

**Table 2.16. Prevalence of HPV DNA in case series of AIN**

Reference, study location	Method of detection (types included)	No. and type of lesions	Overall HPV positivity (% <sup>a</sup> )	Type-specific HPV positivity (% <sup>b</sup> )							Multiple infections (% <sup>b</sup> )	Comments
				6	11	16	18	31	33	Others (type)		
Scholefield <i>et al.</i> (1989), USA	Alkaline hydrolysis, and PCR DNA probes for HPV 6/11, 16	10 AIN I	N=10 (100%)	N=10 (100%)		N=0 (0%)	N/A	N/A	N/A	N/A	N=0 (0%)	Formalin-fixed paraffin-embedded tissue samples. 20 patients diagnosed through biopsy with AIN. 18 male and 5 women (3 with CIN II and 2 with CIN I associated). None of the 20 control groups harbored HPV DNA.
		9 AIN II	N=9 (100%)	N=7 (77.7%)		N=3 (33.3%)					N=1 (11%)	
		4 AIN III	N=4 (100%)	N=0 (0%)		N=4 (100%)					N=0 (0%)	
Crook <i>et al.</i> (1991), UK	SB for HPV16 & 18	5	N=5 (100%)	N/A	N/A	N=5 (100%)	N=0 (0%)	N/A	N/A	N/A	N/A	Fresh samples.
Zaki <i>et al.</i> (1992), USA	ISH for 6/11, 16/18, 31/35/51 & PCR primers for 6, 11, 16, 18 & 33	7 <i>in situ</i> carcinomas	N=6 (85.7%)	N=0 (0%)	N=0 (0%)	N=2 (33.3%)	N=1 (16.7%)	N/A	N=1 (16.7%)	N=2 (33.3%)	N=0 (0%)	Formalin-fixed paraffin-embedded tissue samples.
Ogunbiyi <i>et al.</i> (1994), UK	E6/E7 primers for HPV16	2 AIN I	N=0 (0%)	N/A	N/A	N=0 (0%)	N/A	N/A	N/A	N/A	N/A	Formalin-fixed paraffin-embedded tissue samples.
		11 AIN III	N=10 (90.1%)	N/A	N/A	N=10 (100%)	N/A	N/A	N/A	N/A	N/A	
Frisch <i>et al.</i> (1999), Denmark & Sweden	PCR GP5+/6+ (HR HPV16, 18, 31, 33, 35, 39, 45, 51, 52, 56, 58, 59, 66 & 68) and (LR HPV6, 11, 40, 42, 43 & 44). HPV-typing for HPV16, 18, 31 & 33	34 perianal AIN in women	N=30 (88%)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Formalin-fixed paraffin-embedded tissue samples.
		11 anal canal AIN in women and 4 AIN without location	N=14 (100%)									
		6 AIN in men (5 perianal AIN, 1 without location)	N=6 (100%)									
Daling <i>et al.</i> (2004), USA	MY09/11 for 6/11, 16, 18/45, 31	36 men	N=34 (94.4%)	N/A	N/A	N=29 (85.3%)	N=2 (5.9%)	N/A	N/A	N/A	N/A	Formalin-fixed paraffin-embedded tissue samples. In situ samples reported in Anal carcinoma table.
		34 women	N=31 (91.2%)	N/A	N/A	N=23 (74.2%)	N=3 (9.6%)	N/A	N/A	N/A	N/A	
Varnai <i>et al.</i> (2006), Germany	PCR GP5+/6+ and MY09/11	8 AIN I (3 male, 5 female)	N=6 (75%)	N=5 (83.3%)	N=2 (33.3%)	N=0 (0%)	N=0 (0%)	N=0 (0%)	N=0 (0%)	N=0 (0%)	N=1 (16.7%)	Formalin-fixed paraffin-embedded tissue samples.
		7 AIN II (4 male, 3 female)	N=6 (85.7%)	N=2 (33.3%)	N=2 (33.3%)	N=2 (33.3%)				N=0 (0%)	N=0 (0%)	
		18 AIN III (4 male, 14 female)	N=17 (93.8%)	N=0 (0%)	N=1 (5.9%)	N=15 (88.2%)				N=1 (5.9%) (HPV58)	N=0 (0%)	

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				6	11	16	18	31	33	Others (type)		
Chin-Hong <i>et al.</i> (2005), USA	MY09/11	157 AIN I 53 AIN III	N=176 (83.8%)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	MSM (Men who have Sex with Men), no HIV positive patients.
Hampl <i>et al.</i> (2006), Germany	MY09/11, GP5+/GP6+ and type-specific for HPV6, 11, 16, 18, 31, 33, 35, 40, 42, 44, 45, 51, 52, 53, 55, 56, 58, 61, 66, 67, 68, 73, 74, 91, IS887/MM4 and HPV1A18	16 AIN II/III (Women)	N=14 (87.5%)	N=0 (0%)	N=0 (0%)	N=13 (92.8%)	N=0 (0%)	N=0 (0%)	N=0 (0%)	N=2 (14.3%)	N=3 (21.4%)	Formalin-fixed paraffin-embedded tissue samples.
Hampl <i>et al.</i> (2007), Germany	MY09/11, GP5+/GP6+ and type-specific for HPV6, 11, 16, 18, 31, 33, 35, 40, 42, 44, 45, 51, 52, 53, 55, 56, 58, 61, 66, 67, 68, 73, 74, 91, IS887/MM4 and HPV1A18	1 AIN I	N=1 (100%)	N=0 (0%)	N=0 (0%)	N=0 (0%)	N=0 (0%)	N=0 (0%)	N=0 (0%)	N=0 (0%)	N=1 (100%) (HPV16&33&55)	Formalin-fixed paraffin-embedded tissue samples. 52 patients with multicentric preneoplastic lesions (anus, vulva, vagina and cervix).
		6 AIN II	N=6 (100%)	N=2 (33.3%)	N=0 (0%)	N=4 (66.7%)	N=0 (0%)	N=0 (0%)	N=0 (0%)	N=1 (16.7%) (HPV72)	N=1 (16.7%) (HPV6&16&40)	
		18 AIN III	N=18 (100%)	N=0 (0%)	N=0 (0%)	N=15 (83.3%)	N=0 (0%)	N=1 (5.5%)	N=2 (11.1%)	N=1 (5.5%) (HPV67)	N=1 (16.7%) (HPV16&33) N=1 (16.7%) (HPV16&42) N=1 (16.7%) (HPV16&44&74&91)	

a. percentages given are percentages of HPV positives among all samples.

b. percentages given are percentages of HPV types among HPV positives cases.