

Table 2.3. Rates of detection of type-specific HPV DNA or RNA among women with invasive cervical cancer, restricted to studies with approximately 50 cases or more of cancer

Ref	DNA source	PCR primers	N Cases	Any	6	11	16	18	31	33	35	39	45	51	52	56	58	59	66	68	73	82	Multiple	Notes
Smith et al. (2007), World	Total to Jan 2006	Variety	14,595	87.3	0.5	0.2	54.4	15.9	3.6	4.3	1.7	0.6	3.7	0.7	2.5	0.7	3.3	1.0	0.3	0.5	0.5	0.2	7.8	Single types listed; To Jan, 2006; 12,401 SCC; 2,194 AC
Bhatla et al. (2006), New Delhi	Fixed	PGMY, line blot	106	98.1			63.2	8.5		1.9			5.7	0.9	0.9			2.8			0.9		14.6	Single types listed; 10/12 multiples have HPV 16, 18 or 45
De Boer et al. (2006), Jakarta	Fixed	SPF10, INNO-LiPA	74	95.9			33.8	28.4					5.4		8.1								13.6	Single types listed
Bulk et al. (2006), Amsterdam	Fixed	GP5+/6+ and TS for same 14 types	77 AC 91 SCC	90.9 91.2			32.5 60.4	46.8 8.8	3.3	1.1			1.2 1.1	7.8 4.4				1.1						Single types listed. In AC, HPV52 also found in mult. In SCC, HPV35 and 56 also found in multiples
Castellsague (2006), International	Scrapes and frozen biopsies	GP5+/6+	157 AC	84.7			42.7	31.8		0.6	1.3		3.8	0.6				0.6	1.3					Single types listed; No singles with HPV 6, 11, 31, 52, 56, 68, 70, 73; CP6108 in 3 mult, 70 and 73 each in 1 without establ ca type
Del Mistro (2006), Padova	Fixed	GP5+/6+	40 SCC 5 AC	85.0 100.0			65.0 40.0	20.0		5.0 40.0	2.5		5.0		2.5			5.0						Single types listed; HPV 70 with 56 in One SCC
Tawfik El-Mansi (2006), Edinburgh	Fixed	E6, E7 for HPV 16 and HPV 18	119 AC	47.1			32.8	14.3															13.4 HPV16 & 18	Single types listed
Gudleviciene (2006), Vilnius	Brush swabs	MY09/11, HPV 16 TS	195 SCC 17 AC	94.3 76.5			58.0	6.7	2.6	2.0	0.5		1.0	0.5	0.5			1.0		0.5	0.5		2.5	Single types listed; One HPV67; Many not typed, Percentages are out of total positives

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Hadzisejdic (2006), Rijeka	Fixed	GP5+/6+, SPF10, INNO-LiPA E6/E7 TS HPV 16, 18, 33	54 SCC 40 AC	92.6 92.5			40.7 7.5	11.1 50.0	5.5 2.5				1.8		1.8								25.9 17.5 All with 1+ ca type	Single types listed; 5.5% SCC, 10.0% Ad not typed	
Ho et al. (2006), Taipei	Ayre spatula	MY11/GP6+ Genechip	67 SCC 14 AC	87.7			30.9	14.8							16.1		12.4						23.4	Includes multiple infections, Percentages are out of total positives; Integration study	
Peedicayil (2006), Vellore	Fresh frozen biopsy	PGMY LBA	119	95.0			60.5	15.1	3.4	5.9	5.9		5.0	1.7		1.7	5.9					0.8	17.6	Includes multiple infections; HPV 64 alone in poorly differentiated; HPV 42 and 62 in Poorly diff AC,	
Bertelsen (2006), Bergen	Fixed	GP5+/6+, sequencing	89 '31-34 22 '40-41 16 '50-60 13 '92-04 38	68.0 62.0 89.0			100.0 37.5 75.0 67.6						12.5 12.5 2.9											Single types listed; HPV 16 only type found in specimens from 1930s	
Stevens (2006), Melbourne	Fresh biopsies in transport medium	PGMY LBA	191	86.9			52.9	18.3	0.5	1.6	1.6	3.1	6.3		1.6	1.0	1.0					2.6	0.5	5.2, all 1+ ca type	Includes multiple infections; 1 HPV 26, 3 HPV 53 One single; 1 HPV 73 with other estab. Ca types?

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Wu (2006), Guangzhou		TS, also MY09/11 then GP5+/6+ then sequencing of HC2 positives	475	89.9 of 475	2.0		79.6	2.0	1.3	3.3		1.3				0.7	5.9	0.7	0.7	1.3			2.0 (3, all had HPV16)	152 typed, single types listed; One HPV 26; One HPV 81		
De Vuyst, (2008), Nairobi	Cervix brush	SPF10 INNO-LiPA	51 HIV+; 148 HIV-				43.8	12.5	3.1		6.3		12.5		9.4									37.3	Single types listed; More types in HIV positive than HPV negative; No unusual types in multiples but many HPV 39 and 45; % OF SINGLES	
							44.9	17.3	0.8		4.7	0.8	13.4		1.6									14.2		
Lee, (2007), Gwangju	Cervical scrape	GP5+/6+, MyGene HPV DNA chip	133 SC 27 AC	83.5 81.5			51.1 18.5	9.0 48.1		2.3	2.3	0.8	2.3	0.8	0.8	0.8	3.8								9.8 3.7	Single types listed; Numbers; two HPV53 in multip, one HPV59 in multi one 66 in multi
Sigurdsson, (2007), Reykjavik	Fixed	Merck TS for HPV 16, 18, 31, 33, 35, 39, 45, 51, 52, 56, 58, 59	141	81.6			44.7	12.7	1.4	9.2	2.1	2.1	4.3		1.4										13.5	Single types listed; 1 not amplified in total Restricted types
Tong (2007) Seoul	Cytobrush scrapes	GP5+/6+, MyGene HPV DNA chip	97, incl 18 AC	81.4			38.1	8.2	1.0	4.1	5.2				1.0	1.0	3.1		2.1	2.1					15.5, all but two with HPV 16	Single types listed
Zuna (2007), Oklahoma City	Cytobrush of unfixed biopsies	PGMY LBA	93, incl 16 AC and 2 poorly diff	93.5			55.9	24.7	1.1	3.2	3.2	1.1	4.3	1.1	1.1	1.1	0	2.2		1.1	2.2	1.1		9.1	Includes multiple infections; HPV 68 and HPV 82 single; One HPV 83 single	
Bardin (2008), Warsaw	Fixed	GP5+/6+	88 incl 4 AC	98.9			73.9	5.7	3.4				5.7		3.4	3.4									1.1	Single types listed; Uncommon types Grouped in report

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Castellsague (2008), Maputo	Fixed	SPF10 LiPA25	230	100.0	1.3	1.7	47.0	31.3	2.6	4.8	10.4	0.4	12.6	14.8	14.3		1.7	0.4	0.4	2.6			3.5	Includes multiple infections; HPV 68/73 Not distinguishable; One HPV 70; One HPV 74; Two HPV 39/68/73	
Ding (2008), 4 Taiwan Studies?	Fixed	Varied	263, incl 21 AC	86.3			50.7	11.9	1.8	8.4	0.9	0.4	1.3		3.1		10.1	0.9		0.9			6.2	Single types listed; One "low risk"; Two MM4; 5 unknown	
Esmaeli (2008), Tabriz	Fixed	GP5+/6+, typing for HPV 16, 18, 31, 33	70, incl 5 AC	64.3			54.3	10.0	18.6														21.4	Includes multiple infections	
Insinga et al (2008), US meta	Pooled, adjusted analysis	Varied	1,503 637 adj	88.1	3.3 2.1	0.1 0.0	59.4 61.5	18.6 17.7	3.3 2.4	4.0 2.4	0.5 0.3	0.1 0.0	1.8 1.3	0.0 0.0	0.4 0.0	0.0 0.0	0.6 0.3	0.0 0.0	0.1 0.1	0.1 0.0	0.2 0.0	0.0 0.0	9.2	HPV 70 in 0.2, but 0.0 adjusted to Estimate causality	
Odida (2008), Kampala	Fixed 1968-92, poor DNA	SPF10 LiPA25	146 SC 38 AC 2 undif	63.0 57.9 0.0			47.8 35.0	22.8 50.0	4.3		2.2	1.1	10.9 5.0	1.1 5.0	1.1								3.5	Single types listed; Five unknown types; HPV 70 in one mixed; Percentages are out of total positives	
Prétet et al. (2008), France	Fixed	INNO-LiPA	446 SC 70 AC	98.0 91.4	0.2 0.0	0.2 0.0	55.4 40.0	5.6 20.0	3.6 1.4	2.5 0.0	0.7 1.4	0.7 0.0	1.8 1.4	0.2 0.0	1.4 0.0	0.5 0.0	0.5 1.4	0.2 0.0	0.0 0.0	1.4 0.0	- -	- -	22.3 total	Shown is % of total with single infects.	
Wu (2008), Chengdu	Frozen surgical specimens	MY09/11 and sequencing; one-step and nested TS HPV 16, 18, 52, 58, 59	190	93.2 any test			41.6	3.2	1.1				1.1		2.1		2.6	1.1					0.5	40.0 All with ca type	Single type s listed

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Wentzensen <i>et al.</i> (2009) Oklahoma City	Cervical broom at time of diagnosis	PGMY Linear Array (37 types)	107	90.7 any	0.9		55.1	14.0	1.9	4.7	3.7	3.7	7.5	0.0	5.6	-*	0.9	5.6	2.8	0.0	1.9	0.9		As single or multiple 3.7 HPV 84 2.8 HPV 72, 83 1.9 HPV 62, 70, 81 0.9 HPV 54, 55, 61, 67, 69, 89 Single 0.9 HPV 67 69, 72

Note: the percentages given for each type are percentage of total cases, except for two studies (notified in the Notes column) were percentages given correspond to percentages of total HPV positive cases.

* Linear Array cannot truly distinguish HPV56.