

Profile of oncology patient care at a regional emergency hospital reference unit in the interior of Rio Grande do Sul, Brazil

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Abstract

In the context of oncological disease, the patient's hospitalization needs to be optimized, aiming to alleviate the suffering of patients and family members. It is necessary to know the profile of the patients who access the service, mainly by emergency services. The aim of the study was to identify the profile of patients undergoing cancer treatment and the emergencies that affect them. This was a quantitative, retrospective, longitudinal, observational cohort study, analyzing data from medical records and hospital cancer records in 2017. 1635 patients were included, predominantly aged between 60 to 69 (27.3%) years, 852 (52.1 %) were male, 1542 (94.1%) of were white, 463 (28.3%) had a family history of cancer, and there was a median of 29 days to start post-diagnosis treatment. The typology with the highest incidence was other malignant neoplasms of the skin (n=538; 32.9%), and the location of the first metastasis in the liver (n=47; 2.8%). The patients admitted via emergency services were separated, resulting in 450 (27.5%) patients, with a mean age of 60.5 years, 240 (53.3%) were males and 239 (53.1%) were smokers and ex-smokers. 446 (99.11%) patients were admitted and four (0.88%) were referred to the outpatient clinic. Of the hospitalized patients, 337 (74.90%) were discharged from the hospital and 113 (25.10%) died. Abdominal pain appeared in 111 (24.6%) and tumor lysis syndrome was the main oncological emergency in 182 (40.4%) cases. Knowing the profile of cancer patients and their emergencies contribute to the understanding of the risks of the clinical manifestation, helping health professionals and improving the care provided.

Keywords: Oncology. Emergencies. Health Profile. Health. Cancer.

INTRODUCTION

Oncology comprises the specialty dedicated to the study of cancer and aspects of the development of pathology in the body¹. The treatment occurs mainly through two types: clinical, which acts fundamentally with the use of radiotherapy and chemotherapy, and surgical, acting on the removal of the neoplasm from the body. Oncological therapies occur with a curative, palliative or adjuvant perspective, which are related to the best results in healing, survival and quality of life, when an association of different

therapeutic modalities is performed².

An estimated 27 million incident cases and 12.6 million deaths from the disease, worldwide, are predicted by the year 2030. Moreover, they are the most relevant cause of mortality in developed and developing countries, in addition to representing around 12% of all causes of death in the world³. Regarding the distribution by sex, there will be a slight predominance of males, both in incidence and in mortality^{4,5}.

According to an estimate of incidence in

DOI: 10.15343/0104-7809.202044193206

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Brazil, with the exception of non-melanoma skin cancer, the types of cancer that will be among the most common in men will be prostate (31.7%), lung (8.7%), intestine (8.1%), stomach (6.3%) and oral cavity (5.2%) cancers, and in women, breast (29.5%), intestine (9.4%), cervix (8.1%), lung (6.2%) and thyroid (4.0%) cancers¹.

In Brazil, it was estimated that, in the 2018-2019 biennium, there would be 600 thousand new cases of cancer for each year and that the distribution by geographic region shows that the South and Southeast concentrated 70% of the cases, and the Southeastern region concentrates almost half of this incidence¹. However, there was a great variation in the magnitude and types of cancer between the different regions of Brazil, for example, in the Southern and Southeastern regions, the pattern of incidence shows a predominance of prostate and female breast cancers, as well as lung and intestinal cancers. Meanwhile, the Center-Western region, although similar, incorporates cervical and stomach cancers among the most prevalent in its profile. In the Northern (the only one in the country where the rates of breast and cervical cancers of the uterus were equivalent among women) and the Northeastern regions, although they also report prostate and female breast cancers among the main types, the incidence of cervical and stomach cancers has an important impact in this population¹.

Cancer, after cardiovascular disease, is the second leading cause of death in the world according to the World Health Organization³. However, with the quantitative demographic leap, it is estimated that in a few years, the incidence of oncological diseases will outweigh cardiovascular diseases, becoming the main cause of death and one of the related factors, would be the growth of the elderly population, in contrast the reduction in the incidence of infectious disease deaths and infant mortality. This fact will contribute

to new cases and consequent side effects of the treatments used⁶.

Thus, the high number of hospitalizations of cancer patients in hospital emergencies rooms is alarming. The development of therapeutic strategies and prolonging the life of patients undergoing cancer treatments corroborate the fact that these patients may present sudden symptoms, the result of an unfavorable evolution of the disease, which can develop over time, leading in some cases to sudden death⁷.

Contextualizing, still in Brazil, the fragility regarding the resolution of primary care and the easier process of access to services of high complexity and hospitalization, makes urgent and emergency care work the first entry to health services⁸. Urgent and emergency hospital care is increasingly sought by patients, as they know that this alternative is more resolute and quick, having in these scenarios, various services and resources available, such as: medical consultations, multiprofessional care, exams, medications and hospitalizations⁹.

In urgent and emergency services, there are clinical or surgical services, which serve cardiovascular, cardiorespiratory, cerebrovascular diseases, polytrauma and oncological diseases, which are the main reasons for seeking acute pain care; followed by respiratory problems, trauma and malaise¹⁰. In this reality, oncological diseases point to great increases and advances in therapies culminating in better rates in the life expectancy of patients undergoing cancer treatment. However, this associates them with a greater exposure to risk factors, which can result in an increase in the number of oncological emergencies throughout the treatment process¹¹.

Oncological emergency is any acute event that develops directly or indirectly due to the tumor in a cancer patient, imminently threatening their life, and the main

oncological emergencies can be classified as hematological (febrile neutropenia), metabolic (hypercalcemia, inadequate syndrome excretion of antidiuretic hormone), structural (spinal cord, compression of peripheral nerves, malignant pericardial effusion and occlusion of a large vessel or infiltration) or side effects of chemotherapeutic agents (diarrhea, extravasation)¹². Most emergencies are diagnosed based on clinical, laboratory and radiological findings¹¹.

Oncological emergencies, in most cases, endanger the lives of critically ill patients. With a view to reducing their negative effects on the quality of life and survival, it is essential to understand these emerging syndromes in patients undergoing cancer treatment, in the sense of early diagnosis. Also, having a careful evaluation is essential in each manifestation of emergencies of the disease the patient's symptoms, monitoring parameters and the conditions for a correct identification that allows a medical and therapeutic diagnosis, which can contribute to the planning and effectiveness of supportive care and interventions against these conditions¹². When identified early, most emergencies can be properly treated^{12,13}.

Urgent and emergency services play a fundamental role in the effectiveness of restoring quality of life in this group of patients and are able to offer rapid diagnosis and appropriate treatment. In addition, the patient's emotional and clinical instability tend to be part of the worsening phase and critical care of oncological disease, which can be represented by exacerbations of symptoms that worsen the quality of life, leading to a complex process of living, dying and death¹⁴.

In the phase in which the patient needs assistance in the hospital environment, it is recommended that they can be integrated and expanded beyond the biomedical perspective of care, aiming to alleviate the suffering of both patients and their families; especially since the hospital is, or it should

be, a place of reception that can end up being the "place of death" in many cases⁷. The importance of investments in training the teams is highlighted, with the purpose of organizing the assistance contemplated by a good reception and care based on targeted and individualized health care, and in order to have this, it is necessary to identify the profile of patients undergoing oncological treatments and the main care demands that oncological emergencies raise at the hospital entrance doors¹⁵.

In view of the specificities of care, knowing the characteristics of this population can contribute to the responsible and safe performance of care in different hospital units, particularly in the urgency and emergency units, with a view to offering patients and families, even within this troubled environment, an adequate experience¹⁶. As a hypothesis of this study, it was assumed that the occurrences of cancer found in the records of the Hospital de Clínicas de Passo Fundo differ little from the cases registered in other regions of the state and the country.

Given this context, the present study aimed to identify the profile of patients undergoing cancer treatment and the emergencies that affect them.

METHODOLOGY

The study complied with the rules and ethical guidelines set out in resolution 466/2012 of the National Health Council, being approved by the Research Ethics Committee of the University of Passo Fundo as under opinion No. 3.230.951 and by the Coordination of Teaching and Academic Research at Hospital de Clínicas.

This is a study conducted according to the longitudinal, observational, retrospective cohort model, of the quantitative type. Data

collection was performed on all electronic medical records of patients who were undergoing cancer treatment in the year 2017, since all data relating to these patients were systematized. The population was selected based on the information and elements available in the medical records, composing a non-probabilistic sample of the intentional type of 1635 medical records of individuals enrolled in the Hospital de Clínicas de Passo Fundo (HCPF) from January to December of that year.

The Hospital de Clínicas de Passo Fundo is one of the largest hospital complexes in the northern region of Rio Grande do Sul. It is a macro-regional reference center in the north of the state for the unified health system (SUS), comprising the 144 municipalities of the 6th, 11th, 15th and 19th Regional Health Coordinators, respectively, of the cities of Passo Fundo, Erechim, Palmeira das Missões and Frederico Westphalen. This hospital covers a population of approximately 1,158,000 inhabitants and is the standard example for performing highly complex procedures in Orthopedics and Traumatology, Neurosurgery, Kidney Replacement Therapy, Oncology and Hemodynamics. It offers an Oncology and Hematology Center with a specialized clinical staff, access to technologies and a complete structure for diagnosis, treatment and rehabilitation for patients with cancer and/or hematological diseases.

Medical records from the Medical Archive and Statistics Service (MASS) and Hospital Cancer Registry (HCR) were included in the study, diagnosed with neoplasia according to ICD 10, for the year 2017. As exclusion criteria,

incomplete medical records and medical records that have no conclusive diagnosis were not included in the study.

The information extracted from medical records and records was stratified and cataloged in a file (Excel) for data recording, created by the authors, using the following variables: year of diagnosis, age group, gender, skin color, family history of cancer, city of origin, location of the primary tumor, histological type, topography, metastatic occurrence, time between diagnosis and start of treatment. In this context, a cut was made, via registration number, of all patients who accessed the hospital through the emergency service, in order to deepen the theme of oncological emergencies. This sample totaled 450 records, which analyzed the variables of age, sex, smoking history, conduct after medical consultation, outcome of hospitalization, histological type correlating with deaths and smoking, signs and symptoms correlating with deaths and smoking, and oncological emergencies correlating with deaths.

Data analysis and processing were performed using the Statistical Package for the Social Sciences (SPSS) version 23.0 (SPSS Inc, Chicago, USA), considered significant when $p < 0.05$. Categorical variables were demonstrated by absolute frequencies and percentages. Continuous variables with normal distribution, presented as mean and standard deviation, and those without normal distribution, were displayed as median and interquartile range (IQ).

The Kruskal-Wallis test was used to verify the normality of the data. The level of significance considered was 5%; two-tailed.

RESULTS

In 2017, 1635 cancer patients were seen at the hospital, of which 852 (52.1%) were male, aged between 60 to 69 (27.3%) years and white (n=1542; 94.1%). Of the total population, 463 (28.3%) reported that they had a family history of cancer. The time from the first diagnosis to the start of treatment reached an average of 53 days. However, it should be noted that this average was high because there was a patient who took 793 days to start treatment, so the calculated median was 29 days, where with the first quartile was 11 days and the third quartile was 68 days, as shown in table 1.

Regarding the origin of the patients, the city of Passo Fundo had a higher incidence of cases, with 523 (32.0%) patients. The remaining 1112 (68.0%) patients were from other cities in the regional scope, as highlighted in Table 2.

The typological distribution covers other malignant skin neoplasms with 538 (32.9%) occurrences, followed by breast 219 (13.4%) and prostate 130 (8.0%) cancers with higher incidences, as shown in table 3.

The location of the first metastasis as shown in table 4, points to 188 (11.5%) cases, and metastases in the liver and intrahepatic bile ducts were more prevalent, representing 47 (2.8%) of the cases.

Table 5 shows the data from the emergency unit (EMU), in the year 2017. 450 cancer patients were admitted to this unit, identifying an average age of 60.5 years, of which 240 (53.3%) were males and 239 (53.1%) were smokers and ex-smokers.

Of the total number of patients admitted to the EMU, after medical consultation, 446 (99.1%) patients required hospitalization and four (0.8%) received referral to outpatient care.

Of the hospitalized patients, 337 (74.9%) were discharged from the hospital and 113 (25.1%) patients died.

The typological distribution in the EMU, as seen in Table 6, shows a higher incidence of malignant neoplasms of the bronchi and lungs (n=72; 16.0%), followed by skin (n=35; 7.8%) and colon (n=34; 7.6%).

Correlating the typology with the outcome of death, the malignant neoplasm of the bronchi and lungs (p=0.001), breast (p=0.005) and pancreas (p=0.034) presented significant results.

In relation to the association of cancer typology with smoking, there are significant correlations between the malignant neoplasm of the bronchi and lungs (p=0.001), breast (p=0.001), stomach (p=0.005) and the cervix (p=0.044).

Table 7 describes the signs and symptoms presented and referred to by patients in oncological emergencies and are correlated with smoking and death outcomes. Among the signs and symptoms, abdominal pain was reported in 111 (24.6%) of the cases, followed by loss of strength (n=90; 20.0%), dyspnea (n=84; 18.6%) and lowering of the senses (n=12; 2.7%), which showed a significant correlation (p < 0.05) with the occurrence of death. It was observed that the symptom of dyspnea (p=0.001), bleeding (p=0.011) and the occurrence of vomiting/ diarrhea/ nausea (p=0.040) were significantly correlated with the habit of smoking.

The oncological emergency tumor lysis syndrome was present in 182 (40.4%) cases and was more significant in relation to deaths (p=0.001) as can be seen in table 8.

Table 1- General characteristics of patients undergoing cancer treatment included in the study. Hospital Cancer Registry, Passo Fundo, RS - 2017.

| General characteristics of study participants | N | % |
|--|------|------|
| Sex | | |
| Female | 783 | 47.9 |
| Male | 852 | 52.1 |
| Total | 1635 | 100 |
| Age group in years | | |
| < e 19 | 6 | 0.4 |
| 20 – 29 | 42 | 2.6 |
| 30 – 39 | 82 | 5.0 |
| 40 – 49 | 168 | 10.2 |
| 50 – 59 | 331 | 20.2 |
| 60 – 69 | 446 | 27.3 |
| 70 – 79 | 382 | 23.4 |
| 80 e > | 178 | 10.9 |
| Total | 1635 | 100 |
| Color/ Race | | |
| White | 1542 | 94.3 |
| Black | 23 | 1.4 |
| Yellow | 0 | 0.0 |
| Brown | 44 | 2.7 |
| Indigenous | 2 | 0.1 |
| No information | 24 | 1.5 |
| Total | 1635 | 100 |
| Family history of cancer | | |
| Yes | 463 | 28.3 |
| No | 334 | 20.4 |
| No information | 838 | 51.3 |
| Total | 1653 | 100 |
| Time from first diagnosis to start of treatment | | |

to be continued...

...continuação - Tabela 1

| General characteristics of study participants | N | % |
|---|--------------|-----|
| Time in days (Mean+SD) | 53 + 84.0 | |
| Time in days (Median and interquartile range) | 29 (11 - 68) | |
| Total | 1635 | 100 |

Table 2- Municipalities where the patients come from. Hospital Cancer Registry, Passo Fundo, RS - 2017.

| Municipalities where patients come from | N | % |
|---|-------------|------------|
| Passo Fundo | 523 | 32.0 |
| Other cities | 483 | 29.7 |
| Lagoa Vermelha | 84 | 5.1 |
| Tapejara | 61 | 3.7 |
| Soledade | 59 | 3.6 |
| Sananduva | 44 | 2.7 |
| Marau | 42 | 2.6 |
| Espumoso | 38 | 2.3 |
| Casca | 35 | 2.1 |
| Serafina Corrêa | 31 | 1.9 |
| Barros Cassal | 28 | 1.7 |
| Ibirubá | 24 | 1.5 |
| Não-Me-Toque | 20 | 1.2 |
| Paim Filho | 20 | 1.2 |
| Tapera | 20 | 1.2 |
| São José do Ouro | 19 | 1.2 |
| David Canabarro | 18 | 1.1 |
| Ernestina | 18 | 1.1 |
| Ibiaçá | 18 | 1.1 |
| Campos Borges | 17 | 1 |
| Ibiraíaras | 17 | 1 |
| Ciríaco | 16 | 1 |
| Total | 1635 | 100 |

Table 3- Distribution according to type. Hospital Cancer Registry, Passo Fundo, RS - 2017.

| Distribution as to Typology | N | % |
|---|-------------|------------|
| Other malignant neoplasms of skin | 538 | 32.9 |
| Malignant neoplasm of breast | 219 | 13.4 |
| Other neoplasms | 194 | 11.7 |
| Malignant neoplasm of the prostate | 130 | 8.0 |
| Malignant neoplasm of the bronchi and lungs | 109 | 6.7 |
| Malignant neoplasm of the cervix | 85 | 5.2 |
| Malignant neoplasm of the colon | 59 | 3.6 |
| Malignant neoplasm of the kidney, except renal pelvis | 42 | 2.6 |
| Malignant neoplasm of the stomach | 41 | 2.5 |
| Malignant neoplasm of the esophagus | 34 | 2.1 |
| Malignant neoplasm of the bladder | 33 | 2.0 |
| Malignant neoplasm of the hematopoietic and endothelial reticulum systems | 31 | 1.9 |
| Malignant neoplasm of the pancreas | 29 | 1.8 |
| Malignant neoplasm of the thyroid gland | 24 | 1.5 |
| Malignant neoplasm of the rectum | 24 | 1.5 |
| Secondary and unspecified malignant neoplasm lymph nodes | 23 | 1.4 |
| Malignant neoplasm of the larynx | 20 | 1.2 |
| Total | 1635 | 100 |

Table 4- Location in the first metastasis. Hospital Cancer Registry, Passo Fundo, RS - 2017.

| Location of the first metastasis | N | % |
|--|------------|-------------|
| Metastasis of the liver and intrahepatic bile ducts | 47 | 2.88 |
| Metastasis of bones and joint cartilage from other locations and unspecified locations | 35 | 2.14 |
| Bronchial and lung metastasis | 30 | 1.83 |
| Secondary and unspecified metastasis of lymph nodes | 24 | 1.47 |
| Metastasis of retroperitoneum and peritoneum soft tissues | 21 | 1.29 |
| Brain metastasis | 17 | 1.04 |
| Metastasis of the heart, mediastinum and pleura | 10 | 0.61 |
| Metastasis of other locations and ill-defined locations | 2 | 0.12 |
| Small intestine metastasis | 1 | 0.06 |
| Adrenal gland metastasis [Adrenal gland] | 1 | 0.06 |
| Total | 188 | 11.5 |

Table 5- Characteristics of patients undergoing cancer treatment admitted to the emergency unit. Electronic medical record, Passo Fundo, RS - 2017.

| Characteristics of patients in the emergency unit | N | % | <i>...continuação - Tabela 5</i> | | |
|---|--------------|------|----------------------------------|-----|--------|
| Characteristics of patients in the emergency unit | N | % | | | |
| Age | | | Total | 450 | 100 |
| Years, (Mean + SD) | 60.5 + 14.13 | | Smoking history | | |
| Sex | | | Smoker and ex-smoker | 239 | 53.1 |
| Female | 210 | 46.7 | Non-smoker | 211 | 46.9 |
| Male | 240 | 5.3 | Total | 450 | 100 |
| Total | 450 | 100 | Outcome | | |
| Conduct after medical consultation | | | Death | 113 | 25.1 |
| Hospitalization | 446 | 99.1 | Released | 337 | 74.9 |
| Referral to outpatient care | 4 | 0.88 | Total | 450 | 100.00 |

Table 6- Distribution in terms of Typology at the EMU. Electronic medical record, Passo Fundo, RS - 2017.

| Distribution as to Typology at EMU | N | % | Valor p Óbitos | Valor p Tabagismo |
|---|-----|-------|----------------|-------------------|
| Malignant neoplasm of the bronchi and lungs | 72 | 16.00 | 0.001 | 0.001 |
| Other malignant neoplasms of the skin | 35 | 7.80 | 0.052 | 0.050 |
| Malignant neoplasm of the colon | 34 | 7.60 | 0.146 | 0.281 |
| Malignant neoplasm of the breast | 29 | 6.40 | 0.005 | 0.001 |
| Malignant neoplasm of the stomach | 24 | 5.30 | 0.990 | 0.005 |
| Malignant neoplasm of the cervix | 20 | 4.40 | 0.117 | 0.044 |
| Malignant neoplasm of the pancreas | 20 | 4.40 | 0.034 | 0.056 |
| Malignant neoplasm of the kidney, except renal pelvis | 19 | 4.20 | 0.902 | 0.616 |
| Malignant neoplasm of the esophagus | 18 | 4.00 | 0.413 | 0.096 |
| Malignant neoplasm of the prostate | 17 | 3.80 | 0.063 | 0.136 |
| Other Neoplasms | 162 | 36.10 | 0.453 | 0.314 |

Table 7- Signs and symptoms of oncological emergencies presented in the EMU and P-values compared to deaths and smoking. Electronic medical record, Passo Fundo, RS - 2017.

| Signs and symptoms of oncological emergencies presented in EMU and p-value of deaths and smoking | N | % | Death p value | P Value for Smoking |
|--|-----|-------|---------------|---------------------|
| Abdominal pain | 111 | 24.70 | 0.001 | 0.134 |
| Vomiting/ Diarrhea/ Nausea | 95 | 21.10 | 0.102 | 0.040 |
| Loss of Strength | 90 | 20.00 | 0.023 | 0.212 |
| Dyspnea | 84 | 18.70 | 0.001 | 0.001 |
| Fever | 53 | 11.80 | 0.569 | 0.151 |
| Anemia/ Anorexia | 40 | 8.90 | 0.259 | 0.551 |
| Chest pain | 35 | 7.80 | 0.193 | 0.117 |
| Bleeding | 32 | 7.10 | 0.390 | 0.011 |
| Decreased Senses | 12 | 2.70 | 0.001 | 0.425 |
| Convulsive Crisis | 9 | 2.00 | 0.566 | 0.877 |
| Loss of Kidney Function | 3 | 0.70 | 0.742 | 0.494 |
| Hemiparesis | 3 | 0.70 | 0.742 | 0.494 |
| Facial paralysis | 1 | 0.20 | 0.563 | 0.346 |
| Ascites | 1 | 0.20 | 0.084 | 0.346 |

Table 8- Oncological emergencies based on the signs and symptoms presented in the EMU and p-value compared to deaths. Electronic medical record, Passo Fundo, RS - 2017.

| Oncological emergencies based on symptoms and p-value of deaths | N | % | Valor p Óbitos |
|---|-----|------|----------------|
| Tumor lysis syndrome | 182 | 40.4 | 0.001 |
| Hyponatremia | 169 | 37.6 | 0.018 |
| Superior vena cava syndrome | 143 | 31.7 | 0.001 |
| Disseminated intravascular coagulation | 114 | 25.3 | 0.001 |
| Hypercalcemia | 107 | 23.8 | 0.038 |
| Malignant pericardial effusions | 101 | 22.4 | 0.001 |
| Malignant epidural compression of the spinal cord | 95 | 21.1 | 0.030 |
| Febrile neutropenia | 53 | 11.8 | 0.569 |

DISCUSSION

In Brazil, according to estimated data from the National Cancer Institute (INCA), collaborating with study data, in 2018 the number of malignant neoplasms in males was higher compared to females, according to the incidence per 100 thousand inhabitants and the number of new cases of cancer¹⁷. Globally, the prevalence rate of most cancers in relation to sex shows a higher incidence in men than in women, with incidence rates varying between regions, but were compatible with those presented worldwide¹⁸. The prevalence rate estimates the diagnosis of cancer in one in five men and in one in six women, with one in eight men and one in ten women dying from the disease¹⁹.

The ages with the highest incidences were observed between 60 years and 69 years old, which can be explained by the increase in longevity and by an accelerated growth of the elderly population, surpassing the mark of 30 million in 2017. The highest incidence in this age group in the study performed seems to be related to longevity, as it constitutes an important risk factor for the development of neoplasms; especially, since the increase in life expectancy may bring with it an increase in chronic-degenerative diseases²⁰. Another aspect that corroborates with the results of the study would be the diagnosis of cancer as one of the greatest risks attributed to the elderly population²¹.

Regarding skin color / race, the sample was predominantly of white individuals, in line with the reality of the southern region of Brazil, which concentrates a population of almost 80% white, followed by 16.70% brown and only 3.9% black, according to data from the Brazilian Institute of Geography and Statistics (IBGE),

201022. Information on family history of cancer was present in 28.3% of the cases, confirming the recognized, strong and important way of identifying and guiding the risk assessment for developing chronic conditions, including neoplasms, by integrating the risk of developing the disease due to genetic factors²³.

The study revealed a relative delay between the time from the first diagnosis to the start of treatment. This time can change the prognosis from potentially curable to incurable in aggressive cancers. In a study carried out in a densely populated area of Brazil, with a retrospective analysis of 509 patients diagnosed with malignant lung cancer between the years 2008 and 2014, it was found that the average time from diagnosis to the beginning of treatment was established in one month, but most patients (82.5%) started treatment within two months, demonstrating that the waiting times for the effective start of treatment remained relatively long²⁴. In this context in 2012, the Brazilian government published Law 12.732, establishing that every patient with malignant neoplasm is entitled to start treatment in the Unified Health System (SUS) within 60 days after diagnosis, with the objective of an universal and integral approach, according to the doctrinal precepts of SUS minimizing and eliminating differences in access to cancer treatment²⁵.

As for the typological incidence in emerging countries, cancers of the lung, bladder, liver, prostate, colon and rectum, occur more commonly among men, with cancers of the breast, cervix, ovary and non-Hodgkin lymphoma being the most common among women²⁶. In the Nation's Annual Report on the Situation of Cancer, it was observed that

the typology with the highest incidence is skin melanoma, both for men and women, with a statistically significant increase in rates. With the exception of non-melanoma skin cancer, among men, incidence rates point to the occurrence of neoplasms in the prostate, lung and bronchus, colon and rectum, and among women there is a higher incidence of breast, lung and bronchial cancer, colon and rectum²⁷; confirming the data found in the present study.

Considering the location of the first metastasis, in a study by a multicentric group from Francogyn, when analyzing only women, it was found that the most common anatomical sites of metastases in their first event were lung, bones, liver, diaphragmatic lymph nodes and brain²⁸. Although the study analyzed only the occurrence of metastasis in women, this result corroborates the profiles seen in the present study, which presented similar indicators regarding the first metastasis location.

In the emergency unit, the profile of cancer patients was closely related to that seen in other hospital units, also corroborating with a study of the profile of cancer patients treated in an emergency unit. In the aforementioned study, of the 172 attended patients diagnosed with cancer, an average age of 62 years was identified, 107 (62.2%) of whom were male and the primary location of the tumor in both sexes was predominantly the gastrointestinal and pulmonary regions, followed by breast cancer².

The association of cancer with smoking shows relative risks in several types (cancer of the lip and oral cavity, nasopharynx, esophagus, stomach, colorectal, liver, pancreas, lung, cervix, ovary, kidney, urinary bladder, among others). The harmful effects of smoking on the human body are visible mainly in the respiratory system, as demonstrated in a descriptive epidemiological study on cancer attributable to smoking. The study showed a high incidence

of lung cancer, followed by liver, nasopharynx and cervix, but compared to a previous study, most data were lower for both cancer incidence and mortality in men and women, showing that effective tobacco policies and interventions, such as raising tobacco taxes, establishing non-smoking areas and implementing graphic health warnings, are effective in significantly decreasing tobacco-related cancer²⁹.

A parallel mixed convergent method study using quantitative and qualitative data on signs, symptoms and risk factors for lung cancer in Australia, identified the presence of hemoptysis and dyspnea as the most recognized symptoms in the entire sample population in the quantitative findings. Also, smoking was recognized as a cause of lung cancer; however, smokers were less likely to recognize the potential risk for the development of lung cancer³⁰. Lung cancer was the most evident type in the emergency unit of the study hospital, and just as the previously mentioned study stated, this may explain why dyspnea as one of the main symptoms.

In relation to mortality, in a study that analyzed the sources and methods used in the compilation of cancer statistics in 185 countries, lung cancer was the most frequent cause of death, followed by prostate and liver cancer in men, and in women, breast cancer was the most frequent, followed by lung cancer and cervical cancer³¹. Overall, in both sexes, lung cancer, followed by stomach, liver, breast and colon cancer, were the most frequent causes of cancer death³¹.

Similar to the data found, a longitudinal descriptive study carried out at Hospital Universitario San Ignacio (HUSI) in Bogotá, for four months, with 672 patients who had a history of hemato-oncological or oncological pathology, 79.5% of the patients were aged 50 years or more, and the most frequent cancer

was breast cancer (17.4%), followed by colon (9.5%), gastric (9%), rectum (7.7%) and prostate (6.7%) cancers. Also, the main symptoms recorded were abdominal pain (26.3%), followed by dyspnea (19.3%), vomiting (16.7%), asthenia/ adynamia (15%) and fever (14.5%)³²; which may explain the vast types of symptoms (dyspnea, increase or decrease in respiratory rate, cyanosis, jaundice, fever, abdominal pain, muscle weakness, blurred vision, headache, vertigo, dizziness, hearing loss, impaired mental status, among others) that oncological emergencies may manifest as³³.

Based on signs and symptoms, metabolic oncological emergencies, such as tumor lysis syndrome (TLS) and hyponatremia, were found in greater numbers in cancer patients. In a study that discusses tumor lysis syndrome

in the emergency room, reported that TLS is the most common cancer emergency, and is characterized by the development of hyperuricemia, acute kidney injury and electrolyte disturbances, which can be fatal in many cases and it is crucial to identify patients with high risk of the syndrome to receive early treatment³⁴. In addressing emergencies in hematology and oncology, hyponatremia is associated with lower survival, affecting up to 60% at the end of life, and is one of the most common metabolic disorders in cancer patients. It is multifactorial and may be caused by the cancer itself or by drugs, hypovolemia and nephropathy that waste salt. Hyponatremia, in most cases of cancer patients, is mild to moderate and does not require therapy or can be treated on an outpatient basis³³.

CONCLUSION

The profile of patients undergoing cancer treatment at the study institution was predominantly male, elderly, white, with a family history of cancer. The most common typology found was other malignant neoplasms of the skin and the first metastases affect the liver and intrahepatic bile ducts. The median time to start treatment after diagnosis was 29 days, revealing a relative delay, however within the scope of the current legislation. It was observed that the emergency unit was the access route for many patients undergoing cancer treatment, who mostly had malignant neoplasms of the bronchi and lungs, a history of smoking, signs and symptoms of abdominal pain and the oncological emergence of tumor lysis syndrome.

Death presented a significant relationship with the malignant neoplasm of the bronchi and lungs, of the breast and of the pancreas, with the signs and symptoms of abdominal pain, loss of strength, dyspnea and lowering of

the sensorium and the oncological emergency tumor lysis syndrome. Smoking, on the other hand, had a significant relationship with the malignant neoplasm of the bronchi and lungs, breast, stomach and cervix, with the signs and symptoms of dyspnea, bleeding and the occurrence of vomiting/ diarrhea/ nausea, thus, showing that the studied population differs little from the rest of the state, Brazil and the world.

Outlining and knowing the profile of cancer patients and their main emergencies can improve the understanding of the risk of the clinical manifestations, as well as the planning of campaigns and actions for promotion, prevention, diagnosis and early treatment, encouraging over time, including the improvement in the outcome of patients seen at the service. The continuation of this work is suggested, with more specific correlations between the data in order to further strengthen the results to be discussed and analyzed.

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Received in december 2019.
Accepted april 2020.