

**Supplementary Table 1.** Detection of HR HPV and genotypes in fine needle aspirates (FNA) and tumor tissue stained for p16 antigens from 40 Patients with Primary Tonsillar Tumors.  
<sup>a</sup>Aptima E6/E7 mRNA assays; <sup>b</sup>cobas 4800 HPV DNA assay; <sup>c</sup>p16 immunohistochemical stain of formalin-fixed paraffin-embedded tissue; <sup>d</sup>Non-16 or 18/45 HR HPV genotypes; <sup>e</sup>HPV genotypes 31, 33, 35, 39, 45, 51, 52, 56, 58, 59, 66 or 68; <sup>f</sup>ISV-Insufficient volume; <sup>g</sup>INV-invalid; <sup>h</sup>ND - not done.

Patient ID	FNA		Tumor Tissue		
	mRNA <sup>a</sup>	DNA <sup>b</sup>	p16 <sup>c</sup>	mRNA <sup>a</sup>	DNA <sup>b</sup>
8	-	-	+	+ other <sup>d</sup>	+other <sup>e</sup>
13	16	16	+	16	16
17	16	16	+	16	16
18	16	16	+	16	16
19	16	16	+	16	16
24	16	16	+	16	16
35	16	16	+	-	-
37	16	16	+	16	16
44	16	16	+	16	16
45	16	16	+	16	16
50	16	16	+	16	16
51	-	16	+	+ other <sup>d</sup>	16
58	-	-	+	+ other <sup>d</sup>	+other <sup>e</sup>
67	16	16	+	16	16
77	16	16	+	16	16
78	16	16	+	16	16
79	16	16	+	16	16
10	+ other <sup>d</sup>	+ other <sup>e</sup>	+	ND <sup>h</sup>	ND <sup>h</sup>
14	16	16	+	ND <sup>h</sup>	ND <sup>h</sup>
21	16	16	+	ND <sup>h</sup>	ND <sup>h</sup>
30	16	16	+	ND <sup>h</sup>	ND <sup>h</sup>
38	-	-	+	ND <sup>h</sup>	ND <sup>h</sup>
41	16	ISV <sup>f</sup>	+	ND <sup>h</sup>	ND <sup>h</sup>
46	16	16	+	ND <sup>h</sup>	ND <sup>h</sup>
49	16	16	+	ND <sup>h</sup>	ND <sup>h</sup>
56	-	INV <sup>g</sup>	+	ND <sup>h</sup>	ND <sup>h</sup>
60	16	-	+	ND <sup>h</sup>	ND <sup>h</sup>
61	16	16	+	ND <sup>h</sup>	ND <sup>h</sup>
62	16	16	+	ND <sup>h</sup>	ND <sup>h</sup>
80	16	16	+	ND <sup>h</sup>	ND <sup>h</sup>
81	16	ISV <sup>f</sup>	+	ND <sup>h</sup>	ND <sup>h</sup>
91	16	16	-	16	16
59	-	-	-	-	-
85	-	-	-	-	-
22	-	-	-	ND <sup>h</sup>	ND <sup>h</sup>
23	-	16	-	ND <sup>h</sup>	ND <sup>h</sup>
31	-	-	-	ND <sup>h</sup>	ND <sup>h</sup>
54	-	-	-	ND <sup>h</sup>	ND <sup>h</sup>
57	-	-	-	ND <sup>h</sup>	ND <sup>h</sup>
89	-	ISV <sup>f</sup>	-	ND <sup>h</sup>	ND <sup>h</sup>
<b>TOTAL</b>	67.50%	72.20%	77.50%	85% (17/20)	85% (17/20)
	(27/40)	(26/36)	(31/40)		

**Supplemental Table 2.** Detection of HR HPV and genotypes in fine needle aspirates (FNA) and tumor tissue stained for p16 antigens from 30 Patients with Primary Base of Tongue Tumors.  
<sup>a</sup>Aptima E6/E7 mRNA assays; <sup>b</sup>cobas 4800 HPV DNA assay; <sup>c</sup>p16 immunohistochemical stain of formalin-fixed paraffin-embedded tissue; <sup>d</sup>HPV genotypes 31, 33, 35, 39, 45, 51, 52, 56, 58, 59, 66 or 68; <sup>e</sup>Non-16 or 18/45 HR HPV genotypes; <sup>f</sup>ISV-Insufficient volume; <sup>g</sup>INV-invalid; <sup>h</sup>ND - not done.

Patient ID	FNA		Tumour Tissue		
	mRNA <sup>a</sup>	DNA <sup>b</sup>	p16 <sup>c</sup>	mRNA <sup>a</sup>	DNA <sup>b</sup>
4	16	16	+	16	16
7	-	-	+	16	16
32	16	16	+	16	16
33	0.4	+ other <sup>d</sup>	+	+other <sup>e</sup>	+16/other <sup>d</sup>
39	-	-	+	16	16
47	16	16	+	16	16
52	16	16	+	16	16
64	16	ISV <sup>f</sup>	+	16	16
72	-	-	+	16	16
87	16	16	+	16	16
88	-	-	+	16	16
90	16	16	+	16	16
2	16	16	+	ND <sup>h</sup>	ND <sup>h</sup>
11	16	16	+	ND <sup>h</sup>	ND <sup>h</sup>
15	16	INV <sup>g</sup>	+	ND <sup>h</sup>	ND <sup>h</sup>
20	16	16	+	ND <sup>h</sup>	ND <sup>h</sup>
25	-	-	+	ND <sup>h</sup>	ND <sup>h</sup>
28	16	16	+	ND <sup>h</sup>	ND <sup>h</sup>
29	16	16	+	ND <sup>h</sup>	ND <sup>h</sup>
36	16	16	+	ND <sup>h</sup>	ND <sup>h</sup>
40	16	16	+	ND <sup>h</sup>	ND <sup>h</sup>
43	16	16	+	ND <sup>h</sup>	ND <sup>h</sup>
48	16	16	+	ND <sup>h</sup>	ND <sup>h</sup>
65	16	16	+	ND <sup>h</sup>	ND <sup>h</sup>
75	16	16	+	ND <sup>h</sup>	ND <sup>h</sup>
82	-	-	+	ND <sup>h</sup>	ND <sup>h</sup>
83	16	16	+	ND <sup>h</sup>	ND <sup>h</sup>
86	16	16	+	ND <sup>h</sup>	ND <sup>h</sup>
63	-	16	-	-	-
74	-	-	-	ND <sup>h</sup>	ND <sup>h</sup>
<b>TOTAL</b>	73.30%	75%	93.30%	92.3% (12/13)	92.30%
	(22/30)	(21/28)	(28/30)		(12/13)

**Supplemental Table 3.** Detection of HR HPV and genotypes in fine needle aspirates (FNA) and tumor tissue stained for p16 antigens from 6 patients with OPSCC at sites other than the base of tongue or tonsils.  
<sup>a</sup>Aptima E6/E7 mRNA assays; <sup>b</sup>cobas 4800 HPV DNA assay; <sup>c</sup>p16 immunohistochemical stain of formalin-fixed paraffin-embedded tissue; <sup>d</sup>ND - not done.

Patient ID	Tumour Site	FNA			Tumor Tissue	
		mRNA <sup>a</sup>	DNA <sup>b</sup>	p16 <sup>c</sup>	mRNA <sup>a</sup>	DNA <sup>b</sup>
26	Vallecula	16	16	+	ND <sup>d</sup>	ND <sup>d</sup>
53	Pharyngeal wall	16	16	+	ND <sup>d</sup>	ND <sup>d</sup>
5	Soft palate	16	16	+	ND <sup>d</sup>	ND <sup>d</sup>
6	Soft palate	-	-	-	-	-
66	Soft palate	-	-	-	-	-
68	Soft palate	-	-	-	ND <sup>d</sup>	ND <sup>d</sup>
<b>TOTAL</b>		50% (3/6)	50% (3/6)	50% (3/6)	(0/6)	(0/6)