

**Table 2.20. Prevalence of HPV DNA in case series of cancers of the oral cavity (>40 cases) detected by the polymerase chain reaction (PCR) method**

Reference, study location	Method of detection <sup>a</sup> (types included)	Sites included	No of cases	Overall HPV positivity (%)	Type-specific HPV positivity (%)							Multiple infections (%)	Comments
					6	11	16	18	31	33	Others (type)		
Koppikar <i>et al.</i> (2005), India	CP and FAP primers in L1 ORF to detect all known HPV types, sequencing with Sequenase version 2.0 double stranded DNA sequencing kit	83 Oral cavity (buccal mucosa, gingivobuccal complex, lip, anterior 2/3 tongue, other sites) 6 oropharynx (soft palate, base tongue, other) 1 hypopharynx 2 larynx	102	31.0 (all types) 6.0 percent mucosal types (16 and 18)			5.0	5.0			HPV8 10.0%	14.0	Fresh frozen biopsies Most patients chronic betel-quid chewers 102 subjects with dental complaints as comparison group, early morning mouthwashes in PBS, 5% positivity, all cutaneous
Kreimer <i>et al.</i> (2005) Meta analysis	PCR	Tongue, gum, floor of mouth, palate	2642	23.5	3.1	1.6	16.0	8.0	0.2	0.8	<0.3		Meta analysis
Luo <i>et al.</i> (2007), Taiwan	MY11/GP6+ Nested PCR GP5+/GP6+ HPV blot <sup>®</sup> 39 types	Tongue (10) Buccal mucosa (27) Gingiva (10) Lip (2) Floor of mouth (2)	51	25.5		3.9	9.8	3.9		2.0	52 5.9 53 2.0 39 2.0 72 2.0 66 2.0 58 2.0	9.8	Brush cytology 46 precancers (leukoplakia, oral submucous fibrosis, verrucous hyperplasia), 30% HPV positivity 90 normal (dental extractions), 13% HPV positivity
da Silva (2007), Brazil	Commercial PCR kit (Biopap <sup>®</sup> ) 16, 18, 31, 33, 35, 52, 58, 67, multiple non oncogenic	Tongue	50	74.0							All oncogenic HPV types		Fresh frozen tissue All smoking males Biopsies from 10 normal subjects, all oncogenic HPV negative
Soares <i>et al.</i> (2007) Brazil	GP5+/6+ 23 types	Oral cavity Tongue (20) Floor of mouth (17) Lower lips (14) Jugal mucosa (8) Palate (6) Alveolar Border (5) Retromolar trigone (5)	75	24.0			5.0	23.0				4.0	Paraffin embedded
Liang <i>et al.</i> (2008) USA	GP5+/6+	Oral tongue (anterior two thirds)	51	2.0			2.0						Fresh frozen

Note: Percentages given for HPV types correspond to percentages of total cases.