

Epidemiology & Bulletin

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Epidemiology of Oral Cavity
and Pharyngeal Cancers

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Cancer is a universal public health issue. The incidence of cancer is increasing each year in developed or developing countries as well. In Taiwan Area, malignant neoplasms has been the first leading cause of death since 1982. In the 1985 report of the World Health Organization, the most common cancers of men are: cancers of the lung, the stomach, rectum and large intestine, oral cavity and pharynx, prostate and oesophagus. Cancers of oral cavity and pharynx are relatively important among cancers of men.

According to the WHO International Statistical Classification of Disease, Injuries and Causes of Death (ICD), oral cavity and pharyngeal cancers range from ICD 140 to ICD 149, including malignant neoplasms of lip (140), tongue (141), major salivary glands (142), gum (143), floor of mouth (144), other and unspecified parts of mouth (145), oropharynx (146), hypopharynx (148), and malignant neoplasms of other and unspecified sites within the lip, oral cavity and pharynx (149), with the exception of the malignant neoplasm of nasopharynx (ICD 147) which is not in either the oral cavity or the pharynx.

Malignant neoplasms of oral cavity are more frequently found in the inner part and both sides of the tongue, the rear one-third of the tongue, tonsil, the floor of mouth, lip and the soft palate.

In terms of incidence, oral cavity and pharyngeal cancers are less prevalent in the western hemisphere. The proportion of oral cavity cancer to cancers of all sites also varies from country to country. For instance, in western countries, oral cavity cancer occupies around 5% of all cancers; in Sri Lanka, the ratio is as high as 40%. The incidence of oral cavity cancer is also high among some south-eastern Asian countries. More than 90% of oral cavity and pharyngeal cancers are found in persons above the age of 45 years, and the incidence increases with age. In USA, the incidence of oral cavity and pharyngeal cancer among men is, on average, 17.1 per 100,000 persons; and among women, 5.7 per 100,000 persons. Each year, around 24,000 new cases are identified. These cancers are more common among whites than among other ethnic groups. From the cancer registration data in Taiwan Area, oral cavity cancer has been increasing. The difference between male and female ranges from 3:1 to 2:1 (see Table 1 and Figure 1).

The mortality of oral cavity and pharyngeal cancer in the USA is extremely low under 35 years age, though increases with age. In 1987, in USA, 9,700 persons died of oral cavity and pharyngeal Cancers, giving an age-adjusted mortality rate of 5.6 per 100,000 for men and 2.0 for women. That for the black (5.7 per 100,000) is 1.7 times higher than the

white (3.4 per 100,000). The age-specific mortality rates for these cancers between the black and the white are also different. For the white, the mortality increases with age, reaching the highest point at age 75. For the black, the highest point is reached at ages 55 to 64 and continues until age 75. The long-term trend of the age-adjusted mortality of oral cavity cancer in Taiwan Area between 1971 and 1988 (see Figure 2) shows some sexual difference: the mortality of men has been increasing, that for women has been decreasing.

The survival rate of oral cavity and pharyngeal cancer depends to a large extent on the stage of the cancer when it is diagnosed, the anatomical site, histopathological classification, treatment and age and sex of patient. Statistical data show that the 5-year survival rate of oral cavity and pharyngeal cancer is about 52%. The total survival rate of oral cavity and pharyngeal cancer has not, as compared to the survival rates of other cancers such as cancers of the breast, rectum and prostate, been improved in the last 16 years, and has even become worse for the black.

The risk factors, according to available literatures, vary to some extent by geographic and cultural backgrounds. For instance, in India, tobacco chewing and in France and Puerto Rico, drinking and smoking are the major risk factors. In Taiwan Area, betel nut chewing is considered highly related to oral cavity cancer. Generally speaking, risk factors related to oral cavity and pharyngeal cancers are:

1. use of tobacco (chewing and smoking);
2. drinking;
3. betel nut chewing;
4. precancerous lesions: leukoplakia, submucous fibrosis.
5. occupational factors;
6. malnutrition;
7. syphilis;
8. radiation.

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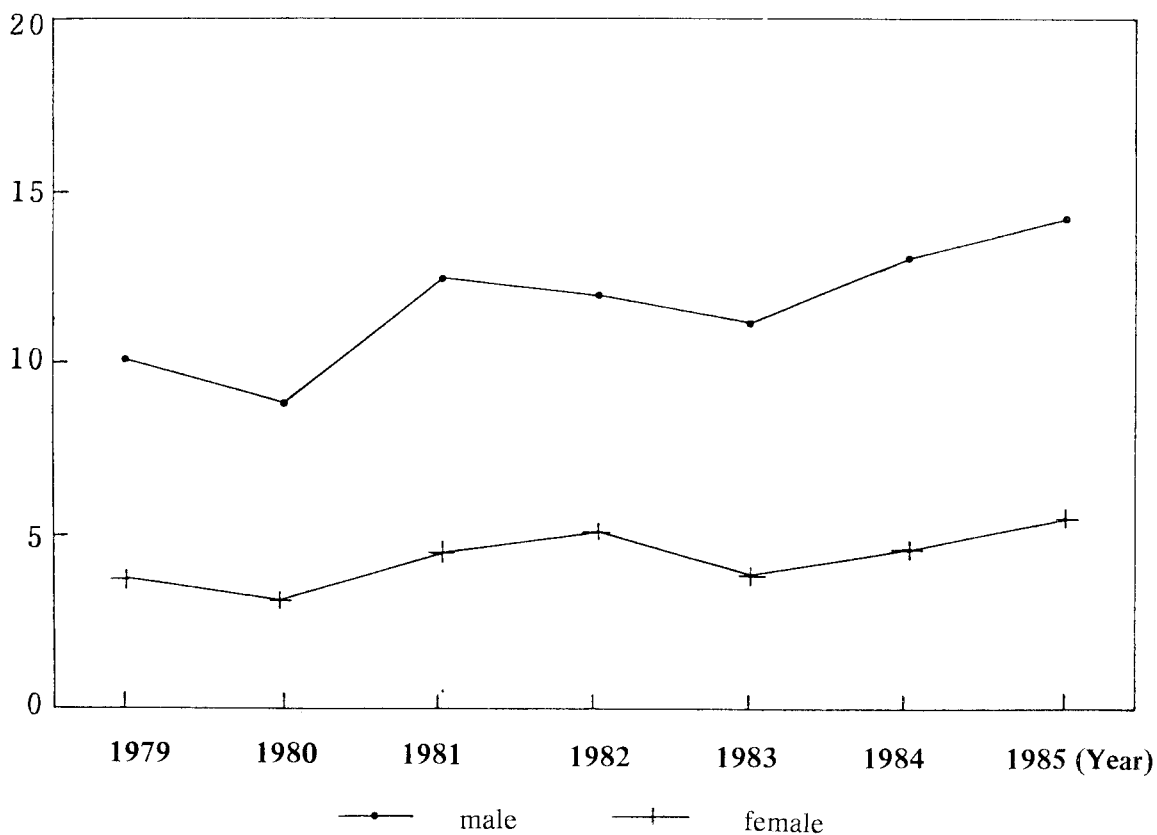


Figure 1. Crude Incidence Rates (per 100,000) of Oral Cavity and Pharyngeal Cancer in Taiwan Area, 1979-1985.

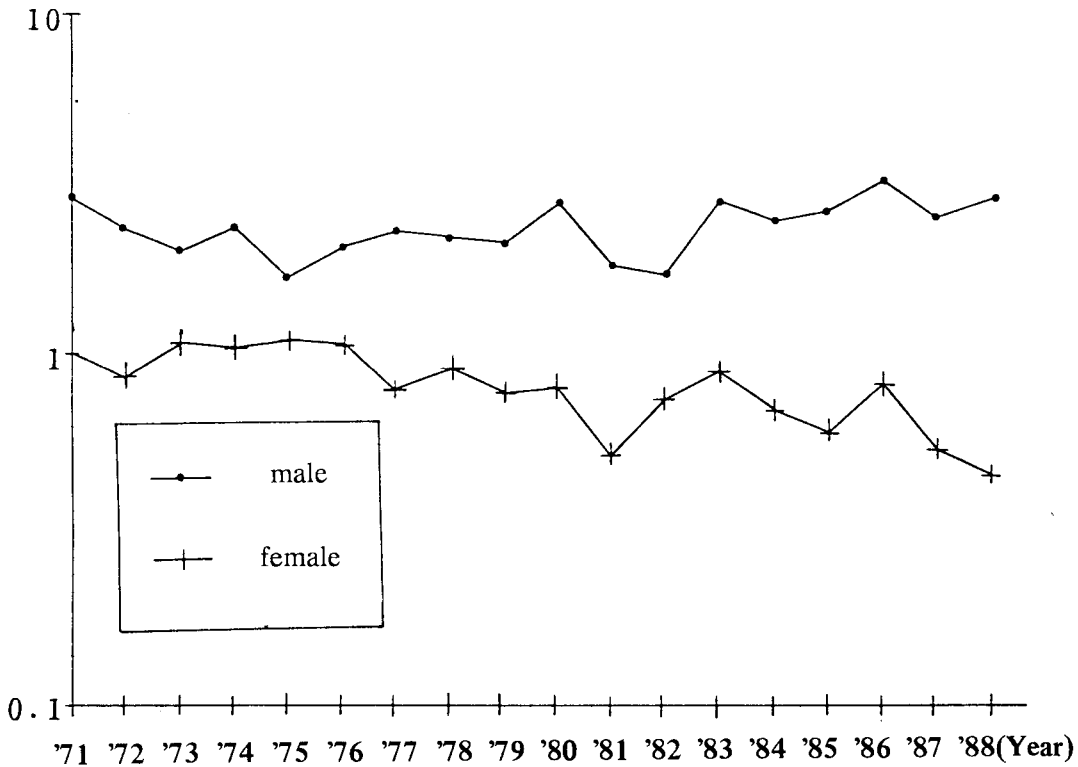


Figure 2. Age-Adjusted Mortality Rates (per 100,000) of Oral Cavity Cancer (ICD 140-145) in Taiwan Area, 1971-1988.

Table 1. No. of Reported Oral Cavity and Pharyngeal Cancers and Crude Incidence Rate (per 100,000) in Taiwan Area, 1979-1985

Year	ICD No.	Male		Female		Total	
		No. of Case	CIR	No. of Case	CIR	No. of Case	CIR
1979	140-149	912	10.08	307	3.71	1,219	7.04
1980	140-149	816	8.86	265	3.14	1,081	6.12
1981	140-149	1,154	12.31	380	4.41	1,534	8.53
1982	140-149	1,135	11.91	445	5.07	1,580	8.64
1983	140-149	1,076	11.12	351	3.93	1,427	7.67
1984	140-149	1,268	12.93	416	4.59	1,684	8.92
1985	140-149	1,416	14.25	499	5.24	1,915	10.01