

ID	Authors, publication year	Knowledge (% correct answers)			
		Oral cancer	Oral cancer identification	Risk factors associated with oral cancers	Cancer therapy side effects and management
1	Ahmed & Naidoo (2019)	Recent graduates were more likely to identify correctly the most common type of oral cancer (p=0.02).	<u>Common sites</u> : buccal mucosa (30%), lips (22%), tongue (20%), FOM (20%) <u>S & S</u> : non-healing ulcers (83%), red/ white patches (81%), no pain (87%), possible swelling (43%).	<u>Risk factors</u> : Tobacco & alcohol (40%), onset >60yrs (35%), low consumption of fruits & vegetables (29%), viral infection (60%). <u>Non-risk factors</u> : family history of cancer (35%), poor denture fit (58%).	NR
2	Akbari et al (2015)	Knowledge score between general & specialist not significant (p=0.09): 67.3% general dentists had desirable score, 100% dental specialists favourable score. Graduates with 1-4 years of experience have the highest OC knowledge compared to those with >20 years of experience (p=0.001).	Diagnostic skills knowledge score between general & specialist dentists not significant: General dentists scored 2.7, specialist dentists scored 3.4. No difference between diagnostic skills and work experience (p=0.3).	NR	NR
3	Alhazzazi (2021)	SCC is the predominant form of HNC (90%). Overall, 35% were knowledgeable, 35% slightly knowledgeable, 29% less knowledgeable.	<u>Common sites</u> : tongue (65%), FOM (65%). <u>S & S</u> : cancer is not always painful (84%).	<u>Risk factor</u> : HPV is a risk factor (75%). <u>Non-risk factor</u> : poor OH (41%).	NR
4	Alonge & Narendran (2004)	27% had high OC knowledge index. SCC is the most common form of cancer (84%).	<u>Common sites</u> : tongue & FOM (51%).	35% had high OC risk factor knowledge index. <u>Risk factors</u> : Tobacco (99%), alcohol (91%), prior OC experience (96%). <u>Non-risk factors</u> : family history of cancer (14%), poor denture fit (33%), poor OH (42%).	NR
5	Alqahtani et al (2021)	Oral surgery/ medicine/ pathology, prosthodontists and periodontists showed higher OC knowledge than GDPs & endodontists. GDPs or dental specialists working in universities or public hospitals had higher knowledge compared to those working in the private clinics and health care centres.	NR	NR	NR
6	Alqutaibi et al (2021)	NR	Prosthodontists with > 10 years of experience were better at detecting and referring suspicious oral lesions.	NR	NR

7	Borhan-Mojabi (2012)	Significant relationship noted between recency of oral cancer course and high OC knowledge.	<u>Common sites:</u> tongue (91.9%), FOM (37.2%), lips (37.9%).	NR	NR
8	Calvert et al (2014)	NR	NR	NR	NR
9	Canto et al (2001)	SCC is the most common OC (80%). Recent graduates were more likely to score better in OC knowledge. Dentists who had taken a course in the past 12 months were better at diagnostic procedures for OC.	35% had low, 44% had medium & 20% had high OC identification knowledge. 80% knew how to examine tongue & surrounding areas for signs of OC and that OC could be painless in the early years.	<u>Risk factors:</u> Tobacco (99.8%), prior OC (96.9%), alcohol (94.5%), older age (64.8%), low fruits & vegetables (30.1%). 30% had low, 35% had medium & 35% had high OC risk knowledge.	NR
10	Clovis et al (2002)	Erythroplakia and leukoplakia are most likely to associate with OC (<50%). Early detection improves 5-year survival rate (>90%).	Recency of graduation and timing of recent CE were significant associated with correct identification procedure (p<0.001).	<u>Risk factors:</u> Tobacco (99.4%), prior oral cancer (96.6%), alcohol (90.4%), older age (78.7%), sun exposure (70.1%), HPV (53.1%), low consumption of fruit and vegetables (34%). <u>Non-risk factors:</u> family cancer history (8.8%), poor denture (39.9%), poor OH (46.3%), spicy food (57%), hot beverages & foods (69.4%), obesity (71.3%). Greater OC risk knowledge noted in recent graduates than experienced dentists (p<0.001).	NR
11	Colella et al (2008)	Erythroplakia/ leukoplakia are likely to develop into OC (53.8%). SCC is the most common form of OC (50.5%). Knowledge was significantly higher for dentists graduated from longer period of time (p<0.0001); with an oral surgery/ pathology background (p=0.034); attended CE on oral cancer in the last 12 months.	<u>Common sites:</u> tongue/ FOM (32%). Dentists who attended a course in the previous 12 months were more likely to identify the most common form of OC and of the early OC lesions.	<u>Risk factors:</u> Tobacco (94.1%), prior OC (89.5%), alcohol (79.2%), older age (47.9%), low fruits & vegetables consumption (25.8%).	NR
12	Cruz et al (2005)	NR	NR	NR	NR
13	Daley et al (2011)	NR	NR	Limited knowledge regarding the HPV-OC link. Limited knowledge regarding the HPV vaccines.	NR

14	Dang et al (2022)	NR	NR	NR	NR
15	Dewan et al (2014)	NR	NR	NR	NR
16	Dixon et al (2021)	Mean knowledge was strongly associated with the volume of HNC patients that respondents reported seeing in practice over the previous year. Participants who had been in practice for 30-39 years had the highest mean knowledge score, while those who had been in practice for longest had lower-than-average knowledge scores.	.NR	NR	NR
17	Ekici (2020)	Correctly answered the 10 most common OC (58.5%). Correctly answered 5-year survival is below 70% (24.1%). Correctly answered OC is preventable (49%). SCC is most the most common form of OC (55.8%). Leukoplakia is the most common premalignant lesions (44.2%).	Common sites: tongue (35%).	<u>Risk factors:</u> Tobacco (93.5%), prior OC (90.1%), alcohol (86.7%), exposure to UV light (83.7%), radiotherapy history (82.3%), HPV (76.9%), older age (52.4%).	NR
18	Fidele et al (2022)	Identified the most common types of OC (80.6%).	Identified the common sites of OC (33.3%). Identified the S & S of OC (38.3%). Dentists with >10 years of experience had high knowledge of clinical presentation for OC (p=0.04).	<u>Risk factors:</u> Tobacco (92%), alcohol (100%), prior OC (80%), older age (68%), HPV (35%). 2.3% able to identify common conditions associated with OC. Experienced dentists with >10 years had higher OC risk factor knowledge compared to recent graduates (p=0.04).	NR
19	Frydrych et al (2012)	NR	NR	NR	NR
20	Gajendra et al (2006)	NR	>2/3 of dentists knew that LNs in OC patients were hard, painless, can be mobile or fixed.	<u>Risk factors:</u> >60 years (33%), sun exposure (<60%), tobacco (90%), alcohol (>80%), low consumption of fruits and vegetables (25%), betel quid chewing (52%), Gutka consumption (16%).	NR

21	Gureri et al (2008)	Knowledge was not related to duration of practice (p=0.99).	NR	NR	<p><u>GDPs</u>: causes of rapid dental decay after H & N radiation therapy (97.62%); oral complications following radiation therapy (97.56%), prophylactic measures of pre-cancer treatment when performing oral evaluation (18.6%), timing of dental procedures in relation to OC treatment (30%).</p> <p><u>Dental specialists</u>: Population most likely to experience oral complications from cancer therapy (98.15%), oral complications from radiation therapy (96.23%), oral evaluation required in pre-cancer treatment (9.3%), the timing of dental procedures in relation to cancer treatment (30.43%), dental considerations before chemotherapy began (39.22%).</p> <p><u>Both GDPs & dental specialists</u>: considerations before a dental procedure in a chemo patient (54.9%), timing of dental procedures in relation to cancer treatment (39.3%), prophylactic measures a dentist shall take during a pre-cancer treatment oral evaluation (14.71%).</p>
22	Haresaku et al (2018)	NR	NR	<p><u>Risk factors</u>: Smoking (both J & A >90%), chewing tobacco (J: 85%, A: 97%), chewing betel nut (J: 25%, A</p>	NR

				97%), alcohol (J: 52%, A: 93%), HPV (J: 38%, A: 92%). <u>Non-risk factors:</u> HSV (J: 91%, A: 70%), family history of cancer, caffeine (J: 85%, A: 92%), family history (J: 23%, A: 22%) <i>NB: J = Japanese dentists, A = Australian dentists.</i>	
23	Hashim et al (2018)	NR	<u>Common sites:</u> tongue (31.1%), FOM (18.7%). <u>Common S & S:</u> persistent ulcer (87.6%), enlarged LN (82.9%), white lesions (79.9%) red lesions (63.2%), non-healing socket (35.1%), dysphagia & limited tongue mobility (68.6%).	<u>Risk factors:</u> tobacco (99%), prior OC (92.3%), alcohol (87.3%), HPV (76.6%), sun exposure (73.2%), older age (60.9%), poor diet (43.8%).	NR
24	Horowitz et al (2000)	NR	NR	NR	NR
25	Husein et al (2011)	NR	NR	NR	NR
26	Joseph et al (2012)	Dentists who attended a recent CE course had higher knowledge score (p<0.05).	<u>Common sites:</u> tongue & FOM (85%). <u>Common S & S:</u> hard/painless/mobile or fixed (70%), asymptomatic in early stage (91%), red/ white lesions (93%).	<u>Risk factors:</u> Tobacco (100%), prior OC (97%), alcohol (89%), older age (60%), Betel quid chewing (89%), UV exposure (83%), viral infection (71%), low consumption of fruits (53%). <u>Non-risk factors:</u> hot food/ beverages (61%), eating spicy food (40%), obesity (74%), poor OH (40%), poor dentures fit (25%), family history of cancer (9%), chronic infection (71%). Dentists who graduated< 15 years (30%) higher risk factors knowledge than > 15 years.	NR
27	Kogi et al (2019)	NR	NR	NR	NR
28	Kujan et al (2006)	NR	NR	NR	NR
29	Leão et al (2005)	Identified the aetiological agents of OC (11%).	Identified the main features of OC (34%).	NR	NR

		Differentiated between the initiating and promoting factors associated with OC aetiology (31%). Dentists who had been dentally qualified for 16 or more years, older than 37 years old, working in the public sector or had attended post-graduate courses were found to have better knowledge of OC.			
30	LeHew et al (2010)	Recency of CE and statistically significantly related to transformed OC knowledge (p=0.0394). The more recent the last CE, the greater the dentists' knowledge.	NR	NR	NR
31	Lopez-Jornet et al (2010)	Early detection improves 5-year survival rates from OC (98.5%). SCC is the most frequent form of OC (90.6%). Oral leukoplasia & erythroplasia were the most frequent precancerous lesions (95%). Age, gender and year of graduation had no influence over OC knowledge.	<u>Common sites:</u> lip (89.1%), tongue & FOM (89.1%). <u>Common S & S:</u> asymptomatic early stages (95.6%).	<u>Risk factors:</u> Tobacco (100%), alcohol (96.4%), prior OC (95.5%), older age (69.4%), low consumption of fruits & vegetables (52.6%). <u>Non-risk factors:</u> obesity (14.4%), spicy foods (40.8%), poorly prostheses fit (95.5%), poor OH (77.6%).	NR
32	Marino et al (2017)	NR <i>(The authors did not separate dentists' data from other oral health professionals)</i>	NR	NR	NR
33	Martins et al (2021)	NR	NR	NR	Radiation related caries toxicity (81.78%) [oral med or dentists working in cancer facilities scored 97% while dentists who did not focus their activities on management of oncology patients scored 46%]. RRC can lead to osteoradionecrosis (74.64%).
34	Maybury et al (2012)	SCC is the most common form of OC (83%). Tongue is the 2nd most common site after lip (59%). Erythroplakia & leukoplakia are the two commonest pre-cancerous lesions (42%).	<u>Common sites:</u> ventral-lateral border of tongue (72%). <u>Common S & S:</u> early lesions are small, painless & red (81%), asymptomatic in early stages (80%), hard/ painless/fixed or mobile LNs (77%).	<u>Risk factors:</u> Tobacco (>80%), prior OC (>80%), alcohol (>80%), HPV (>80%); older age (>60%), UV light exposure (>60%); low consumption of fruits & vegetables (>40%), >60 years (>40%).	NR

		Recency of graduation (<10 years), women and working in group private practice are predictors of high score on OC knowledge.	39.2% dentists scored highly on OC identification procedures. Dentists with 20-29 years of experience, female and dentists working in a group practice are more likely to get a high score on diagnostic procedures.	<u>Non-risk factors:</u> hot beverages & food, obesity & use of spicy foods (>60%); familial clustering & poor oral hygiene (>40%); poor dentures fit & family history (<20%). 37.8% dentists scored highly for OC risk factors knowledge.	
35	McCann et al (2000)	Leukoplakia is a predisposing factor to OC (80%). Erythroplakia is a predisposing factor to OC (69%).	NR	<u>Risk factors:</u> Smoking (94%), alcohol (90%), age (63%), viral infection (35%).	NR
36	Nazar et al (2022)	Answered the OC knowledge questions (81.3%). Identified the most common form of OC (94.2%). Identified the most likely lesions associated with OC (91.6%). Recognised the features of OC metastases (82.9%). Female (61.9%) scored better in OC knowledge (p=0.026). No significant difference in knowledge based on age, nationality or level of education.	Identified the common site of oral cancer (93.5%). Identified the symptoms of late stage OC correctly (91.6%). Identified the early stage of OC correctly (50.6%).	<u>Risk factors:</u> Tobacco & alcohol (95.8%), older age (41.3).	NR
37	Nazar et al (2019)	Correctly answered the OC knowledge questions (73.4%). Common form of OC (80.6%). Likely lesions associated with OC (87.9%). OC knowledge scores were significantly correlated with age (p<0.001) and years of experiences (p<0.001). No difference in OC knowledge with different level of education.	Identified late stage of OC symptoms (83.7%). Identified the early stage of OC symptoms (31.3%).	<u>Risk factors:</u> Alcohol & smoking (99.7%), older age (37.3%).	NR
38	Nicholls & Ilankovan (1998)	NR	NR	NR	NR
39	Patel et al (2012)	NR	NR	NR	NR
40	Patton et al (2006)	Early detection improves 5-year survival rate (98.8%).	NR	NR	NR

41	Pavão Spaulonci et al (2018)	19% new graduates vs 6.7% senior clinicians obtained significantly better grade in OC knowledge. Junior dentists were 2.1 higher in knowledge than senior dentists. Professionals with public experience were 2.3 times more aware about OC. Participants who performed self-assessment and reported having satisfactory OC knowledge were 2.2 times more likely to have higher knowledge level.	NR	<u>Risk factors:</u> Alcohol (98.4%), tobacco (100%), older age (88.4%), HPV (88.9%), low fruits & vegetables consumption (40.2%). Significant difference was noted between senior and junior dentists knowledge in risk factors. Significantly more senior dentists than junior dentists incorrectly thought that poorly fitting dentures, poor dental status, poor OH & hot beverages are risk factors.	NR
42	Reed et al (2000)	NR	NR	<u>Risk factors:</u> Smoking (90%), chew/snuff (88%), alcohol (45%), diet (6%), HPV (26%).	NR
43	Saleh et al (2014)	Knowledge on early signs and symptoms of OC were significantly associated with age (31-40 years), gender (female), recency of graduation (<10 years) and nature of clinical practice (public).	<u>Common S & S:</u> red/ white patches (93.1%), non-healing ulcers (97%), bleeding gum as potential sign (67.1%).	<u>Risk factors:</u> Smoking (99.4%), betel quid (99.2%), alcohol (88.9%), HPV (67.2%). <u>Non-risk factor:</u> family history of OC (17.5%).	NR
44	Seals (1990)	NR	NR	NR	NR
45	Seoane et al (2006)	NR	NR	NR	NR
46	Shadid & Habash (2023)	70.1% had poor OC knowledge. Common form of OC (76%). Dentists with < 5 years clinical experience were more likely to have better knowledge compared to more experienced dentists (0<0.05). No difference in gender or place of work.	Common sites of OC (37.5%). Common S & S (31.1%). Early signs of OC (80.3%). Dentists with < 5 years clinical experience were more likely to have better diagnostic skills compared to more experienced dentists (0<0.05). No difference in gender or place of work.	<u>Risk factors:</u> low fruits& vegetables consumption (39.8%), sun exposure (86.2%), older age (67.3%), HPV (74.8%), prior OC (92.9%), tobacco (97.2%), alcohol (92.9%). <u>Non-risk factors:</u> family history (10.2%), poorly fitting dentures (25.6%), consumption of spicy food (49.6%), hot beverages/food (65.7%), poor OH (31.1%), obesity (19.3%).	NR
47	Strey et al (2022)	NR	NR	NR	NR
48	Taheri et al (2018)	Recognised precancerous lesions were the more potentially malignant (59.5%). Identified the most common type of precancerous lesions (57.5%).	Correctly answered the most common signs of cancerous lesions (54.9%).	<u>Risk factors:</u> Alcohol & tobacco (86.9%), older age (67.3%).	NR

		Recent graduates (<10 years) scored significantly better than those graduated 10 years or more.			
49	Tami-Maury et al (2016)	NR	NR	NR	NR
50	Vijay Kumar & Suresan (2012)	SCC is the most common form of OC (96%). Early detection improves 5-year survival rates from OC (44.5%).	Non-scrapable white lesions are potentially malignant (82%).	<u>Risk factors:</u> Alcohol (99%), tobacco (78%), UV light (45%), older age (59%). <u>Non-risk factors:</u> poor denture fit (54%).	NR
51	Wong & Toljanic (2009)	NR	NR	NR	NR
52	Wright et al (2011)	NR	NR	NR	NR
53	Yellowitz et al (1998)	Inconsistent responses on knowledge about OC. Identified erythroplakia and leukoplakia as the most common predisposing conditions to OC (87%). Early detection improves 5-year survival rates (97%).	Recognised early lesions were asymptomatic (73%).	<u>Risk factors:</u> Tobacco (99.6%), alcohol (91%), UV light exposure (98%), prior OC (96%), >60 years (30%) <u>Non-risk factors:</u> poor denture fit (35%), poor OH (53%), family history of cancer (80%).	NR

Note: ENT = Ear Nose and Throat Specialists; GDPs = General Dental Practitioners HCPs = Health Care Professionals; HNC = Head and Neck Cancer; H & N = Head and Neck; HPV = Human Papilloma Virus; HSV = Herpes Simplex Virus; LNs = Lymph Nodes; NR = Not Reported; OC = Oral cancer; OCE = Oral Cancer Examination; OH = Oral Hygiene; SCC = Squamous Cell Carcinoma; S & S = Signs and Symptoms; UV = Ultra-Violet.