

# Current panorama of oral cancer in the northeast region of Brazil: from 2015 to 2020

Panorama atual do câncer de boca na região nordeste do Brasil: de 2015 a 2020

Panorama actual del cáncer bucal en la región nordeste de Brasil: de 2015 a 2020

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## REVISA

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### RESUMO

**Objetivo:** descrever o panorama atual do câncer de boca na região Nordeste, com ênfase na taxa de mortalidade entre homens e mulheres, no período de 2015 a 2020. **Método:** Trata-se de um estudo descritivo, retrospectivo, que analisou os dados nos anos de 2015 a 2020 no site DATASUS (TABNET). **Resultados:** Foi observada uma maior prevalência em homens e ainda assim um leve crescimento de casos entre mulheres as quais possuem atualmente um maior contato com os fatores de riscos. **Conclusão:** O estudo verificou que o câncer de boca é mais incidente em homens do que em mulheres, tanto no Brasil (com diferença entre homens e mulheres de 11.363 casos), como no Nordeste (com diferença de 2.363 casos). As taxas de mortalidade vêm diminuindo no gênero masculino e feminino, no Brasil e no Nordeste (principalmente entre os anos de 2019 e 2020). **Descritores:** Câncer Bucal; Neoplasia; Mortalidade.

### ABSTRACT

**Objective:** to describe the current panorama of oral cancer in the Northeast region, with emphasis on the mortality rate between men and women, from 2015 to 2020. **Method:** This is a descriptive, retrospective study, which analyzed data over the years from 2015 to 2020 on the DATASUS website (TABNET). **Results:** A higher prevalence was observed in men and yet a slight increase in cases among women, who currently have greater contact with risk factors. **Conclusion:** The study found that oral cancer is more common in men than in women, both in Brazil (with a difference between men and women of 11,363 cases) and in the Northeast (with a difference of 2,363 cases). Mortality rates have been decreasing in males and females, in Brazil and in the Northeast (mainly between 2019 and 2020). **Descriptors:** Oral Cancer; Neoplasia; Mortality.

### RESUMEN

**Objetivo:** describir el panorama actual del cáncer oral en la región Nordeste, con énfasis en la tasa de mortalidad entre hombres y mujeres, de 2015 a 2020. **Método:** se trata de un estudio descriptivo, retrospectivo, que analizó datos a lo largo de los años de 2015 a 2020 en el sitio web de DATASUS (TABNET). **Resultados:** Se observó una mayor prevalencia en hombres y, sin embargo, un ligero aumento de casos en mujeres, quienes actualmente tienen mayor contacto con factores de riesgo. **Conclusión:** El estudio encontró que el cáncer oral es más común en hombres que en mujeres, tanto en Brasil (con una diferencia entre hombres y mujeres de 11.363 casos) como en el Nordeste (con una diferencia de 2.363 casos). Las tasas de mortalidad han ido disminuyendo en hombres y mujeres, en Brasil y en el Nordeste (principalmente entre 2019 y 2020). **Descritores:** Cáncer Bucal; Neoplasia; Mortalidad.

## Introduction

Cancer is a disease that affects the population in different regions of the body. Head and neck cancer, for example, is characterized as a malignant neoplasm that affects structures of the oral cavity, such as the larynx, pharynx, lips and tongue.<sup>1</sup> The mortality rates of oropharyngeal cancer have been growing over the years, due to the lack of knowledge on the subject, especially by the population that has little or no access to information on the subject. The most common cancer, found in 90% of cases, is squamous cell carcinoma (SCC), which mostly affects men over 40 years of age, when diagnosed are usually in more advanced stages.<sup>2,3</sup>

Annually more than 300,000 cases of oral cancer are diagnosed worldwide, of these, around 130,000 die every year, for presenting alarming data is considered a global health problem.<sup>4</sup> Trazendo esse número para o Brasil, estimou - se que a incidência de neoplasias malignas na cavidade bucal é de cerca de 3.300 novos casos somente no Nordeste, configurando ainda que 2.180 desses casos acometem homens e 1.200 em mulheres<sup>5</sup>.

The oral cavity because it is a place of easy access for both the patient and the dental surgeons, oral cancer should be the easiest to be diagnosed, for a correct early treatment. Although this is not the most common scenario, since the initial stage of the disease goes unnoticed while in more advanced cases they present more visible signs and often without adequate treatment condition. Therefore, the training of the dentist can be collaborative with the fact that more and more a restorative and/or curative oral health is promoted instead of a training that encourages the promotion and prevention of oral health.<sup>6</sup>

Some factors significantly increase the risk of developing oral cancer, namely: smoking, responsible for increasing by twenty times the risk of developing neoplasia, alcohol that acts as a triggering factor in the emergence of various cancers, the diet that once poor in essential nutrients, increase the risk of development linked to a low immunity, as well as genetic predisposition, immunosuppression and infections.<sup>7,8</sup>

According to Cartaxo<sup>9</sup>, another relevant factor for the development of oral cancer, in addition to those mentioned, is exposure to solar radiation, being one of the main causes allied to a low quality of life and socioeconomic status. The authors state that the Northeast region, especially the region of the state of Rio Grande do Norte, where the rates of workers with frequent sun exposure are higher, the rates of oral cancer should be better studied.<sup>9</sup>

In view of the high prevalence of oral cancer in Brazil, the impact of this neoplasm on the Unified Health System and the importance of the theme in the social and scientific fields, the objective of this study was to describe the current panorama of oral cancer in the Northeast region, with emphasis on the mortality rate among men and women, in the period from 2015 to 2020.

## Method

This is a retrospective, descriptive study with a quantitative approach, which analyzed secondary data referring to the period between the years 2015 and 2020. In the retrospective study, the researcher collects the previous information of the factors and exposures, and follows them for a period. This type of study ensures that the measures of causal factors were not influenced by the knowledge that individuals obtained about the pathology researched, and minimizes the potential for bias or bias, since all individuals surveyed come from the same population.<sup>10</sup>

The quantitative approach is defined as objective, and seeks to describe meanings that are considered as inherent to objects and acts. It has a focused, punctual and structured approach, using quantitative data.<sup>10</sup>

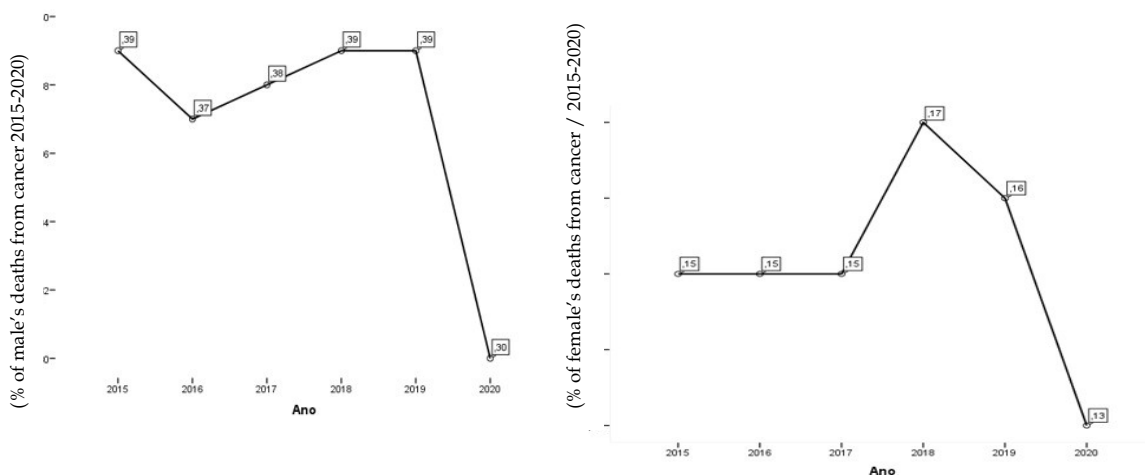
Data such as: gender, referring to all patients, identified according to the ICD-10 (C 00 to C06), in the period from 2015 to 2020, were included on the DATA SUS website.

All data has been collected and is available on the Website: <https://mortalidade.inca.gov.br/MortalidadeWeb/pages/Modelo03/consultar.xhtml> ; when entering the DATASUS11 website in the TABNET area, there will be a "Vital Statistics" tab where you will have Cancer (Inca site) from where the data for the study were collected. According to the International Classification of Diseases (ICD-10), all dental reasons (C00 to C06) were used in the research. Data collection took place in the month of September 2022. For this collection, the variable included was: gender (female, male).

## Results

The analysis and interpretation of the data obtained from this study showed that the total number of deaths in men is more prevalent than in women in Brazil. Although the number of deaths of men is higher than in women, both variants suffered falls, in men a decrease of 0.09 and in women a decrease of 0.03, between the years 2019 and 2020 in Brazil (Figures I and II).

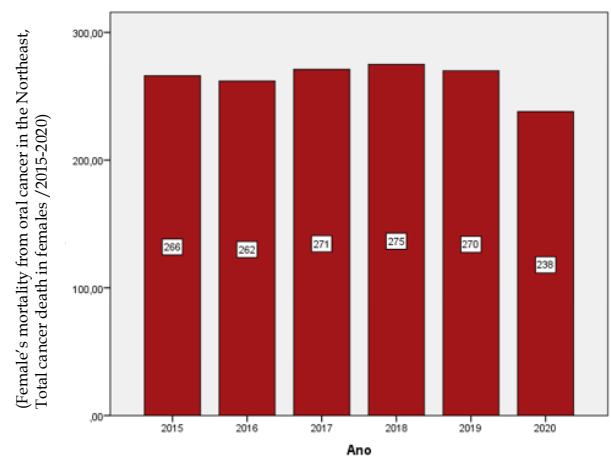
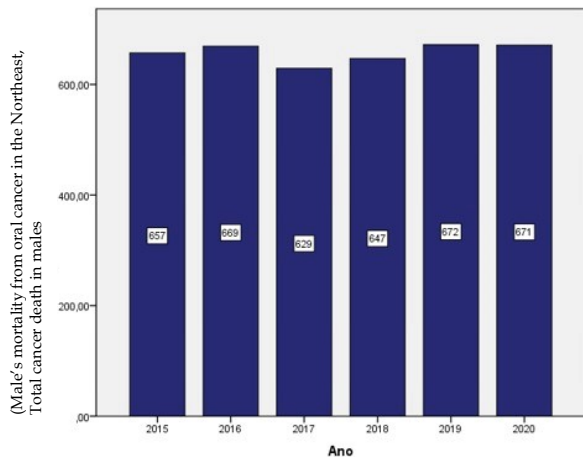
**Figures 1 and 2-** Percentage of deaths from oral cancer in Brazil, among men and women, in the years 2015 to 2020.



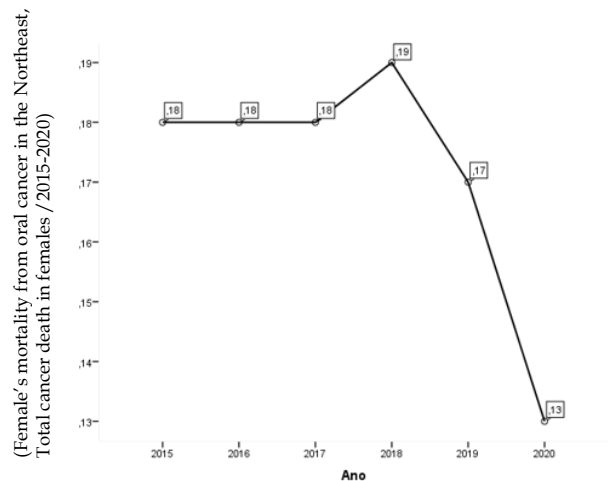
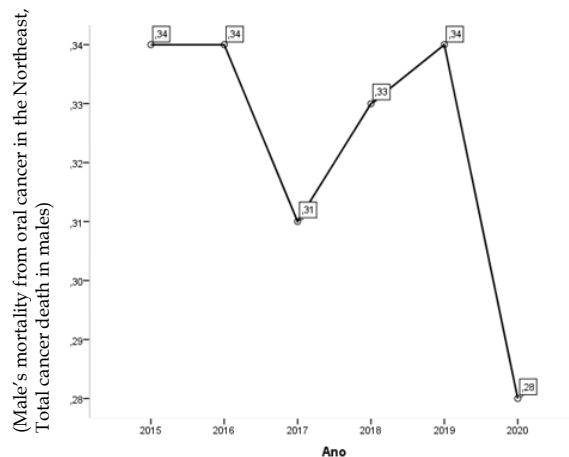
When it comes to the Northeast, it is noticed that the total number of deaths is more prevalent in men than in women, with a significant difference of 58,505 thousand only in the year 2020.

It is verified that the mortality rates from oral cancer are higher in men than in women, having a difference of 433 in the year 2020, in the Northeast (Figures 3 and 4).

**Figures 3 and 4-** Deaths from oral cancer in the Northeast, among men and women, between the years 2015 and 2020.



It is noteworthy that there is a decrease of 0.06 between the years 2019 and 2020 in the rates of deaths from oral cancer in men and a decrease also in deaths among women of 0.04, however the number of deaths in men is higher than in women (Figures 5 and 6).



## Discussion

In the present study, it was observed that oral cancer mortality decreased between the years 2019 and 2020 in both sexes, although males have higher rates for oral cancer compared to females, which may be related to lifestyle, since men have more habits of elitism, smokers and go to the dentist less. However, Oral Squamous Cell Carcinoma (SCC) has been growing among women, as they are increasingly having drinking and smoking habits.<sup>12</sup>

Although it is also perceived that the total population has increased and the number of cases of oral cancer has decreased significantly, which leads us to assume that the decrease is due to the fact that in the years 2019 to 2022 the world has experienced the pandemic, and consequently has undergone some changes in data collection. Since it was not possible to carry it out, although much was tried, there was a blackout of the data which we can verify in some news. The attacks were suffered in January and February and again in October 2021, the latest of a total of seven attacks since the start of the pandemic.<sup>13</sup>

The Coronavirus (COVI-19) pandemic has prevented oral cancer cases from being discovered early on, or treatments from being initiated, as dental care is being done only for urgency and emergency, hospitals with their high demands are giving priority to COVID-19 cases. Several areas of society have been forced to stop their activity this has brought and will still bring many impacts on the health system, since patients who were not diagnosed early in the disease, probably will not have a good prognosis.<sup>14</sup>

Authors corroborate the idea that increasingly the easy access, to the risk factors of oral cancer such as the consumption of alcohol and tobacco, brought as a burden the significant increase among women, even though the numbers bring men as the majority in cases of mortality.<sup>12</sup>

The highest suspicion to explain the discrepancy between men and women is exposure to these factors. As tobacco use in Brazil is higher in men than in women.<sup>15</sup>

Exposure to protective factors can also be considered, since men seek health services less frequently. Periodic consultation has been shown to be an important factor in timely diagnosing precancerous lesions and, therefore, avoiding death from the disease.<sup>16</sup> It is known that the Brazilian Northeast has agriculture and livestock as its main activity, cultural, behavioral, social and economic issues are directly related to the adoption of risk behaviors that influence oral cancer.<sup>17</sup>

We can take into account that little or almost nothing is reproduced about sun protection habits for lips, especially for those who have a continuous exposure under the sun. Although it is common to use props for the purpose of solar barriers, it is unusual to have on the agenda the protection of the lips.<sup>17</sup>

According to Cartaxo et al.<sup>9</sup>, rural workers in the Northeast have little or no knowledge about oral cancer, what are its risk factors, how to prevent it, do not know how to identify the neoplasm early on and go little to the dental office, thus hindering a good prognosis of the disease, since they are a population at risk for the disease.

It is also noteworthy that other factors generate a higher risk for oral cancer such as tobacco use, alcohol intake among other factors such as HPV infection and unhealthy diet.<sup>17</sup>

Smokers can develop mouth ulcers, although transient, allow more direct contact of tobacco carcinogens, favoring deeper and more extensive aggressions on the entire mucosa. Therefore, there is a higher risk of mouth cancer among smokers who use poorly fitting prostheses or who have other conditions that lead them to have ulcers on the oral mucosa.<sup>5</sup>

Studies point out that the consumption of alcoholic beverages increases about 9 times the risk of mouth cancer, when it is associated with smoking this risk becomes 35 times higher. Thus, excessive alcohol consumption is attributed

to 2 to 4% of cancer deaths and, more specifically, 50 to 70% of all deaths from cancer of the tongue, oral cavity, pharynx and esophagus.<sup>18-20</sup>

Because of this fact and corroborating with Perea et al.<sup>21</sup>, their study demonstrated that mortality in men in southeastern Brazil is five times higher than in females, comparing with the study of this study that the mortality of men is also higher than in women, in the Northeast region.

The study by Perez et al.<sup>22</sup> showed that there is a predominance of oral cancer in males, having a ratio of 5:1, thus going against the results of the present study having a ratio of 3:1.

Cunha et al.<sup>23</sup> identified that there was an increase in the numbers of mortality from oral cancer in the period from 2010 to 2019 in the Federal District, with higher mortality in males than in females. This is different from the present study, since the rates of deaths from oral cancer have been decreasing in the Northeast. High-risk populations should be targeted by educational and screening programs. Therefore, the establishment of these programs and measures can make all the difference in the lives of patients with oral cancer and reduce the risks of developing secondary tumors.<sup>24</sup>

Mendes<sup>25</sup> points out that an organized health care network, with well-defined flows and well-articulated actions, can contribute to the correct direction of the individual to the service they really need, in addition to reducing the waiting time at all stages of their therapeutic journey, leading to a good prognosis of the disease.

## Final Considerations

The study found that oral cancer is more prevalent in men than in women, both in Brazil (with a difference between men and women of 11,363 cases) and in the Northeast (with a difference of 2,363 cases). Mortality rates have been decreasing in males and females in Brazil and the Northeast (mainly between 2019 and 2020).

More research is needed on the subject, considering that oral cancer is one of the tumor types that most leads to death in Brazil and in the world. Further studies should be conducted, especially after the release of the 2021 and 2022 data, to know what are the new parameters of the disease in Brazil as a whole and in its regions.

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