# EPIDEMIOLOGICAL AND OBSERVATIONAL STUDY OF NEOPLASTIC PATIENTS TREATED AT THE CANCER HOSPITAL OF RIO VERDE-GOIÁS

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**ABSTRACT**

The number of cancer cases has increased considerably worldwide, especially since the last century, and is now one of the most important public health problems. Thus, it is necessary to collect epidemiological data regarding the profile of cancer patients users of the Rio Verde Cancer Hospital, with the aim of providing a knowledge, both for academics and the hospital itself, about the characteristics of the users, in order to finally identify possible failures in primary care and in the screening of certain types of neoplasms. This study aimed to describe the epidemiological profile of cancer patients attended by the Rio Verde Cancer Hospital in Goiás. The population of the study was the patients with positive history for cancer hospitalized in the Cancer Hospital of Rio Verde-GO, who had their medical records analyzed. A total of 1174 medical records were analyzed, of which 101 had patients diagnosed with some form of cancer (8.60%); 63 patients were women (62.37%) and 38 were men (37.62%). Regarding the origin, 92 patients were from Rio Verde (91.08%); With regard to schooling, 30 patients have completed elementary education (29.70%); 49 patients were married (48.51%) and the most common cancer was skin cancer, with 64 cases (63.36%). Cancer is an important public health problem and in order to face the difficulties arising from it, it is necessary to know it and to know how much this disease affects the population, in order to create measures to mitigate the damages caused by the disease.

**Citation: Jordana Gaudie Gurian, Danielly Martins Flores, Larissa Martins Flores** *et al.* **2019.** "Epidemiological and observational study of neoplastic patients treated at the cancer hospital of rio verde-goiás", *International Journal of Development Research*, 09, (11), 31512-31515.

## INTRODUCTION

Neoplasms have been growing worldwide and are the second leading cause of death in most countries and are one of the most important public health problems worldwide (WHO, 2019). It is a disease of multiple causes, such as environmental, cultural, socioeconomic factors, lifestyles or customs, with emphasis on: smoking habits, eating habits, genetic factors and the aging process itself (Dolan, 2019). The frequency of distribution of different types of Cancer is variable according to the characteristics of each region, which emphasizes the need to study geographic variations in the patterns of this disease for its proper monitoring and control (Dolan et al., 2019).

It is noteworthy that in Rio Verde there is the Cancer Hospital that operates on an outpatient basis and focuses on the prevention and diagnosis of cancer cases. According to estimates, about 60% of care is provided by the Unified Health System (SUS) and 40% is provided by Unimed and Pax Rio Verde health plans. As it is an outpatient hospital, it must have an infrastructure with offices, has four operating rooms and has no beds. The Rio Verde Cancer Hospital promotes several Cancer Prevention and Fight Campaigns, these campaigns aim to prevent cervical cancer, breast cancer, and prostate cancer, serving the population of the municipality of Rio Verde and districts. More severe cases of the disease are diagnosed and referred to referral centers for cancer treatment, such as Cancer Hospital in Goiânia and Barretos - SP. In this context, it is

necessary to survey epidemiological data regarding the profile of cancer patients who use the Rio Verde Cancer Hospital, in order to enable knowledge, both for academics and for the hospital itself, about the characteristics finally identify possible failures in primary care and screening for certain types of cancer. Studies show that around 12.7 million cases worldwide and 7.6 million deaths from malignant neoplasms occur every year (Dolan et al., 2019 and Sakaguchi, 2019). It is estimated that over 25 million people have been living with cancer diagnosed for at least five years (Oliveira, 2015 and Guerra, 2005). It is predicted that by 2030, if the same conditions are maintained, there will be 20 million new cases of cancer and 13 million deaths (almost double the estimated for 2008), largely in developing countries (INCA, 2012). These data show the cancer morbidity and mortality profile, which tends to undergo a large increase over the years. This condition will occur as a consequence of the many precipitating factors found in modern society, such as inadequate diet, exposure to carcinogens in the workplace, and demonstrating an inefficiency and inefficiency of cancer prevention and control systems, requiring a high demand for cancer, investment, prevention and assistance policies (Saúde, 2014). It is known that in undeveloped countries there is greater involvement of the population due to infectious diseases, while in developed and developing countries there is a predominance of cancer diseases. Since Brazil is a developing country, cancer incidence, mortality and morbidity rates are expected to increase progressively (Imanichi, 2007), where population aging occurs rapidly and late, which also contributes to cancer mortality similarities to cancer from developed countries. Brazil faces a major problem related to statistics and the reliability of information regarding the population's health conditions. This is a result of structural and informational problems that do not facilitate the registration, notification of the disease and later statistical analysis (WHO, 2019). Thus, this work will contribute not only to the education of academics but at the same time, will help the city and hospital where the research was conducted, as there is a lack of data on the incidence and epidemiological profile of cancer patients in the region. Rio Verde city. By discovering the epidemiological profile of these patients, it will be easier to propose ways to prevent and intervene in the reality in which the municipality is. Once the most prevalent characteristics in cancer patients have been traced, it will be possible to determine the population subgroups that deserve greater attention from municipal public policies and medical academics and other health-related courses. Thus, the objective of this study was to describe the epidemiological profile of cancer patients treated at the Cancer Hospital of Rio Verde-Goiás.

## MATERIALS AND METHODS

**Study Design:** The research is of mixed type, that is, a bibliographic survey was carried out, using material published in scientific articles and statistical data about cancer, in the virtual libraries Pubmed, Scielo, LILACS, and Cochrane. In addition, medical records were collected to determine the incidence and prevalence of cancers in Rio Verde, as well as to determine the epidemiological profile of cancer users at the Rio Verde Cancer Hospital, with subsequent statistical analysis of the results obtained.

**Participants:** The research population was the patients with positive history for cancer hospitalized at the Cancer Hospital of Rio Verde-GO, whose records were analyzed. The sample consists of medical records of patients from the Cancer Hospital of Rio Verde-GO who had some type of cancer from 2013 to 2015.We included all individuals regardless of age, gender, place of residence and origin who were treated at the Cancer Hospital of Rio Verde from January 2013 until December 2015. We excluded individuals who were not diagnosed with any of them. type of cancer.

**Ethical Aspects:** Obeying the norms of Resolution 466/12 of the National Health Council (CNS) this project was submitted to the Research Ethics Committee (CEP) of UniRV which was approved with the protocol 1.588.968. It was also requested the authorization of the coordinator of the nursing service, who is the technical responsible of the nursing part for the Cancer Hospital of Rio Verde-GO.

### Data analysis

All collected data were organized in a spreadsheet and then the descriptive statistical analysis of the results obtained through the Microsoft Excel 2016® program was performed.

## RESULTS AND DISCUSSION

We analyzed 1174 medical records, of which 101 had patients diagnosed with some type of cancer, which corresponds to 8.60% of our sample; 1073 records showed no diagnosis or reference to patient portability of cancer, which means that 91.39% of the sample had no cancer. Among the patients with medical records diagnosed with malignant neoplasia, 63 were women (62.37%) and 38 were men (37.62%). The minimum age found was 20 years and the maximum was 91 years. It is noteworthy that women tend to report morbidities that they present more easily than men, as well as seeking more health services, with consequent timely diagnosis and treatment (Figueiredo, 2011). Regarding origin, 92 patients were from Rio Verde (91.08%), 3 from Quirinópolis (2.97%), 2 from Acreúna (1.98%), 1 from Cachoeira Alta (0.99%), 1 Montividiu (0.99%), 1 from Saint Helena (0.99%) and 1 from Santo Antônio da Barra (0.99%). Regarding the education level of cancer patients, 30 patients have completed elementary school (29.70%), 24 incomplete elementary school (23.76%), 5 completed high school (4.95%), 4 incomplete high school (3.96%), 3 complete higher education (2.97%), 1 incomplete higher education (0.99%), 5 illiterate (4.95%) and 29 medical records did not contain this information (28.71 %). It was verified that the lack of studies of Brazilians is strictly related to the incidence of cancer in the population. This social class is often disenfranchised from information sought in advanced medical care. Studies have shown that there is a higher frequency of cancer in less educated segments [10], like those observed in this study reveal social inequality in the presence of chronic diseases. The cancers found were: 64 skin cancers (63.36%), 16 cervical cancers (15.84%), 11 breast cancers (10.89%), 4 ovarian cancers (3.96%), 3 cases of rectal cancer (2.97%), 2 cases of uterine cancer (1.98%) and 1 case of prostate cancer (0.99%). The tropical climate is present in most of the state of Goiás, mainly in the city of Rio Verde which is located in the central west region of the country [11], a mesoregion that features dry winters and rainy summers, with high temperatures mainly in the spring and summer, reaching a thermal average of 30 ° C in August and September. Studies show that countries close to the equator line suffer greater solar radiation and, consequently, their population is more predisposed to skin cancer (Imanichi,

2017). These data confirm the population's predisposition to the damage suffered by chronic sun exposure. In addition, the prevalence of cervical cancer corresponds to the difficulty of early diagnosis of preneoplastic lesions, lack of greater incentive and clarification by the public health about HPV, its pathological consequences and its risk factors (Carvalho, 2015). Women infected with human papillomavirus (HPV) near-sexual initiation are more likely to develop this cancer early. In the present study, the third most prevalent cancer in the population was breast cancer. It is one of the main women's public health problems, and stands out for its high incidence and high mortality rates, especially in underdeveloped countries, such as Brazil14.

This increase comes from the interaction of genetic factors and current lifestyles, mainly related to the increase of risk factors as new reproductive habits of contemporary women. The causes of cancer are varied and may be external or internal to the organism, both being interrelated. External causes relate to the environment and the habits or customs of a social and cultural environment. Internal causes are often genetically predetermined and are linked to the body's ability to defend itself against external aggressions. These causal factors may interact in various ways, increasing the likelihood of malignant transformations in normal cells (INCA, 2016). Of all cases, 80% to 90% of cancers are associated with environmental factors. Some of them are well known: cigarettes can cause lung cancer, overexposure to the sun can cause skin cancer, and some viruses can cause leukemia. Others are under study, such as some components of the food we eat, and many are still completely unknown (INCA, 2016). This statement is well evidenced in our research, since the most common cancer was skin cancer, as we live in a region of high temperatures and sun exposure throughout the year, which culminates in saying that the environmental factor is being determinant for the emergence of new cancer cases in our region. In addition, it is also important to emphasize the importance of occupational factors such as exposure to soot; arsenic and its compounds (used in wood preservation, pesticide formulation, metallurgy, etc.); coal tar (tar); mineral oils (industrial, untreated or poorly treated); and shale oils (used by the petrochemical industry) (INSTITUTO NACIONAL DE CÂNCER JOSÉ ALENCAR GOMES DA SILVA, 2018), as they are agents that modify the course, severity and appearance of the disease, and have a significant impact on the incidence of cancers in society (Fayer, 2014). Thus, it is notorious the application of preventive measures aimed at the female public, as they are the main portion affected by the two most prevalent types of cancer in the Rio de Verde region, according to this research. Therefore, in order to reduce the high incidence of these two main types of cancer, the following measures should be taken: with regard to breast cancer, early diagnosis should be made, as it may result in a decrease in mortality and minimize the diseases resulting from this disease. Parallel to this, cervical cancer can be prevented by screening, using the Pap smear offered by the public health system and performed annually, it is noted that when identified and treated, in most cases, it presents good resolubility, evolving to healing. Thus, there is the importance of implementing prevention programs to have effective control in reducing this prevalent cancer in women.

## Conclusion

With this work, it was possible to evaluate that the Cancer Hospital of Rio Verde treats a large number of referred patients, from different regions, with some suspicion of malignant neoplasia. The profile of cancer patients most found in this research was: female, coming from Rio Verde-GO, with complete elementary school and the most found cancer was skin. Regarding the most prevalent types of cancer evidenced in this study, it was observed that skin cancer is the most prevalent, mainly due to the high incidence of sun rays throughout the year in the region, thus, there is a great need for awareness about its importance and the use of photoprotection. It was also observed that the second and third most prevalent types of cancer were respectively cervical cancer and breast cancer, with a higher incidence in the female population. It is also very important to adopt healthy lifestyle habits, such as avoiding exposure to risk factors, some of them being smoking, unhealthy eating, and physical inactivity. This may contribute to the prevention of cancer occurrence, increasing survival and thus improving the quality of life. Thus, the information on the epidemiological profile of cancer patients treated at the Cancer Hospital of Rio Verde presented in this study contributed to health surveillance, since the effective promotion of health can achieve greater control of the disease, increasing the early diagnosis, and consequently reducing mortality.

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