



## Original Research Article

## Incidence of Oral malignancy in Basrah Southern Iraq between 2005-2017

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## ABSTRACT

**Background:** Cancer is a major health problem in Basrah. Oral cancer is an important component which deserves exploration.

**Objective:** To study the incidence of oral malignancy in Basrah.

**Materials and Methods:** Available data were obtained from the cancer registry in Basrah, a histopathological research facility of Al-Sadder Teaching Hospital, Al-Basrah General Hospital and College of Dentistry in Basrah.

**Results:** In Basrah from 2005 to 2017, there were 304 cases identified of oral malignancy in various sources, 152 cases for both male and female. Squamous cell carcinoma accounted for 82.2%. The Tongue is the most frequent site followed by buccal mucosa, lower jaw then the upper jaw.

**Conclusion:** No solid evidence exists regarding the incidence of oral malignancy in Basrah governorate and the present information represent only an attempt to measure the extent and characteristics of oral malignant diseases. Comprehensive cancer registration is highly required supported by accurate information on new cases and on cancer-related mortality. The current level of registered oral malignant diseases is likely to be underestimated.

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## 1. Introduction

Oral malignancy is one of the worldwide diseases, which possesses the eighth position among various kinds known about diseases. Every year, the total number of oral malignant new cases surpasses 300.000 cases. In spite of the fact that the differing circulation of oral malignant occurrence around the world, the quantity of new cases shows an expansion in various countries. The mortality burden may be up to about 130.000 individuals globally each year.<sup>1</sup>

In 2010, the World Health Organization (WHO) revealed an oral malignancy death pace of around 2 per 100,000 in the Middle East, which is lower than that announced in India and the United States.<sup>2</sup> Oral malignant diseases have

different aetiology epidemiology and survival rate.<sup>3</sup>

Little is known about oral malignancy in Basrah. The requirement for far-reaching information about malignant growth forms is obligatory to design and set up control programs for the regular oral disease which might be amiable to counteraction, early discovery and cure. This study is an attempt to describe in quantitative terms the extent of oral malignant diseases over the years 2005-2017.

## 2. Materials and Methods

An aggregate of 304 patients equally and by chance were distributed between females and males The cases were compiled from records available at the histopathological research facility of Al-Sadder Teaching Hospital, Al-Basrah General Hospital and College of Dentistry in Basrah. Additionally Cancer Registration Section at the

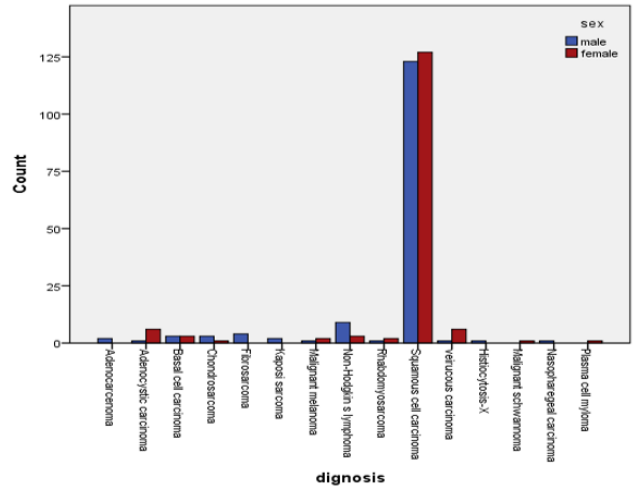
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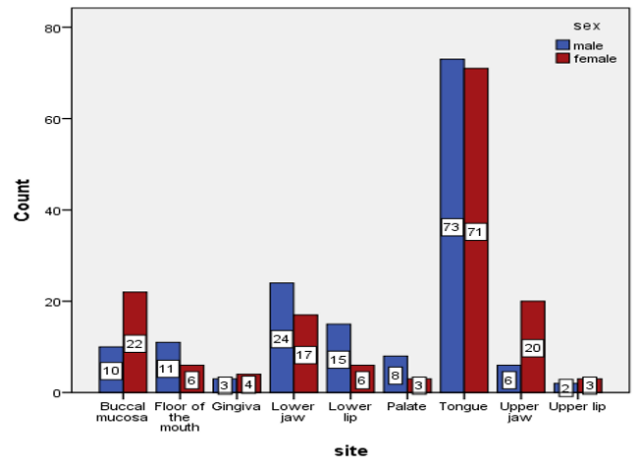
Department of Pathology in the College of Medicine in Basrah. Was used as a source of additional cases of oral cancer. This investigation incorporated the period between 2005-2017. Information on each case included gender, age, histopathological diagnosis site of cancer and year of diagnosis. Cases of oral malignancy whose normal residence is governorates other than Basrah were excluded. Sites of oral malignant growth included: upper and lower lip, tongue, gingiva, the floor of mouth, palate, buccal mucosa, upper and lower jaw Data were entered into an SPSS version 20. Population figures for Basrah population were obtained from various sources verified by the estimates published by the Ministry of planning and developmental cooperation.

**3. Results**

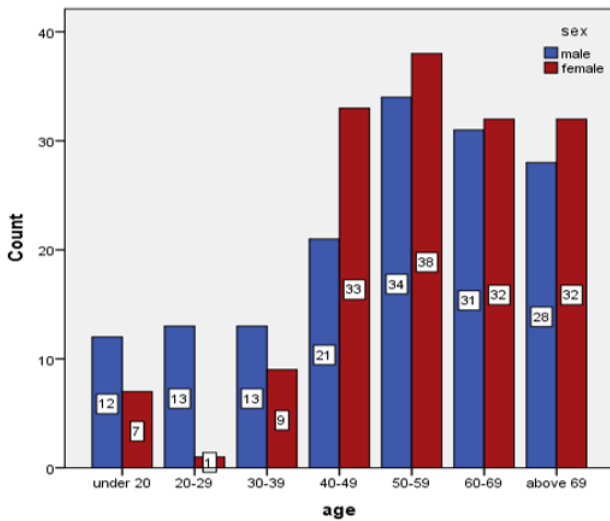
Among 304 cases analyzed as oral malignant diseases for the period 2005-2017, half of them were males and half were females. Oral malignancy is seen more among persons aged 50-59 years (23.7%), and this is true for both sexes (11.2%), for males and (12.5%) for females (Figure 1). Most cases were Squamous cell carcinoma (82.2%), females had slightly higher proportion of Squamous cell carcinoma 127(41.8%) than Males 123 (40.5%), then Non-Hodgkin s lymphoma about 12(3.9%), male 3.0% and female 1.0%, while different kinds of malignancies had little cases as found in (Figures 2, 3 and 4). There is a clear variation in the numbers and incidence rates of cases over the years. As shown in (Figure 5) and (Table 1).



**Fig. 2:** Distribution of malignant types in relation to sex



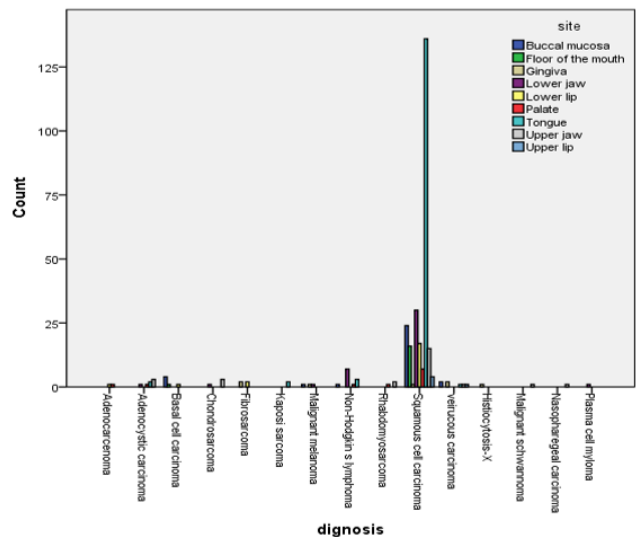
**Fig. 3:** Site distribution in relation to sex



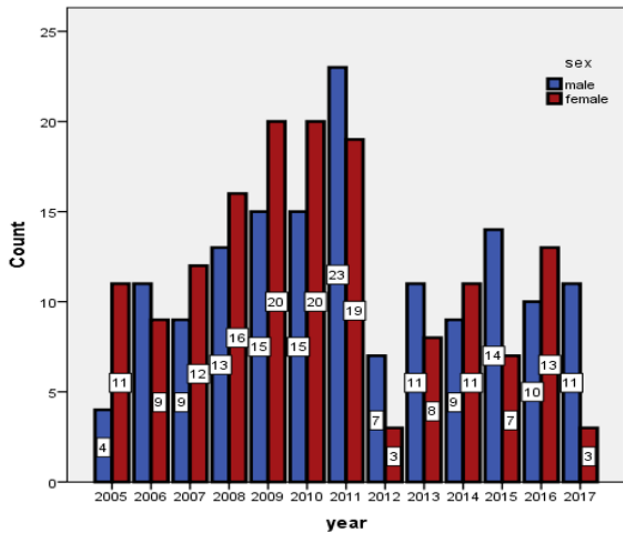
**Fig. 1:** Age group distribution in relation to sex

**4. Discussion**

In Iraq and especially in Basrah in the southern part of Iraq, malignancy has certainly expanded in total incident cases,



**Fig. 4:** Distribution of the malignancy according to the site



**Fig. 5:** Distribution of cases of oral malignancy according to years of diagnosis

**Table 1:** Time trend of incident oral malignancy in Basrah over the years 2005-2017

Year	Total population	No. of new cases	IR/100000
2005	2 173 197	15	0.69
2006	2 201 313	20	0.91
2007	2 267 352	21	0.93
2008	2 335 373	29	1.24
2009	2 405 434	35	1.46
2010	2 467 531	35	1.42
2011	2 531 997	42	1.66
2012	2 602 983	10	0.38
2013	2 675 774	19	0.71
2014	2 750 696	20	0.73
2015	2 827 715	21	0.74
2016	2 906 891	23	0.79
2017	3 071 956	14	0.45
Mid period population, number of cases and average IR/100000	2 531 997	23.4	0.92

incidence rate and burden on the health care system.<sup>4-6</sup>

Most of the oral malignancy in this study was squamous cell carcinoma, like other going before researches, squamous cell carcinoma was the most widely recognized malignancy. A great variation is reported in the mix of various types of malignancies among various studies<sup>2,3,7-13</sup> in regard to the mix itself and/or in relation to sex.

As per the site, the research demonstrated the tongue as the most frequent site for an oral malignant growth in Basrah followed by buccal mucosa, a result which is consistent with

to the pattern in European and the US populaces,<sup>2,14</sup> but disagree with a study in Sulaimani<sup>8</sup> that showed the lip as the first then the tongue. While the investigations among Asian populaces uncovered that the most widely recognized site is Buccal mucosa because of betel quid/tobacco biting habits.<sup>14</sup> Remarkably, the gingiva and alveolus were the most ordinarily influenced locales among patients from the Southwestern district of Saudi Arabia (to be specific, Jizan and Najran).<sup>15</sup> Besides, in Sudan, a high introduction of cancer that surpassed one anatomical region to attack the nearby one was observed.<sup>16</sup>

As per the age distribution, just 7.2% of malignancy happened in persons aged less than 30 years. The event of oral squamous cell carcinoma is uncommon among youthful people. The peak beginning of oral malignancy starts from the sixth decade onwards. This outcome might be perceived because of versatile resistant reactions in old people,<sup>10-12,15,16</sup> and extensive stretch of exposure to various cancer-causing agents, for example, synthetic compounds, radiation and infections which are significant hazard factors causes oral malignancy.<sup>3,8-10,17,18</sup> Alcohol consumption is viewed as a hazard factor for oral malignancy with cigarette smoking in Iraq, Libya and Egypt,<sup>2</sup> Utilization of Shamma and Qat were identified with the expanded danger of oral malignancy in Saudi Arabia and Yemen,<sup>12,13</sup> but these are not prevailing in Basrah.

In Basrah an expanded danger of malignancy as an impression of expanded presentation to different hazard factors, for example, way of life changes, the aftermaths of different wars contamination and financial assents and different exposures are likely to be all operating to enhance the risk of malignant diseases.<sup>19</sup>

Most investigations don't record oral malignant growth like the investigation of disease in Basrah in a seven-year exertion throughout the years 2005-2011 made by the Basrah Cancer Research Group (BCRG) brought about enrolling an aggregate of 17080 new cases. Likewise Iraqi Cancer Board in Ministry Of Health every year distributed detailed measurable information of malignancy in Iraq, this incorporates the most widely recognized ten malignant diseases and appropriation of all tumours in various governorates and ages and genders with little data of oral malignancies.<sup>19,20</sup> Concentrate International Agency for Research on Cancer/WHO in Iraq record just 0.98% of oral malignancy among 25.320 diseases recorded in 2018.<sup>21</sup> In this investigation oral malignant growth recorded was 304 case, among them 209 cases recorded by Iraqi Cancer Registry in Basrah, that's means around 95 cases recorded from the different other sources. The implication is that official cancer registries are still lagging behind complete coverage of case detection and registration. In this context, our results support the conclusions stated by Al-Hilfe and Habib in 2016 when they reported an under-registration of around one-fifth of the incident cancer cases in Basrah.<sup>22</sup>

Certainly, under-registration as well as expanding the scope of Iraqi Cancer Board are significant future challenges facing this institution.<sup>23</sup>

## 5. Conclusion

No solid evidence exists regarding the incidence of oral malignancy in Basrah governorate and the present information not very identical with the Iraqi cancer registry, this registry must include more information about the risk factor, address, habits, economic, treatment pattern and mortality to all types of malignancies included oral malignancy on each province. High-quality, accurate data based oral malignant registries, with accurate mortality statistics, serve to limit the unreported and undiagnosed oral malignancy cases and help better guides health policy pioneers in building up proper diagnostic, treatment and preventive services all through Iraq. Ministry of Health in Iraq must search for a system to confirm the medical conditions that its patients wish to receive treatment outside the country and the reasons for which the patient desires treatment abroad and try to find solutions to a healthy reality appropriate for the Iraqi people.

## 6. Source of Funding

None.

## 7. Conflict of Interest

None.

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