

Location of oral cancers differs in smokers, nonsmokers

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The location of oral cancers differed in smokers and nonsmokers with nonsmokers having a higher proportion of cancers occur on the edge of the tongue, according to a study published online by *JAMA Otolaryngology-Head & Neck Surgery*.

The relatively high incidence of mouth squamous cell cancer in [nonsmokers](#), especially women, without obvious causes has been noted in other studies. Traditionally, head and neck [squamous cell cancer](#) (HNSCC) has been associated with the five "S's" of smoking, spirits, syphilis, spices and sharp (or septic) teeth. Other risk factors include immunosuppression and diet. The role of human papillomavirus (HPV) in head and neck cancers is accepted in oropharyngeal SCC, according to background information in the study.

Researcher Brendan J. Perry, B.Sc. M.B.B.S, of the Princess Alexandra Hospital, Brisbane, Australia, and fellow co-authors sought to examine whether oral cavity cancers occurred more commonly at sites of dental trauma and how that varied between nonsmokers without major identified carcinogens and smokers. Their study was an analysis of patients with oral cavity or oropharyngeal cancers seen at an Australian hospital between 2001 and 2011.

After 157 patients were excluded, the study included 724 patients of whom 334 had oropharyngeal cancer and 390 had oral cavity cancer. Of the 334 patients with oropharyngeal cancer, 48 were lifelong nonsmokers, 266 current smokers and 20 former smokers. Of the 390 patients with [mouth cancer](#), 87 were lifelong nonsmokers, 276 current smokers and 27 former smokers. The average age at diagnosis was 60 years old for oropharyngeal cancer and almost 62 years old for mouth cancer. Both cancers were more common among men.

Study results show that oral cancers occurred on the lateral (edge of) [tongue](#) in 57 nonsmokers (66 percent) compared with 107 smokers/former smokers (33 percent). The edge of the tongue was the most common site of tumors in both [smokers](#) and nonsmokers, though it was proportionally more common in nonsmokers. The authors suggest if chronic dental trauma is a carcinogen, it would be expected that a high incidence of mouth cancer would occur near teeth, especially on the edge of the tongue or the buccal mucosa (the inside lining of the cheeks).

"We acknowledge that this study does not prove that chronic dental trauma causes [cancer](#). ... Our data support the limited evidence from the small number of previous studies that recognized a potential role of chronic dental irritation in carcinogenesis," the authors conclude.

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