

**Table 2.14. Prevalence of HPV DNA in case series of penile cancer and penile intraepithelial neoplasia**

Reference, study location	Method of detection (types included)	No and type of lesion	Overall HPV prevalence (% <sup>e</sup> )	HPV type specific contribution N (% <sup>f</sup> )							Multiple infections N (%)	Comments
				6	11	16	18	31	33	Others (types)		
Villa and Lopes (1986) Brazil	Southern Blot	1 Verrucous SCC	0(0.0%)	0 (0.0%)	0 (0.0%)	N/A	N/A	0 (0.0%)	0 (0.0%)	0 (0.0%)	N/A	Frozen tissue
		6 Keratinizing SCC	1(16.7%)	0 (0.0%)	1 (100.0%)	0(0.0%)	0(0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0(0.0%)	
		Highly keratinized	7(63.6%)	0 (0.0%)	0 (0.0%)	0(0.0%)	7(100.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0(0.0%)	
McCance <i>et al.</i> (1986) Brazil	Southern Blot	53 Penile cancer (no comments on histology)	27(50.9%)	0 (0.0%)	0 (0.0%)	26(96.3%)	1(3.7%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	4(14.8%)	Snap-frozen
Kiyabu <i>et al.</i> (1989) USA	PCR type specific for 16 and 18	5 SCC	2(40.0%)	N/A	N/A	2(100.0%)	0(0.0%)	N/A	N/A	N/A	0(0.0%)	Formalin-fixed Paraffin-embedded
Eliezri <i>et al.</i> (1990) USA	Slot/Southern Blot, ISH for paraffin-embedded samples	12 Mixed Carcinoma "In situ" and SCC (unknown proportions)	9(75.0%)	0 (0.0%)	0 (0.0%)	9(100.0%)	0(0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0(0.0%)	Fresh tissue and paraffin-embedded
Varma <i>et al.</i> (1991) USA	PCR Type specific for HPV 6/11 and 16 and ISH for 6,11,16,18,31,33 and 35.	5 Carcinoma "in situ"	4(80.0%)	1(25.0%)		4(100.0%)	0(0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (20.0%)	Paraffin-embedded
		4 Verrucous carcinoma	0(0.0%)	0 (0.0%)		N/A	N/A	0 (0.0%)	0 (0.0%)	0 (0.0%)	N/A	
		21 Invasive carcinoma	16(76.2%)	1 (6.25%)		14(87.5%)	0(0.0%)	3 (18.75) <sup>a</sup>		0 (0.0%)	2(12.5%)	
Sarkar <i>et al.</i> (1992) USA	PCR type specific for 6b/11, 16 and 18 + Southern Blot	7 Ca. "in situ" (Bowenoid)	7(100.0%)	0 (0.0%)		7(100.0%)	0(0.0%)	N/A	N/A	N/A	0(0.0%)	Formalin-fixed Paraffin-embedded
		8 Ca. "in situ" (Non-Bowenoid)	0(0.0%)	0 (0.0%)		N/A	N/A	N/A	N/A	N/A	N/A	
		3 SCC Keratinizing	2(66.7%)	0 (0.0%)		2(100.0%)	0(0.0%)	N/A	N/A	N/A	0(0.0%)	
		8 SCC Non-Keratinizing	7(87.5%)	0 (0.0%)		7(100.0%)	0(0.0%)	N/A	N/A	N/A	0(0.0%)	
		1 Verrucous SCC	0(0.0%)	0 (0.0%)		N/A	N/A	N/A	N/A	N/A	N/A	
		2 Verrucous hyperplasia	2(100.0%)	0 (0.0%)		2(100.0%)	0(0.0%)	N/A	N/A	N/A	0(0.0%)	
Wiener <i>et al.</i> (1992) USA	PCR + Southern Blot type specific for HPV 16 and 18	29 SCC	9(31.0%)	N/A	N/A	8(88.9%)	1(11.1%)	N/A	N/A	N/A	0(0.0%)	Formalin-fixed Paraffin-embedded

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Iwasawa <i>et al.</i> , (1993) Japan	PCR type specific for HPV 16,18 and 33	111 SCC	70(63.1%)	N/A	N/A	68(97.1%)	2(2.9%)	N/A	0 (0.0%)	N/A	0(0.0%)	Formalin-fixed Paraffin-embedded	
Maden <i>et al.</i> (1993) Canada	PCR E6/E7 for HPV6,16 and 18	67 Mixed Carcinoma "In situ" and SCC (unknown proportions)	33(49%)	Unknown	N/A	23(69.7%)	Unknown	N/A	N/A	N/A	Unknown	Paraffin-embedded	
Suzuki <i>et al.</i> (1994) Japan	PCR consensus primers on L1 and E6 (6,11,16,18,31,33,42,52,58)	8 SCC	5(62.5%)	0 (0.0%)	0 (0.0%)	3(60.0%)	0(0.0%)	1 (20.0%)	1 (20.0%)	0 (0.0%)	0(0.0%)	Fresh samples	
		5 SCC	2(40.0%)	0 (0.0%)	0 (0.0%)	1(50.0%)	0(0.0%)	0 (0.0%)	1(50.0%)	0 (0.0%)	0(0.0%)	Paraffin-embedded	
Aynaud <i>et al.</i> (1994) France	Southern Blot	43 PIN1	36(83.7%)	12 (33.33%)		14(38.9%)	3(8.3%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	6(10.5%)	Frozen tissue	
		18 PIN2	17(94.4%)	2 (11.76%)		10(58.8%)	2(11.8%)	0 (0.0%)	1,0	0 (0.0%)			
		4 PIN3	4(100.0%)	0 (0.0%)		4(100.0%)	0(0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)		
Chan <i>et al.</i> (1994) China	PCR Type specific for HPV16/18	11 Well differentiated SCC	0(0.0%)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Paraffin wax embedded	
		17 Moderate differentiated SCC	4(23.5%)	N/A	N/A	2(50.0%)	2(50.0%)	N/A	N/A	N/A	0(0.0%)		
		6 Poor differentiated SCC	4(66.7%)	N/A	N/A	2(50.0%)	2(50.0%)	N/A	N/A	N/A	N/A	0(0.0%)	
		7 Verrucous carcinoma	0(0.0%)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Cupp <i>et al.</i> (1995) USA	PCR MY09/11 type specific for HPV16 and 18	42 SCC	23(54.8%)	N/A	N/A	17(73.9%)	2(8.7%)	N/A	N/A	N/A	1(4.3%)	Formalin-fixed paraffin embedded	
		3 Verrucous carcinoma	0(0.0%)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
		12 PIN	11(91.7%)	N/A	N/A	9(81.8%)	0(0.0%)	N/A	N/A	N/A	N/A	0(0.0%)	
		13 Carcinoma in situ	12(92.3%)	N/A	N/A	11(91.7%)	2(16.7%)	N/A	N/A	N/A	N/A	0(0.0%)	

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				6	11	16	18	31	33	Others (types)		
Gregoire <i>et al.</i> (1995) USA and Paraguay	PCR Type specific for: 6,11,16 and 18 + Primers for wide range including 16,18,31,33,35,52	45 Typical SCC	5(11.1%)	1 (20.0%)	0 (0.0%)	23(88.5%)	0(0.0%)		0 (0.0%)	0 (0.0%)	0(0.0%)	Formalin-fixed paraffin embedded
		12 Basaloid SCC	9(75.0%)	0 (0.0%)	0 (0.0%)	0(0.0%)		0 (0.0%)	0 (0.0%)	0 (0.0%)	0(0.0%)	
		10 Papillary	0(0.0%)	0 (0.0%)	0 (0.0%)	N/A		0 (0.0%)	0 (0.0%)	N/A		
		9 Warty	2(22.2%)	0 (0.0%)	0 (0.0%)	0(0.0%)		0 (0.0%)	0 (0.0%)	0 (0.0%)	N/A	
		6 Verrucous carcinoma	0(0.0%)	0 (0.0%)	0 (0.0%)	N/A		0 (0.0%)	0 (0.0%)	N/A		
		3 Spindle	0(0.0%)	0 (0.0%)	0 (0.0%)	N/A		0 (0.0%)	0 (0.0%)	N/A		
		2 Anaplastic	0(0.0%)	0 (0.0%)	0 (0.0%)	N/A		0 (0.0%)	0 (0.0%)	N/A		
		8 Mixed SCC, other	0(0.0%)	0 (0.0%)	0 (0.0%)	N/A		0 (0.0%)	0 (0.0%)	N/A		
		19 Mixed SCC, warty or basaloid	9(47.4%)	0 (0.0%)	1 (11.1%)	0(0.0%)		0 (0.0%)	0 (0.0%)	0(0.0%)		
		1 Unclassified	1(100.0%)	0 (0.0%)	0 (0.0%)	0(0.0%)		0 (0.0%)	0 (0.0%)	0(0.0%)		
Cubilla <i>et al.</i> (1998) USA and Paraguay	PCR and southern Blot. Type specific for 6,11,16,18,31,33, 35,52	11 Basaloid SCC	9(81.8%)	0 (0.0%)	0 (0.0%)	9(100.0%)	0(0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0(0.0%)	Formalin-fixed paraffin embedded
Levi <i>et al.</i> (1998) Brazil	N total=84. 2 samples taken and one was formalin or Bouin-fixed and paraffin-embedded and the other frozen	Type Specific for 6/11, 16 and 18	64 SCC	18(28.1%)	3 (16.66%)	9(50.0%)	2(11.1%)	0 (0.0%)	0 (0.0%)	5 (27.77%)	0(0.0%)	Bouin/Formalin-fixed paraffin embedded
		PCR MY09/11 and probing for 6,11,16,18,31	50 SCC	28(56.0%)	6 (21.42%)	16(57.1%)	3(10.7%)	0 (0.0%)	0 (0.0%)	6 (21.42%)	2(7.1%)	Frozen tissue
Picconi <i>et al.</i> (2000) Argentina	PCR GP5+/6+ and typing by PCR-SSCP	38 SCC	27(71.1%)	2 (7.4%)	0 (0.0%)	10(37.0%)	12(44.4%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0(0.0%)	Formalin-fixed paraffin embedded

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				6	11	16	18	31	33	Others (types)		
Bezerra <i>et al.</i> (2001) Brazil	PCR consensus primers and probing for HPV types: 6,11,16,18,31,33,34,35,39,40,42,43,44,45,51,52,54,56 and 58	60 SCC	16(26.7%)	0 (0.0%)	0 (0.0%)	9(56.3%)	3(18.8%)	0 (0.0%)	0 (0.0%)	1(6.25%)	0(0.0%)	Formalin-fixed paraffin embedded
		11 Warty	5(45.5%)	2 (40.0%)	3(60.0%)	0(0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0(0.0%)	
Bezerra <i>et al.</i> (2001) Brazil	PCR consensus primers and probing for HPV types: 6,11,16,18,31,33,34,35,39,40,42,43,44,45,51,52,54,56 and 58	82 SCC	25(30.5%)	2 (8.0%)		14(56.0%)	5(20.0%)	0 (0.0%)	0 (0.0%)	1 (4.0%)	0(0.0%)	Formalin-fixed paraffin embedded.
Rubin <i>et al.</i> (2001) USA and Paraguay	PCR SPF10 + INO-LIPA	106 Keratinizing SCC	37(34.9%)	4 (10.8%)	0 (0.0%)	19(51.4%)	1(2.7%)	0 (0.0%)	0 (0.0%)	16 (43.2%) <sup>b</sup>	8(21.6%)	Formalin-fixed paraffin embedded
		12 Verrucous carcinoma	4(33.3%)	1 (25.0%)	0 (0.0%)	1(25.0%)	0(0.0%)	0 (0.0%)	0 (0.0%)	1 (25.0%)	0(0.0%)	
		15 Basaloid SCC	12(80.0%)	0 (0.0%)	0 (0.0%)	10(83.3%)	0(0.0%)	1 (8.3%)	0 (0.0%)	0 (0.0%)	1(8.3%)	
		5 Warty	5(100.0%)	0 (0.0%)	0 (0.0%)	5(100.0%)	0(0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0(0.0%)	
		2 Clear cell SCC	1(50.0%)	0 (0.0%)	0 (0.0%)	1(100.0%)	0(0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0(0.0%)	
		1 Sarcomatoid	0(0.0%)	0 (0.0%)	0 (0.0%)	N/A	N/A	0 (0.0%)	0 (0.0%)	0 (0.0%)	N/A	
		1 Metastatic penile SCC	1(100.0%)	0 (0.0%)	0 (0.0%)	0(0.0%)	1(100.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0(0.0%)	
Perceau <i>et al.</i> (2003) France	PCR GP5+/6+ and type specific for 16,18,31 and 33	17 SCC	6(35.3%)	0 (0.0%)	0 (0.0%)	3(50.0%)	0(0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0(0.0%)	Formalin-fixed paraffin embedded

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				6	11	16	18	31	33	Others (types)		
Salazar <i>et al.</i> (2005) Mexico	PCR Specific for HPV16	39 Typical SCC	25(64.1%)	N/A	N/A	25(100.0%)	N/A	N/A	N/A	N/A	0(0.0%)	Formalin-fixed paraffin embedded
		3 Warty	2(66.7%)	N/A	N/A	2(100.0%)	N/A	N/A	N/A	N/A	0(0.0%)	
		2 Verrucous carcinoma	1(50.0%)	N/A	N/A	1(100.0%)	N/A	N/A	N/A	N/A	0(0.0%)	
		2 Papillary	0(0.0%)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
		1 Fusiform	0(0.0%)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
		3 MixSCC/Verrucous	6 (69.8%)	N/A	N/A	6 (100.0%)	N/A	N/A	N/A	N/A	0(0.0%)	
		5 Mix.SCC/Warty		N/A	N/A		N/A	N/A	N/A	N/A		
		1 Mix. SCC/papillary		N/A	N/A		N/A	N/A	N/A	N/A		
		1 Mix. SCC/Basaloid		N/A	N/A		N/A	N/A	N/A	N/A		
Gentile <i>et al.</i> (2006) Italy	PCR MY09/11 and PCR GP5+/6+	9 Typical SCC	6(66.7%)	0 (0.0%)	0 (0.0%)	4(66.7%)	1(16.7%)	0 (0.0%)	0 (0.0%)	1 (16.6%)	0(0.0%)	Formalin-fixed paraffin embedded
		2 Verrucous carcinoma	2(100.0%)	0 (0.0%)	0 (0.0%)	1(50.0%)	1(50.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0(0.0%)	
Lont <i>et al.</i> (2006) Netherlands	PCR GP5+/6+ plus Reverse line blot analysis for 14 high-risk types: 16,18,31,33,35,39,45,51,52,56,58,59,66 and 68.	152 Keratinizing SCC	47(30.9%)	N/A	N/A	Unknown	Unknown	0 (0.0%)	0 (0.0%)	0 (0.0%)	Unknown	Formalin-fixed paraffin embedded
		1 Basaloid SCC	0(0.0%)	N/A	N/A	N/A	N/A	0 (0.0%)	0 (0.0%)	0 (0.0%)	N/A	
		12 Verrucous carcinoma	2(16.7%)	N/A	N/A	Unknown	Unknown	0 (0.0%)	0 (0.0%)	0 (0.0%)	Unknown	
		4 Warty	1(25.0%)	N/A	N/A	Unknown	Unknown	0 (0.0%)	0 (0.0%)	0 (0.0%)	Unknown	
		2 Sarcomatoid	0(0.0%)	N/A	N/A	N/A	N/A	0 (0.0%)	0 (0.0%)	0 (0.0%)	N/A	
		171 N total. HPV (types not dif.by histology)	50(29.2%)	N/A	N/A	39(78.0%)	4(8.0%)	0 (0.0%)	2 (4.0%)	6 (12.0%) <sup>c</sup>	0(0.0%)	
Senba <i>et al.</i> (2006) Thailand	PCR SPF10, ISH	52 Keratinizing SCC	41(78.8%)	18 (43.9%)	1 (2.4%)	0(0.0%)	29(70.7%)	0 (0.0%)	0 (0.0%)	2 (4.87%)	9(22%)	Formalin-fixed paraffin embedded It includes series from Ferreux E et al. J Pathol 2003; 201:109-118
		12 Non-keratinizing SCC	11(91.7%)	7 (63.6%)	0 (0.0%)	1(9.1%)	7(63.6%)	0 (0.0%)	0 (0.0%)	3 (27.27%)	6(54.5%)	
		1 Verrucous carcinoma	1(100.0%)	1 (100.0%)	0 (0.0%)	0(0.0%)	0(0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0(0.0%)	
Prowse <i>et al.</i> (2008) UK	PCR SF10 plus INNO-LIPA	26 SCC	14(53.8%)	1 (7.1%)	0 (0.0%)	11(78.6%)	1(7.1%)	0 (0.0%)	0 (0.0%)	4 (28.57%) <sup>d</sup>	2(14.2%)	Paraffin-wax embedded

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Protzel <i>et al.</i> (2007) Germany	PCR type specific for 6/11, 16 and 18	9 Keratinizing SCC	2(22.2%)	0 (0.0%)		2(100.0%)	0(0.0%)	N/A	N/A	N/A	0(0.0%)	Formalin-fixed paraffin embedded
		4 Non-keratinizing SCC	2(50.0%)	1(50.0%)		1(50.0%)	0(0.0%)	N/A	N/A	N/A	0(0.0%)	
		1 Papillary	0(0.0%)	0 (0.0%)	0 (0.0%)	N/A	N/A	N/A	N/A	N/A	N/A	
		1 Verrucous carcinoma	0(0.0%)	0 (0.0%)	0 (0.0%)	N/A	N/A	N/A	N/A	N/A	N/A	
		1 condylomatous	0(0.0%)	0 (0.0%)	0 (0.0%)	N/A	N/A	N/A	N/A	N/A	N/A	
		3 Basaloid SCC	3(100.0%)	1(33.3%)		2(66.7%)	0(0.0%)	N/A	N/A	N/A	0(0.0%)	
Pascual <i>et al.</i> (2007) Spain	PCR MY09/11and PCR GP5+/6+	24 SCC	17(70.8%)	0 (0.0%)	0 (0.0%)	13(76.5%)	3(17.6%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0(0.0%)	Formalin-fixed paraffin embedded
		18 Warty	16(88.9%)	0 (0.0%)	0 (0.0%)	14(87.5%)	1(6.3%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0(0.0%)	
		1 Basaloid SCC	1(100.0%)	0 (0.0%)	0 (0.0%)	1(100.0%)	0(0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0(0.0%)	
		1 Sarcomatoid	1(100.0%)	0 (0.0%)	0 (0.0%)	1(100.0%)	0(0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0(0.0%)	
		4 Papillary	3(75.0%)	0 (0.0%)	0 (0.0%)	3(100.0%)	0(0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0(0.0%)	
		1 Verrucous carcinoma	0(0.0%)	0 (0.0%)	0 (0.0%)	N/A	N/A	0 (0.0%)	0 (0.0%)	0 (0.0%)	N/A	
Heideman <i>et al.</i> (2007) Netherlands		72 Keratinizing SCC	40(55.6%)	1 (2.5%)	0 (0.0%)	22(55.0%)	3(7.5%)	0 (0.0%)	1 (2.5%)	2 (5.0%)	14(35%)	Formalin-fixed paraffin embedded
		7 Verrucous carcinoma	4(57.1%)	0 (0.0%)	0 (0.0%)	2(50.0%)	0(0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0(0.0%)	
		2 Warty	1(50.0%)	1 (100.0%)	0 (0.0%)	0(0.0%)	0(0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0(0.0%)	
		2 Sarcomatoid	1(50.0%)	0 (0.0%)	0 (0.0%)	0(0.0%)	0(0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1(100%)	
Guerrero <i>et al.</i> (2008) Spain	PCR GP5+/6+ Non-radioactive RLB for 37 HPV types	17 SCC	10(25.0%)	0 (0.0%)	0 (0.0%)	10(100.0%)	0(0.0%)	0 (0.0%)	0 (0.0%)	1(10.0%)	1(10.0%)	Formalin-fixed paraffin embedded
		4 Warty	1(0.0%)	0 (0.0%)	0 (0.0%)	1(100.0%)	0(0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0(0.0%)	
		1 Verrucous carcinoma	0(0.0%)	0 (0.0%)	0 (0.0%)	N/A	N/A	0 (0.0%)	0 (0.0%)	0 (0.0%)	N/A	
		2 Basaloid SCC	0(12.0%)	0 (0.0%)	0 (0.0%)	N/A	N/A	0 (0.0%)	0 (0.0%)	0 (0.0%)	N/A	
Yanagawa <i>et al.</i> (2008) Japan	PCR-RFLP type specific for 6,11,16,18,31,33, 42,52,58	25 SCC	3(12.0%)	0 (0.0%)	0 (0.0%)	3(100.0%)	0(0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0(0.0%)	Formalin-fixed paraffin embedded

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Reference, study location	Method of detection (types included)	No and type of lesion	Overall HPV prevalence (% <sup>e</sup> )	HPV type specific contribution N (% <sup>f</sup> )						Multiple infections N (%)	Comments	
				6	11	16	18	31	33			Others (types)
Tornesello <i>et al.</i> (2008) Uganda/Italy	PCR MY09/11 and PCR GP5+/6+	15 Keratinizing SCC										Liquid nitrogen frozen and Formalin-fixed paraffin-embedded
		1 Basaloid SCC										
		1 Verrucous carcinoma										
		17 N total. HPV(types not dif. by histology)	11(64.7%)	2 (18.2%)	0 (0.0%)	10(90.9%)	2(18.2%)		1 (9.09%)	1 (9.09%)	0(0.0%)	
		54 Keratinizing SCC										Formalin-fixed paraffin-embedded
		3 Basaloid SCC										
		2 Verrucous carcinoma										
		1 Warty										
		1 Sarcomatoid										
		61 N total. HPV (types not dif. by histology)	29(47.5%)			26(89.7%)	2(6.9%)			1	0(0.0%)	
		37 Keratinizing SCC	(0.0%)	0 (0.0%)	0 (0.0%)	(0.0%)	(0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0(0.0%)	Series from Tornesello ML <i>et al</i> Int. J cancer 122 2008
		2 Verrucous carcinoma	(0.0%)	0 (0.0%)	0 (0.0%)	N/A	N/A	0 (0.0%)	0 (0.0%)	0 (0.0%)	N/A	
		1 Basaloid SCC	(0.0%)	0 (0.0%)	0 (0.0%)	(0.0%)	(0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0(0.0%)	
		1 Sarcomatoid	(0.0%)	0 (0.0%)	0 (0.0%)	N/A	N/A	0 (0.0%)	0 (0.0%)	0 (0.0%)	N/A	

a Two of these specimens were positive for I6 and 30s by ISH; cross-reactivity cannot be entirely excluded

b HPV-35 (n=2); HPV-45 (n=4); HPV-51 (n=1); HPV-52 (n=4); HPV-68 (n=3); HPV-70 (n=1) and HPV-74 (n=1)

c HPV-45 (n=1); HPV-56 (n=1); HPV-58 (n=1) and HPV-59 (n=1)

d HPV-52 (n=2); HPV-56 (n=1) and HPV-68 (n=1)

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

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