50%) HPV16 L1 Ab + HPV16 DNA +	N=34/218 (15.6%) HPV16 L1 Ab + HPV16 DNA +	5.3 (1.8–16.2)	
Youk <i>et al.</i> (2001), Korea	MY09/11, L1C1/L1C2 and Type Specific for HPV16&18	15 SCC	34	Anal canal	N=21 (100%)	N=0 (0%)		13 samples of normal anal tissue from the same patients + 21 normal anal epithelium (elective hemorrhoidectomies)
		6 Cloacogenic						
Bjørge <i>et al.</i> (2002), Finland & Norway	L1/L2 ELISA for HPV 16, 18, 33 & 73	3 Perianal skin Cancer	1500	Sera	N=8 (28.6%) HPV16 cut off point 354	N=120 (8%) HPV16 cut off point 354	3.0 (1.1–8.2)	Sera. OR adjusted for the other HPV types
		18 SCC			N=5 (17.8%) HPV18 cut off point 100	N=105 (7%) HPV18 cut off point 100	4.4 (1.1–17)	
		3 Cloacogenic SCC			N=6 (21.4%) HPV33 cut off point 100	N=165 (11%) HPV33 cut off point 100	1.0 (0.2–4.0)	
		3 Adenocarcinoma			N=14 (50%) HPV16, 18 or 33	N=285 (19%) HPV16, 18 or 33	4.2 (1.8–10)	
		1 Transitional Carcinoma			N=1 (3.6%) HPV73 cut off point 100	N=105 (7%) HPV73 cut off point 100	0.2 (0.0–1.8)	

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Daling <i>et al.</i> (2004), USA	MY09/11 for 6/11, 16, 18/45, 31	54 Heterosexual	221 Heterosexual	Sera	N=24/47 (51.1%) HPV16 L1	N=33/202 (16.3%) HPV16 L1	7.4 (3.5–15.8)	Sera. OR adjusted for age, at reference date, reference year and number of lifetime sexual partners
		48 Non-Heterosexual	14 Non-Heterosexual		N=22/45 (48.9%) HPV16 L1	N=0/11 (0%) HPV16 L1	6.0 (3.3–10.9)	
		127 SCC	1445	Sera	N=46/109 (42.2%) HPV16 L1	N=191/1275 (14.9%) HPV16 L1	3.9 (2.5–6.1)	
		39 Cloacogenic SCC			N=15/39 (38.5%) HPV16 L1		4.1 (2.0–8.6)	