Epidemiological, Sociodemographic And Clinical Profile Of Men With Cancer In Rondônia, Brazilian Amazon

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ABSTRACT

Objective: to analyze the epidemiological, sociodemographic and clinical profile of men in Rondônia, Western Amazonia (Brazil), diagnosed with the main types of cancer, during a period of 2 (two) years. Materials and Methods: it is an epidemiological, descriptive, cross-sectional and quantitative study, with the systematization of primary data according to the methodological model recommended by Paraguassu-Chaves et al [6]. We used an instrument developed by Paraguassu-Chaves et al [5], semi-structured composed of a series of epidemiological, clinical and sociodemographic variables. The research project is in compliance with Resolution 196/96 of the National Health Council of Brazil, taking into account the ethical aspects of research in Brazil. Main results: the 10 (ten) main types of cancer diagnosed by the location of the primary tumor in men were analyzed, corresponding to 1,163 (74.9%) cases of cancer in men, over a period of 2 (two) years. The 10 (ten) most common types of cancer in men were: prostate (30.9%), non-melanoma skin (22.9%), stomach (11.7%), bronchi and lungs (6.7%), colon (5.8%), leukemia (5.8%), esophagus (4.4%), central nervous system (4.2%), rectum (3.9%) and bladder (3.6%). The age group of 50 to 79 years old reaches 76.4% of the 10 main types of cancer in men. They are more frequent

in brown (64.6%) and white (28%) men and with low education. 73.2% of men with cancer are married. 44.9% of men with cancer work in agriculture. 45.6% of men with cancer have a family history of cancer. The sum of smokers and ex-smokers reaches a relative frequency of 43.7%. 19.5% consume alcoholic beverages and 17.2% are ex-consumers. In 40.1%, "other isolated therapeutic procedures" were applied in the first treatment. 14.2% of diagnosed patients died from the disease. Conclusions: The scenario of cancer projection in men in Rondônia is worrying and requires an urgent redirection of actions and strategies for cancer prevention, control, assistance and treatment.

Keywords— cancer in men. epidemiological profile. clinical and sociodemographic profile. Rondônia. Brazilian Amazon.

I. INTRODUCTION

Cancer is the main public health problem in the world [1] and is already among the top four causes of premature death in most countries. This means that cancer is responsible for the fourth leading cause of death in the population under 70 years of age. Cancer incidence and mortality has increased worldwide. One explanation for the significant increase in the incidence of cancer lies in the increased exposure of cancer risk factors.

According to Paraguassu-Chaves et al [2] the redefinition of living standards, based on the standardization of working conditions, nutrition and consumption triggered by the global industrialization process, has important repercussions on the epidemiological profile of populations. And, as a consequence, the increase or decrease in cancer incidence and mortality.

The most recent global estimate (year 2018) pointed out that 18 million new cases of cancer occurred worldwide (17 million without counting the cases of non-melanoma skin cancer) and 9.6 million deaths (9.5 million excluding non-melanoma skin cancer) [1].

According to a study “Global cancer statistics 2018: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries” authored by Bray et al [3], lung cancer is the most incident in the world (2.1 million), followed by breast (2.1 million), colon and rectal cancer (1.8 million) and prostate (1.3 million). The incidence in men (9.5 million) represents 53% of new cases, slightly higher than in women, with 8.6 million (47%) of new cases. Worldwide, the most common types of cancer in men were lung cancer (14.5%), prostate cancer (13.5%), colon and rectum (10.9%), stomach (7.2%) and liver (6.3%).

According to the INCA estimate for each year of the 2020-2022 period, 625,000 new cases of cancer will occur in Brazil [1]. Non-melanoma skin cancer will be the most incident (177 thousand), followed by breast and prostate cancer (66 thousand each), colon and rectum (41 thousand), lung (30 thousand) and stomach (21 thousand). The most common types of cancer in men, with the exception of non-melanoma skin cancer, are prostate (29.2%), colon and rectum (9.1%), lung (7.9%), stomach (5.9 %) and oral cavity (5.0%) [1].

In the northern region of Brazil (where Rondônia is geographically located, more precisely in the Western Amazon, the incidence rates per 100 thousand inhabitants and the number of new cases of cancer in men are estimated for 2020, according to the main location of the neoplasia (except non-melanoma skin cancer),

in the following decreasing order: prostate 2,770 new cases (28.7), stomach 1,110 new cases (11.5), trachea, bronchi and lung 870 new cases (9.0), colon and rectum 490 new cases (5.1), leukemia 410 new cases (4.2), oral cavity 340 new cases (3.5), central nervous system 300 new cases (3.1), esophagus 250 new cases (2.6), larynx 240 new cases (2.5) and non-Hodgkin's lymphoma 210 new cases (2.2) [1].

The National Cancer Institute of Brazil estimated for the State of Rondônia, for the year 2020, the incidence rates per 100 thousand inhabitants and the number of new cases of cancer in men (except non-melanoma skin cancer), according to the primary location of the malignancy, the following cancers: prostate 310 new cases (32.40), trachea, bronchi and lung 110 new cases (11.85), stomach 80 new cases (8.90), colon and rectum 60 new cases (6.36), oral cavity 50 new cases (5.71), leukemia 40 new cases (4.61), esophagus 40 new cases (4.52), central nervous system 40 new cases (4.26), larynx 30 new cases (3.28), bladder 30 new cases (2.86) and non-Hodgkin's lymphoma 20 new cases (2.46) [1].

According to Paraguassu-Chaves et al [4] epidemiological, sociodemographic and clinical studies on cancer in Rondônia and the Brazilian Amazon are still scarce. According to this author and his collaborators, few references are known for this set of diseases that presents itself in a scenario of public health problems for the population residing in this Region of Brazil.

There is recognition of the efforts of a group of volunteer researchers under the coordination of professor Dr. Paraguassu-Chaves and his contribution in the direction of new research on the socio-demographic profile, clinical profile, epidemiological profile, production and territorial and spatial distribution of cancer in Rondônia, Western Amazon.

Among his studies, although of epidemiological focus, they stand out for the understanding of cancer in Rondônia, such as the description of the distribution and magnitude of cancer in the population of Rondônia, both at the municipal level and throughout the State of Rondônia; the systematization of essential data for the planning, execution and evaluation of cancer promotion, prevention, control and treatment actions in Rondônia, as well as for the establishment of priorities; the approximation of the identification of the etiological factors in the genesis of cancers in Rondônia; the provision of an educational tool and product that can be used as instructional material for teaching purposes at the reach of all people, regardless of school level or cultural education; the availability of data and information to support the development of studies and applied research on the production and distribution of cancers in Rondônia.

The National Cancer Institute of Brazil (INCA) recognizes that the prevention and control of cancer in our country, of continental dimensions and strong regional differences, because it houses a population of behaviors, beliefs and attitudes in a very diverse way, currently represents great challenges public health. The description of the distribution of the most incident types of cancer, over time, has been one of the main strategies for the establishment of guidelines in public policies and, mainly, for the planning of cancer prevention and control actions [5].

The book “Epidemiological profile of cancer in Rondônia: Brazilian Amazon”, by Paraguassu-Chaves et al [6] records a historic milestone in the systematization and analysis of cancer data in Rondônia. It is relevant for the effort to try to understand the behavior of cancer, the sociodemographic, epidemiological and clinical profile of part of the population of Western Amazonia diagnosed with cancer.

In recent years, cancer has been incorporated into the fear of the population of the Brazilian Amazon. The majority of the population is not aware of neoplasms, which led people to live in fear of the disease and fear of death [4].

Given this scenario, resources and efforts must be directed to guide cancer prevention and control strategies at all levels (health promotion, early detection, patient care, cancer surveillance and its risk factors, training of human resources, communication and social mobilization, research and management of the Unified Health System (SUS).

Despite the implementation of the High Complexity Unit - UNACON, to catalog the data supporting the Hospital Cancer Information System - SISRHC / INCA, as systematic sources of information, based on medical records regarding the registration and use of admitted cases, evaluating quantity, quality of survival and, indirectly, the quality of care provided in the hospital, and this information is a primary source not only for epidemiological research on cancer determinants, but also for the prevention, diagnosis and treatment of the disease [5], [6], [7], it was found in previous research that the information system has several flaws in filling out medical records, which can hinder a safer and more efficient analysis or even the interpretation of data about the disease [4].

There is unanimity among this group of researchers coordinated by Paraguassu-Chaves of the awareness that the practice of health research is a fundamental aspect in the improvement of health systems and policies, and that it is a determining factor in the development of Brazil, and in particular of the Amazon Region. Given this reasonable justification, the objective of this study is to analyze the epidemiological, sociodemographic and clinical profile of men in Rondônia, Western Amazonia (Brazil), diagnosed with the main types of cancer, over a period of 2 (two) years.

II. MATERIALS AND METHODS

2.1 Study Type

This is an epidemiological, descriptive, cross-sectional and quantitative study, with the systematization of primary data according to the methodological model recommended by Paraguassu-Chaves et al [6]. The data were systematized from the primary data organized by the Hospital Epidemiology Nucleus - NHE of the Hospital de Base Dr. Ary Pinheiro and the Hospital de Câncer de Barretos - Porto Velho Unit, based on the diagnoses performed, for a period of 2 (two) years.

2.2 Model of Semi-structured Instrument Paraguassu-Chaves

We used an instrument developed by Paraguassu-Chaves et al [5], semi-structured and adapted for this research with the following variables: localization of primary tumor in men; age group during cancer diagnosis; ethnicity / color; degree of education; marital status; professional occupation; family cancer history; smoking; alcoholism; first treatment received; cancer death; forwarding source; entry clinic and 1st care clinic; previous diagnosis and treatment; cancer by clinical stage; bost important basis of diagnosis; primary numbers of tumors; topography of the occurrence of the 1st metastasis; cancer whose initial treatment cannot be performed according to reason for not treating; cancer status at the end of the 1st treatment; time interval according to the average, median, fashion, quartile, minimum and maximum, and

time interval (in days) elapsed, according to the median, between: 1st consultation-1st diagnosis; 1st diagnosis - start of treatment; 1st consultation and start of treatment, according to the clinic responsible for the 1st treatment.

2.3 Sampling Number

The research was carried out with the database of 1,552 male patients diagnosed with cancer in Rondônia, corresponding to the period of 2 years. Of this total, 1,163 new cases of cancer in men (74.9%) were selected, corresponding to the 10 (ten) main types of cancer diagnosed by the location of the primary tumor.

2.4 Inclusion and exclusion criteria and ethical aspects

All medical records diagnosed with cancer admitted to Dr. Ary Pinherio and Barretos / Rondônia base hospitals were included. Data without information or data that does not apply (discarded) due to inconsistency or incomplete records was excluded. The research project is in compliance with Resolution 196/96 of the National Health Council of Brazil, taking into account the ethical aspects of research in Brazil.

III. RESULTS

Of a total of 1,552 new cases of cancer diagnosed in men during the study period, 1,163 (74.9%) corresponds to the 10 (ten) main types of cancer diagnosed by the location of the primary tumor.

Proportional distribution of the 10 (ten) most frequent types of cancer in men by location of the primary tumor.

Of the proportional distribution of the most frequent cancers in men in the two-year period reported at the Barretos hospital (Porto Velho Unit) and at the Dr. Ary Pinheiro base hospital, prostate cancer has the highest frequency (30.9%), followed by non-melanoma skin cancer (22.9%) and stomach cancer (11.7%). The proportional distribution of the 10 (ten) most common types of cancer in men was: prostate (30.9%), non-melanoma skin (22.9%), stomach (11.7%), bronchi and lungs (6.7%), colon (5.8%), leukemias (5.8%), esophagus (4.4%), central nervous system (4.2%), rectum (3.9%) and bladder (3.6%). The 10 most common cancers in men in this study represent 74.9% of all cancers diagnosed in men. (Table 1).

Table 1: Proportional distribution of the 10 (ten) most frequent types of cancer in men by location of the primary tumor.

Localization of Primary Tumor in Men	Fa*	Fr %
Prostate (C61)	359	30.9
Non-melanoma skin (C44)	267	22.9
Stomach (C16)	136	11.7
Bronchus and Lung (C33-C34)	78	6.7
Colon (C18)	68	5.8
leukemias (C91-C95)	68	5.8

Esophagus (C15)	51	4.4
Central Nervous System (C70-C71-C72)	49	4.2
Rectum (C20)	45	3.9
Bladder (C67)	42	3.6
Total	**1.163**	**100.0**

Fa* Absolute frequency **Fr%** Relative frequency

Distribution of the 10 main neoplasms of men in the State of Rondônia by age at diagnosis of cancer.

According to national and international literature, age is still one of the most important risk factors for cancer in men. Incidence rates rise rapidly after 50 years of age. In Rondônia, the age group of 50 to 79 years old reaches 76.4% of the 10 main types of cancer in men, with respectively 20.4% (aged between 50 and 59 years old), 26% (aged between 60 and 69 years old) and 30% (between 70 and 79 years old).

Prostate cancer has a high frequency from the age of 50. The highest prevalences are in the age groups from 60 to 69 years old with 38.5% and from 70 to 79 years old with 32.5% of new cases.

Non-melanoma skin cancer is the second most common in men with 20.2% of new cases (aged between 50 and 59 years), 11% of new cases (aged between 60 and 69 years), 37% (between 70 and 79 years) and 13.9% of new cases in patients over 80 years of age.

Stomach cancer is more common in men over 40 years of age. Stomach cancer has a frequency of 16.1% of new cases in patients aged between 40 and 49 years, 19.6% (aged between 50 and 59 years), 28.6% (aged between 60 and 69 years) and 26.8% (age between 70 and 79 years). Bronchial and lung cancer in men is more prevalent in patients over 50 years old, with 20.8% in the 50 to 59 age group, respectively, 45.8% in the 60 to 69 age group and 16.7% in the age group of 70 and 79 years. Colon cancer has a high incidence in the 30 to 39 age group (15.4%), reaching its highest incidence (23.1%) in the 50 to 59 age group.

Esophageal cancer concentrates the highest incidence in the age group of 50 to 59 years (40.9%) and 60 to 69 years (31.8%). Rectal cancer is most frequently found with 25% of new cases in the age group of 40 to 49 years and with 30% in the age group of 60 to 69 years. Bladder cancer maintains the highest concentration of new cases in the 50 to 59 age group (27.3%) and the same relative frequency (27.3%) in the 70 to 79 age group. (Table 2).

The data referring to cancers of the leukemias were excluded due to the lack of available information or because of inconsistent information.

Table 2: Distribution of the 10 main neoplasms of men in the State of Rondônia by age at diagnosis of cancer.

Age Range **Cancer Diagnosis**	**<29 years**	**30 – 39**	**40 – 49**	**50 – 59**	**60 – 69**	**70 – 79**	**> 80 years**	**Ignored**
Prostate (C61)	0.0	1.8	1.8	18.0	38.5	32.5	6.6	1.8
Non-melanoma skin (C44)	2.3	2.3	10.4	20.2	11%	37%	13.9	2.9
Stomach (C16)	0.0	5.3	16.1	19.6	28.6	26.8	3.6	0.0
Bronchus and Lung (C33-C34)	0.0	0.0	12.5	20.8	45.8	16.7	4.2	0.0
Colon (C18)	3.8	15.4	19.2	23.2	19.2	15.4	3.8	0.0
Esophagus (C15)	0.0	0.0	9.1	40.9	31.8	18.2	0.0	0.0
Rectum (C20)	5.0	10.0	25.0	10.0	30.0	10.0	10.0	0.0
Bladder (C67)	4.5	0.0	4.5	27.3	18.2	27.3	18.2	0
Leukemias (C91-C95)	**	**	**	**	**	**	**	**
Central Nervous System (C70-C71-C72)	**	**	**	**	**	**	**	**
Fr%	**1.4**	**3.1**	**9.0**	**20.4**	**26.0**	**30.0**	**8.9**	**1.2**

Fr% Relative frequency. ** No information available.

Distribution of the 10 main neoplasms in men, by ethnicity / color.

Table 3 shows the distribution of the 10 main neoplasms in men in the State of Rondônia by Ethnicity / Color. Neoplasms diagnosed in brown (64.6%) and white (28%) men are more frequent than in other ethnicities, such as: black, yellow and indigenous.

Of the 10 main types of cancer, brown men predominated, in all types of cancer in the following decreasing order: esophagus (77.3%), colon (69.2%), stomach (67.9%), bronchi and lungs (66.6%), non-melanoma skin (66%), rectum (65%) and prostate (63.3%). The only exception was bladder cancer, which predominated in white patients.

The second highest frequency of cancer by skin color is concentrated in white patients with 28% of new cases among the 10 main types of cancer in men in Rondônia. Among white patients, the relative frequencies are more significant in bladder cancer with 45.4%, rectal cancer with 35%, prostate cancer with 29.5%, bronchial and lung cancer with 29.2%, cancer of non-melanoma skin with 28.5%, stomach cancer with 19.6%, colon cancer with 19.2% and esophageal cancer with 18.2% of new cases. Black patients have a significant frequency in cancer of the colon (11.6%), stomach (10.7%) and bladder (9.1%). (Table 3).

Table 3: Distribution of the 10 main neoplasms in men, by ethnicity / color.

Ethnicity / Color	**Brown**	**White**	**Black**	**Yellow**	**Indigenous**
Prostate (C61)	63.3	29.5	7.2	0.0	0.0
Non-melanoma skin (C44)	66.0	28.5	5.5	0.0	0.0
Stomach (C16)	67.9	19.6	10.7	0.0	1.8
Bronchus and Lung (C33-C34)	66.6	29.2	0.0	4.2	0.0
Colon (C18)	69.2	19.2	11.6	0.0	0.0
Esophagus (C15)	77.3	18.2	4.5	0.0	0.0
Rectum (C20)	65.0	35.0	0.0	0.0	0.0
Bladder (C67)	40.9	45.5	9.1	4.5	0.0
Leukemias (C91-C95)	**	**	**	**	**
Central Nervous System (C70-C71-C72)	**	**	**	**	**
Fr%	**64.6**	**28.0**	**6.1**	**1.1**	**0.2**

Fr% Relative frequency. ** No information available.

Distribution of the 10 main neoplasms in men by level of education.

The education of men diagnosed with cancer is 18.3% illiterate, 43.6% with incomplete primary education, 18.5% with complete primary education, 15.6% with secondary education and 4% with complete higher education. The frequency of cancer in men with less education is much higher than the cases diagnosed in men with more education.

Prostate cancer concentrates its highest incidence in patients with low education (76.5%), thus distributed by educational level, 12% illiterate, 40.4% incomplete elementary school and 24.1% complete high school, as shown in table 4.

The same situation occurs with non-melanoma skin cancer (79.8%) of patients with low education, distributed as follows: 14.7% illiterate, 50.4% of patients with incomplete elementary school and 14.7% with elementary school complete. In the same trend of low schooling, stomach cancer patients are 26.8% illiterate, 32.1% have incomplete elementary school and 19.7% have completed elementary school. Patients with bronchial and lung cancer, 91.6% were patients with education level up to complete elementary school.

They remain in the same condition as patients with low education, patients with colon cancer with 88.6% with education level up to complete elementary school, esophageal cancer with 86.4% with up to complete elementary school, cancer of the rectum with 60 % of patients with complete primary education and bladder cancer with 81.8% of patients with complete primary education. (Table 4).

Table 4: Distribution of the 10 main neoplasms in men by level of education.

Degree of Education	**Illiterate**	**Incomplete elementary school**	**Complete elementary school**	**Complete high school**	**Graduated**
Prostate (C61)	12.0	40.4	24.1	17.5	6.0
Non-melanoma skin (C44)	14.7	50.4	14.7	14.7	5.5
Stomach (C16)	26.8	32.1	19.7	14.3	7.1
Bronchus and Lung (C33-C34)	29.1	54.2	8.3	4.2	4.2
Colon (C18)	7.7	46.2	34.6	7.7	3.8
Esophagus (C15)	22.7	36.4	27.3	13.6	0.0
Rectum (C20)	15.0	35.0	10.0	35.0	5.0
Bladder (C67)	18.2	54.5	9.1	18.2	0.0
Leukemias (C91-C95)	**	**	**	**	**
Central Nervous System (C70-C71-C72)	**	**	**	**	**
Fr%	**18.3**	**43.6**	**18.5**	**15.6**	**4.0**

Fr% Relative frequency. ** No information available.

Distribution of the 10 main neoplasms in men by conjugal state.

The distribution of the top 10 types of cancer in men shows that 73.2% of men with cancer are married. The highest frequencies of cancer in men were found in married men, without exception, distributed as follows: bladder cancer (86.5%), prostate (78.9%), non-melanoma skin (77.1%), rectum (72.7%), stomach (71.5%), bronchi and lungs (68.8%), esophagus (68.2%) and colon (61.8%). The second highest frequency is made up of single patients with 11.6% of men with cancer among the 10 most common types of cancer in Rondônia. (Table 5).

Table 5: Distribution of the 10 main neoplasms in men by conjugal state.

Marital Status	**Married**	**Single**	**Widowed**	**Separated / Divorced**	**Consensual Union**
Prostate (C61)	78.9	5.4	9.0	4.2	2.4
Non-melanoma skin (C44)	77.1	11.0	4.6	2.7	4.6
Stomach (C16)	71.5	10.7	8.9	0.0	8.9
Bronchus and Lung (C33-C34)	68.8	18.7	12.5	0.0	0.0
Colon (C18)	61.8	17.6	8.8	5.9	5.9
Esophagus (C15)	68.2	9.1	9.1	13.6	0.0

Rectum (C20)	72.7	18.2	0.0	9.1	0.0
Bladder (C67)	86.5	4.5	4.5	0.0	4.5
Leukemias (C91-C95)	**	**	**	**	**
Central Nervous System (C70-C71-C72)	**	**	**	**	**
Fr%	**73.2**	**11.9**	**7.2**	**4.4**	**3.3**

Fr% Relative frequency. ** No information available.

Distribution of the 10 main neoplasms in men, by occupation.

Men diagnosed with cancer who work in agriculture represent 44.9% of the 10 most common types of cancer in men in Rondônia. Next are men occupying the professions of commerce, banks, transport and others with 22.7%, public agents or employees of the federal, state and municipal public service with 10.8% and independent professional, professor or technician with 10.8%.

The proportional distribution of cancer in men by occupational activity is very well defined with agricultural activity, mainly in relation to cancers of the prostate (73.5%), bladder (66.6%), non-melanoma skin (65.1%), bronchi and lungs (40%), stomach (39.4%) and esophagus (31.8%) are the most frequent.

Among men working in commerce, banking, transportation and other similar activities, rectal cancer (45%), colon cancer (38.5%), stomach (23.2%), esophagus (18.2%), bronchi and lungs (16%), bladder (14.3%) non-melanoma skin (13.8%) and prostate (11.5%) are the most prominent. The group of professional public officials and the group of independent professionals, teachers or technicians have a considerable incidence in stomach cancer (8.9% and 14.3% respectively), bronchial and lung cancer (16% and 12% respectively), colon cancer (11.5% and 15.4% respectively), esophageal cancer (13.6% and 18.2% respectively) and rectal cancer with 15% and 10% respectively. (Table 6).

Table 6: Distribution of the 10 main neoplasms in men, by occupation.

Professional occupation / Cancer	**Agriculture**	**Industry**	**Commerce, Bank, Transport and Others**	**Public agent**	**Independent Professional, teacher or technician**	**Works at Home**
Prostate (C61)	73.5	3.6	11.5	4.8	5.4	1.2
Non-melanoma skin (C44)	65.1	2.8	13.8	7.3	6.4	4.6
Stomach (C16)	39.4	7.1	23.2	8.9	14.3	7.1
Bronchus and Lung (C33-C34)	40.0	8.0	16.0	16.0	12.0	8.0
Colon (C18)	23.1	3.8	38.5	11.5	15.4	7.7
Esophagus (C15)	31.8	9.1	18.2	13.6	18.2	9.1
Rectum (C20)	20.0	5.0	45.0	15.0	10.0	5.0
Bladder (C67)	66.6	0.0	14.3	9.5	4.8	4.8

Leukemias (C91-C95)	**	**	**	**	**	**
Central Nervous System (C70-C71-C72)	**	**	**	**	**	**
Fr%	**44.9**	**4.9**	**22.7**	**10.8**	**10.8**	**5.9**

Fr% Relative frequency. ** No information available.

Distribution of the 10 main neoplasms in men by family cancer history.

Regarding the family history of cancer, 45.6% of men with cancer in Rondônia have a family history of cancer. The greatest evidence of cancer with a family history was found in esophageal cancer with 63.7% and rectal cancer with 50%. All 10 main types of cancer in men are related to family history of cancer, in the following order: cancer of the esophagus (63.2%), rectal cancer (50%), stomach cancer (48.2%), cancer of the stomach colon (46.2%), bronchial and lung cancer (45.8%), bladder cancer (45.5%), non-melanone skin cancer (34%) and prostate cancer (31.9%). (Table 7).

Table 7: Distribution of the 10 main neoplasms in men by family cancer history.

Family Cancer History	**Yes**	**Not**	**Fr%**
Prostate (C61)	31.9	68.1	100.0
Non-melanoma skin (C44)	34.0	66.0	100.0
Stomach (C16)	48.2	51.8	100.0
Bronchus and Lung (C33-C34)	45.8	54.2	100.0
Colon (C18)	46.2	53.8	100.0
Esophagus (C15)	63.7	36.3	100.0
Rectum (C20)	50.0	50.0	100.0
Bladder (C67)	45.5	54.5	100.0
Leukemias (C91-C95)	**	**	**
Central Nervous System (C70-C71-C72)	**	**	**
Fr%	**45.6**	**54.4**	**100.0**

Fr% Relative frequency. ** No information available.

Distribution of the 10 main neoplasms in men by smoking.

The relative incidence of men who declared smokers was 22.8% and 20.9% ex-smokers. The sum of smokers and ex-smokers reaches a relative frequency of 43.7% of men with cancer in Rondônia.

The sum of smokers (29.2%) and ex-smokers (45.8%) represents the highest relative incidence in patients with bronchial and lung cancer. Esophageal cancer has the second highest relative incidence of smoking and ex-smoking patients with respectively (45.4%) and (27.3%). In descending order, the 10 main types of cancer in men are directly related to smoking, distributed as follows: bronchial and lung cancer, 29.2% smokers and 45.8% ex-smokers; esophageal cancer, 45.4% smokers and 27.3% ex-smokers; stomach cancer, 23.2% smokers and 19.6% ex-smokers; colon cancer, 23.1% smokers and 19.2% ex-smokers; bladder cancer, 18.2% smokers and 22.7% ex-smokers; rectal cancer, 20% smokers and 10% ex-smokers;

non-melanoma skin cancer, 9.2% smokers and 17.4% ex-smokers; and, prostate cancer with 14.5% of smokers and 5.4% of ex-smokers. (Table 8).

Table 8: Distribution of the 10 main neoplasms in men by smoking.

Smoking	**Yes**	**Ex-consumer**	**Never**
Prostate (C61)	14.5	5.4	80.1
Non-melanoma skin (C44)	9.2	17.4	73.4
Stomach (C16)	23.2	19.6	57.2
Bronchus and Lung (C33-C34)	29.2	45.8	25.0
Colon (C18)	23.1	19.2	57.7
Esophagus (C15)	45.4	27.3	27.3
Rectum (C20)	20.0	10.0	70.0
Bladder (C67)	18.2	22.7	59.1
Leukemias (C91-C95)	**	**	**
Central Nervous System (C70-C71-C72)	**	**	**
Fr%	**22.8**	**20.9**	**56.3**

Fr% Relative frequency. ** No information available.

Distribution of the 10 main neoplasms in men due to alcoholism.

According to table 9, considering all types of cancer in men, alcoholism tends to be a determining factor for cancer in men in the State of Rondônia. Of the men diagnosed with cancer, 19.5% consume alcoholic beverages and 17.2% are ex-consumers. The frequency of men who have never consumed alcoholic beverages is 63.3%. Men diagnosed with cancer who consume alcoholic beverages are distributed in the following decreasing order: cancer of the esophagus (36.4%), cancer of the bronchi and lungs (25%), stomach cancer (24.6%), colon cancer (23.1%), prostate (14.5%), bladder (13.6%), rectal cancer (10%) and non-melanoma skin cancer (9.2%).

Among ex-consumers of alcoholic beverages are more frequent, patients with bronchial and lung cancer (33.3%), bladder cancer (22.8%), esophageal cancer (18.2%), stomach cancer (15.8%), colon cancer (15.4%), rectal cancer (15%) and non-melanoma skin cancer (13.7%). (Table 9).

Table 9: Distribution of the 10 main neoplasms in men due to alcoholism.

Alcoholism	**Yes**	**Ex-Consumer**	**Never**
Prostate (C61)	14.5	3.0	82.5
Non-melanoma skin (C44)	9.2	13.7	77.1
Stomach (C16)	24.6	15.8	59.6
Bronchus and Lung (C33-C34)	25.0	33.3	41.7

Colon (C18)	23.1	15.4	61.5
Esophagus (C15)	36.4	18.2	45.4
Rectum (C20)	10.0	15.0	75.0
Bladder (C67)	13.6	22.8	63.6
Leukemias (C91-C95)	**	**	**
Central Nervous System (C70-C71-C72)	**	**	**
Fr%	**19.5**	**17.2**	**63.3**

Fr% Relative frequency. ** No information available.

Proportional distribution of cancer according to the first treatment.

As for the 1st treatment received, "Other isolated therapeutic procedures" had a higher frequency, with 40.1%. The second highest frequency was the surgery procedure with 20.4%, followed by chemotherapy with 7.4% and radiation therapy with 1.8% of the first treatments received by men diagnosed with cancer. Patients who have not received any type of therapeutic treatment, even after diagnosis, reach 30.3%. Patients who received “other isolated therapeutic procedures” are in decreasing order: cancer of the esophagus (45.5%), bladder (39.2%), non-melanoma skin (33%), rectal (30%), prostate (28 , 9%), colon (26.9%), bronchi and lungs (20.8%) and stomach (17.9%).

Cancer patients who received surgery treatments were: colon cancer (30.9%) bladder (30.4%), non-melanoma skin (27.5%), rectal cancer (25%), stomach cancer (21.4%) and prostate cancer (15.1%). Received no treatment, 45.5% of patients with esophageal cancer, 39.2% of bladder cancer, 33% of non-melanoma skin cancer, 30% of rectal cancer, 28.9% of prostate cancer, 26.9% colon cancer, 20.8% bronchial and lung cancer and 17.9% stomach cancer. (Table 10).

Table 10: Distribution of cancer according to first treatment received.

First treatment received	**Surgery**	**Chemotherapy**	**Radiotherapy**	**Other therapeutic procedures**	**No treatment**
Prostate (C61)	15.1	7.8	1.8	46.4	28.9
Non-melanoma skin (C44)	27.5	6.5	0.0	33.0	33.0
Stomach (C16)	21.4	7.1	0.0	53.6	17.9
Bronchus and Lung (C33-C34)	8.3	25.0	4.2	41.7	20.8
Colon (C18)	30.9	3.8	3.8	34.6	26.9
Esophagus (C15)	4.5	9.1	4.5	36.4	45.5
Rectum (C20)	25.0	0.0	0.0	45.0	30.0
Bladder (C67)	30.4	0.0	0.0	30.4	39.2
Leukemias (C91-C95)	**	**	**	**	**
Central Nervous System (C70-C71-C72)	**	**	**	**	**
Fr%	**20.4**	**7.4**	**1.8**	**40.1**	**30.3**

Fr% Relative frequency. ** No information available.

Distribution of the 10 main neoplasms in men by death / cancer.

By analyzing the distribution of the 10 most common types of cancer in men and the cause of death from cancer, it can be identified that 14.2% of diagnosed patients died from the disease.

The main victims of deaths were men with stomach cancer (28.3%), esophageal cancer (27.3%) and bronchial and lung cancer with 16.7%. Bladder cancer (13.6%) and rectal cancer (10%) also have a significant frequency of death. Colon cancer with 7.7%, prostate cancer with 5.3% and skin cancer without melanoma with 4.5% complete the list of types of cancer that led men to death. (Table 11).

Table 11: Distribution of the 10 main neoplasms in men by death / cancer.

Death / Cancer	**Yes**	**Not**	**Fr%**
Prostate (C61)	5.3	94.7	100
Non-melanoma skin (C44)	4.5	95.5	100
Stomach (C16)	28.3	71.7	100
Bronchus and Lung (C33-C34)	16.7	83.3	100
Colon (C18)	7.7	92.3	100
Esophagus (C15)	27.3	72.7	100
Rectum (C20)	10.0	90.0	100
Bladder (C67)	13.6	86.4	100
Leukemias (C91-C95)	**	**	**
Central Nervous System (C70-C71-C72)	**	**	**
Fr%	**14.2**	**85.8**	**100.0**

Fr% Relative frequency. ** No information available.

Proportional distribution of cancer by origin of the referral.

Of a universe of 1,552 diagnosed cases, 1,549 were reported by the Unified Health System - SUS, corresponding to 99.8% of patients admitted to the Hospital de Barretos and Bo Hospital de Base Dr. Ary Pinheiro / RO. In total, only 0.2% of all cancer cases registered in men at Hospital de Barretos (Unit of Hospital de Barretos in Porto Velho) and Hospital de Base Dr. Ary Pinheiro were not reported by SUS. (Table 12)

Table 12: Proportional Distribution of Cancer by Origin of the Referral.

Forwarding source	Fa*	Fr%
SUS	1.549	99.8
Not SUS	3	0.2

Fa* Absolute frequency. **Fr%** Relative frequency

Proportional distribution of cancer according to entry clinic and clinic responsible for the 1st service.

In the 2 years of studies on the distribution of cancer according to the entrance clinic at the Barretos hospital (Porto Velho Unit) and at the base hospital, Dr. Ary Pinheiro, follows the pattern of the annual frequency distribution.

Clinical oncology is the gateway for cancer patients in men in these 2 (two) referral hospitals for cancer diagnosis and treatment in the State of Rondônia. The oncology clinic was responsible for 81.8% of all male cancer patients.

Clinical oncology with 28.1% of all cases, urology with 12%, gastroenterology with 11.9% and head and neck clinic with 8.7% of all new cases are, respectively, the main clinics responsible for first appointments at Barretos hospital (Porto Velho) and Dr. Ary Pinheiro hospital (Table 13).

Table 13: Proportional distribution of cancer according to entry clinic and clinic responsible for the 1st service.

Entrance Clinic	**Fr %**	**1st Service Clinic**	**Fr%**
Clinical Oncology	81.8	Clinical Oncology	28.1
Gastroenterology	3.1	Urology	12.0
Neurology	1.8	Gastroenterology	11.9
Urology	1.5	Head and neck	8.7
Pneumology	0.6	Clinical Histology	2.7
Dermatology	0.4	General surgery	1.8
Other Clinics	10.7	Neurosurgery	1.5
Screening	0.1	Other Clinics	32.8
No information	0.0	No information	0.5
F%	**100.0**	**F%**	**100.0**

Fr% Relative frequency

Proportional distribution of cancer by entry clinic, according to previous diagnosis and treatment.

According to table 14 of the distribution of cancer by the entry clinic, according to previous diagnosis and treatment, 67% of patients were diagnosed and without previous treatment, 17.3% with diagnosis and previous treatment and 15.5% without diagnosis and without previous treatment.

Of the patients seen at the oncology clinic, 8.2% of the patients have already been diagnosed and received previous treatment. However, 69% of patients already diagnosed, but without previous treatment and 12.6% without diagnosis and without previous treatment.

Of the patients who entered the various clinical specialties, the frequency of patients who enter the medical and hospital service without diagnosis and without prior treatment stands out.

In the neurology clinic, 22.9% had no diagnosis and had no previous treatment, in the hematology clinic 41.6% without diagnosis and without previous treatment, in the urology clinic 41.6% without diagnosis and without previous treatment, in the clinic of urology 14.6% without diagnosis and without previous treatment, in gastroenterological clinic 39.4% without diagnosis and without previous treatment and in head and neck clinic 28.9% without diagnosis and without previous treatment.

In the other entry clinics, 25.8% of the patients were not diagnosed and had not undergone any previous treatment. (Table 14).

Table 14: Distribution of cancer by entry clinic, according to previous diagnosis and treatment.

Entrance Clinic	With Diag / With Trat	With Diag / Without Trat	Without Diag/ Without Treat	No Infor	Fr%
Clinical Oncology	18.2	69.0	12.6	0.2	100.0
Neurology	11.5	65.6	22.9	0	100.0
Clinical Hematology	29.2	29.2	41.6	0	100.0
Urology	10.4	75.0	14.6	0	100.0
Gastroenterology	9.6	51.0	39.4	0	100.0
Head and neck	8.9	62.2	28.9	0	100.0
Other Clinics	13.2	60.3	25.8	0.7	100.0
Fr%	**17.3**	**67.0**	**15.5**	**0.2**	**100.0**

Fr% Relative frequency

Proportional distribution of cancer by clinical stage, according to previous diagnosis and treatment.

Nine hundred and forty-three (943) new cases of cancer by clinical stage were excluded (ignored) due to inconsistency in the patient's medical record. For this variable, there was a failure in the health information system. Therefore, only the medical records correctly filled in all mandatory fields were considered.

Table 15 represents the proportional distribution of cancer by clinical stage, according to previous diagnosis and treatment. Excluding the sub-stratification of patients without information, there was a predominance of patients (62.1%) with unknown disease stage.

The distribution of cancer by clinical stage, according to previous diagnosis and treatment, is increasing from stages I to stage IV, in the following proportion: stage I (6.1%), stage II (9.2%), stage III (10.3%) and stage IV (12.3%), with predominance in stages III and IV.

Of the total of 316 patients with diagnosis and without treatment, 59.2% were unaware of the disease stage (unknown stage), 13.6% the disease was in stage IV and 11.4% in stage III.

Of the 152 patients with diagnosis and previous treatment, 52.6% were unaware of the disease stage (unknown stage), 14.5% were in stage IV, 13.8% in stage III and 11.8% in stage III.

Of the 141 patients without diagnosis and without previous treatment, 78.7% were unaware of the disease stage (unknown stage), 7.1% were in stage IV, 4.2% in stage III and 5.7% in stage III. (Table 15).

Table 15: Proportional distribution of cancer by clinical stage, second to previous diagnosis and treatment.

Diagnosis	Stage I	Stage II	Stage III	Stage IV	unknown stage	Fa*
With Diag / Without Trat	6.3	9.5	11.4	13.6	59.2	**316**
With Diag / With Trat	7.2	11.8	13.8	14.5	52.6	**152**
Without Diag / Without Treat	4.3	5.7	4.2	7.1	78.7	**141**
Fa*	**37**	**56**	**63**	**75**	**378**	**609**
Fr%	**6.1**	**9.2**	**10.3**	**12.3**	**62.1**	**100.0**

Fa* Absolute frequency **Fr%** Relative frequency

Proportional distribution of cancer, by examination performed for diagnosis, number of primary tumors and topography of the occurrence of the first metastasis.

According to the results of the study, 92% of the patients had their diagnosis confirmed by histological examination of the primary tumor. A single primary tumor was identified in 100% of the tests. Of the topographies of occurrence of the 1st metastasis, there was a predominance of cancer of the liver and intrahepatic biliary tract with 25% of the occurrences, bronchi and lungs with 23.1%, bones, joints and articular cartilages of the limbs with 23.1% and meninges 11.5% of occurrences. (Table 16).

Table 16: Proportional distribution of cancer, by examination performed for diagnosis, number of primary tumors and topography of the occurrence of the first metastasis.

Most important basis of diagnosis	Fr%
Clinic	0.1
Clinical research	0.2
Examination by Image	4.8
Tumor Markers	1.6
Cytology	1.0
Primary Tumor Histology	92.0
No information	0.3
Primary Tumor Numbers	**Fr %**
Single Primary Tumor	100.0
Topography of the occurrence of the 1st metastasis	**Fr* %**
Liver and Intrahepatic Bile Ducts	25.0
Bronchi and Lungs	23.1

Heart, Mediastinum and Pleura	3.9
Bones, Joints and Joint Cartilage of Limbs	23.1
Malignant Neoplasm of Bones and Articular Cartilages from Other Unspecified Locations	1.9
Kidney	1.9
Meninges	11.5
Brain	3.9
Thyroid gland	1.9
Other locations and ill-defined locations	3.8

Fr% Relative frequency

Proportional distribution of cancer due to not undergoing treatment.

Fourteen hundred and fifty-one (1,451) new cases of cancer whose initial treatment cannot be performed according to the reason for non-treatment were excluded (ignored) due to inconsistency in the patient's medical record.

According to available data and information, 83% of patients who abandoned treatment justified "Other reasons" without convincing details or explanations. Nine percent justify that they undergo treatment in another state of Brazil and 3% abandoned treatment without any explanation. Regarding the state of the disease at the end of the 1st (first) treatment, it is observed that 74% of the patients had disease progression, 13% with stable disease, 2.2% partial remission of the disease, 1% total remission (cure) and 6.8% died. (Table 17).

Table 17: Proportional Distribution of Cancer Cases Whose Initial Treatment, According to the Reason for Not Performing the First Treatment and Disease Status at the End of the First Treatment.

Cancer whose initial treatment cannot be performed according to reason for not treating	**Fr%**
Treatment in another State	9.0
Advanced Illness, Lack of Clinical Conditions or Other Associated Diseases	2.0
Treatment Abandonment	3.0
Refusal of Treatment	1.0
Other reasons	83.0
No information	2.0
Cancer status at the end of the 1st treatment	**Fr%**
Complete Remission	1.0
Partial Remission	2.2
Stable Disease	13.0

Disease in progress	74.0
Oncological Therapeutic Support	0.3
Death	6.8
Not applicable	2.7

Fr% Relative frequency

Time interval according to the average, median, fashion, quartile, minimum and maximum.

One of the factors in assessing the quality of care of a reference institution in cancer treatment is the time interval between the three most important moments in caring for a patient: admission date, diagnosis date and treatment start date. Due to inconsistency in the patient and hospital records, the data and information available do not distinguish by gender; therefore, table 10 makes a general reference between men and women.

The average time since registration / diagnosis is 19.5 days, the maximum is 209.5 days and the median is 10 days. The diagnosis / treatment period has an average of 79 days, a maximum of 2,444 days and a median of 40.5 days, while the registration / treatment period has an average time of 5.5 days, a maximum of 129.5 days and the median of 2 days. In the third quartile, the time between enrollment and diagnosis is 28 days and between diagnosis and treatment it reaches 82.5 days. (Table 18).

Table 18: Time interval (in days) elapsed, according to the average, median, mode, quartile, minimum and maximum, between: 1st consultation-1st diagnosis, 1st diagnosis-beginning of treatment, 1st consultation-beginning of treatment.

Indicator	**Registration / Diagnosis**	**Diagnosis / Treatment**	**Registration / Treatment**
Maximum	209.5	2.444	129.5
Average	19.5	79	5.5
Median	10	40.5	2
Minimum	0	0	0
Mode	1	0	0
First Quartile	3.5	13.5	0
Third Quartile	28	82.5	4

Time interval between the 1st consultation and the 1st diagnosis; 1st diagnosis - start of treatment; 1st consultation and start of treatment in the main entry clinics for men with cancer.

The entry clinics with medians between registration and diagnosis with the longest time elapsed are: general surgery with 38 days, gastrosurgery clinic with 18.5 days, clinical oncology with 14.7 days and head and neck clinic with 11 days.

The clinics with the most significant median between diagnosis and 1st treatment, in decreasing order, are: dermatology 106 days, urology 61 days, clinical oncology 49.5 days, head and neck clinic 43.5 days,

general surgery 31.7 days, gastroenterology 27.5 days, gastrosurgery 24.5 days and neurology 23 days. (Table 19).

Table 19: Time interval (in days) elapsed, according to the median, between: 1st consultation-1st diagnosis; 1st diagnosis - start of treatment; 1st consultation and start of treatment, according to the clinic responsible for the 1st treatment.

Entrance Clinic	Median Registration / Diagnosis	Median Diagnosis / Treatment	Median Registration / Treatment
Head and neck	11	43.5	2
General surgery	38	31.7	20.2
Dermatology	0	106	0
Gastrosurgery	18.5	24.5	3.5
Gastroenterology	6.5	27.5	2
Clinical Hematology	4.5	2.5	4
Neurosurgery	7	15.2	2.7
Neurology	5.2	23	3
Clinical Oncology	14.7	49.5	1
Pneumology	8	10.2	7.2
Urology	11.5	61	1

IV DISCUSSION

The objective of this research was to analyze the epidemiological profile of the 10 (ten) most frequent types of cancer in men treated at 2 (two) referral hospitals for cancer treatment in the State of Rondônia, Western Amazon (Brazil), in a period equivalent to 2 (two) years.

The research was conducted with a database organized by the Núcleo Hospitalar de Epidemiologia - NHE of the largest public reference hospital in the State of Rondônia. The incidence of cancer as a public health problem in Rondônia motivated the search to know the epidemiological profile of men diagnosed with cancer.

Proportional distribution of the 10 (ten) most frequent types of cancer in men by location of the primary tumor.

Of a total of 1,552 new cases of cancer diagnosed in men during the study period, 1,163 (74.9%) correspond to the 10 (ten) main types of cancer diagnosed by the location of the primary tumor. Therefore, 1,163 patients correspond to the research sample. In this research, prostate cancer is more frequent (30.9%), followed by non-melanoma skin cancer (22.9%) and stomach cancer (11.7%). The proportional distribution of the 10 (ten) most common types of cancer in men was: prostate (30.9%), non-melanoma skin (22.9%),

stomach (11.7%), bronchi and lungs (6.7%), colon (5.8%), leukemias (5.8%), esophagus (4.4%), central nervous system (4.2%), rectum (3.9%) and bladder (3.6%).

According to INCA [1], the incidence rates of 100 thousand inhabitants and the number of new cases of cancer in Rondônia, according to sex and location of the tumor, for the year 2020, will reach 1,530 new cases of cancer in men. Also according to INCA [1], the 10 highest frequencies in men will be non-melanoma skin cancer (380 new cases), prostate (310 new cases), bronchi and lungs (110 new cases), stomach (80 new cases) , colon and rectum (60 new cases), oral cavity (50 new cases), esophagus (40 new cases), central nervous system (40 new cases), leukemia (40 new cases) and larynx (30 new cases).

The study by Paraguassu-Chaves et al [6] found 10 neoplasms more frequent in men in the following order: prostate cancer (33%), non-melanoma skin (22%), stomach (12%), bladder (5.2%), bronchi and lungs (5.2%), colon (4.8%), rectum (4.8%), esophagus (4.5%), liver and intrahepatic bile ducts (4.1%).

In the research "Cancer in men: a study with patients seen at a hospital in the city of Porto Velho, Brazilian Amazon" by Paraguassu-Chaves et al [2], prostate cancer is more common in 33.9% of new cases, followed by non-melanone skin cancer in 22.2% of cases and stomach cancer in 11.4% of cases.

Paraguassu-Chaves et al [4] in "Epidemiological and sociodemographic characterization of women and men with cancer in a State in the Brazilian Amazon" found the following results: prostate cancer (30.9%), non-melanoma skin cancer (22.9%), stomach cancer (11.7%), bronchial and lung cancer (5.7%), colon cancer (5.8%), cancer of the retoculoendotial hematopoietic system (5.8%), cancer of the esophagus (4.4%), brain cancer (4.2%), cancer of the rectum (3.9%) and bladder cancer (3.6%).

In the reference studies in Rondônia, there is no significant difference in the most common types of cancer in men. Therefore, the 10 (ten) most common types of cancer remain almost in their totality and frequency over the last few years.

The world estimate points to prostate cancer as the second most common cancer in men in the world [1]. It is a highly prevalent disease [8]. It ranks second among malignant neoplasms that affect men, worldwide, behind lung cancer only. Estimated 1,280,000 new cases of prostate cancer, or the equivalent of 7.1% of all cancer values considered [3], [9].

In Brazil, prostate cancer is the cancer with the highest incidence among men (except non-melanoma skin cancer) [10], [11], [12]. In Brazil, there are an estimated 65,840 new cases of prostate cancer for each year of the 2020-2022 triennium. This value corresponds to an estimated risk of 62.95 new cases per 100 thousand men [1]. In Brazil, in 2017, there were 15,391 deaths from prostate cancer, equivalent to the risk of 15.25 / 100 thousand men [13].

The main risk factor is age and its incidence increases significantly after 50 years [14]. Other known risk factors that increase the risk of the disease are: family history, hereditary genetic factors (for example, Lynch syndrome and mutations in BRCA1 and BRCA2) [15].

Smoking and excess body fat are risk factors [16]. Exposure to aromatic amines, arsenic and petroleum products are also risk factors [14]. Family history in the first degree (father, siblings or children) has a positive association to increase the risk of developing this neoplasm [17]. Skin color / ethnicity is relevant in the etiology of prostate cancer [18]. There are other associations of controversial risk factors, such as sex hormones, elitism, eating patterns and obsesity [8], [19] e [20].

Of all the malignancies diagnosed in the world, non-melanoma skin cancer is the most common type in both sexes [3] e [9]. Non-melanoma skin cancer is the most common tumor among men and women in Brazil [21]. In 2018, 1.04 million (5.8%) of new cases of non-melanoma skin were estimated worldwide, with 640 thousand new cases in men (16.6 / 100 thousand) [1].

In Brazil, the number of new cases of non-melanoma skin cancer expected, for each year of the 2020-2022 triennium, will be 83,770 in men, corresponding to an estimated risk of 80.12 new cases per 100 thousand men [1]. In Brazil, 1,301 deaths from non-melanoma skin cancer occurred in men in 2017. This value corresponds to the risk of 0.92 / 100 thousand [22].

The main risk factors for skin cancer are prolonged exposure to the sun (ultraviolet rays - UV), especially in childhood and adolescence, exposure to tanning beds and family history of skin câncer [15]. Skin cancers are more common in people with fair skin over 40 years of age, except for those who already have skin diseases [23]. This statement is corroborated by studies related to sun exposure as an extremely relevant risk factor [24]. In addition to these, there are also environmental and occupational factors.

In Rondônia, workers who carry out their activities outdoors, such as construction workers, farmers, fishermen, health workers, among others, have a higher risk of non-melanoma skin cancer.

It is difficult to estimate non-melanoma skin cancer, as not all cancer records are collected [1]. Despite the low lethality, its high incidence is the cause of the occurrence of deaths from non-melanoma cancer, almost identical to melanoma skin cancer [25].

Of all cancers that occur in the world, stomach cancer ranks fifth [26], [27]. In men the frequency is twice as high as in women [8]. Stomach cancer in both sexes is the third leading cause of death worldwide, with 8.8% of all deaths. In Brazil, in 2017, there were 9,206 deaths from stomach cancer in men, these values corresponded to the risk of 9.12 / 100 thousand [22], [23], [24]. For Brazil, it is estimated, for each year of the 2020-2022 triennium, 13,360 new cases of stomach cancer among men. This value corresponds to an estimated risk of 12.81 per 100 thousand men [1].

Helicobacter Pylori infection comprises a cause more strongly associated with the risk of developing stomach cancer [8], [28], [29].

Other environmental factors include nutritional habits, such as diets rich in smoked or salt-preserved foods, obesity, alcohol and tobacco consumption [8], [30]. On the other hand, the intake of fruits and vegetables, cereals and seafood has been reported as a protective factor. Hereditary factors contribute to a lesser extent to the burden of this type of cancer, such as previous family history, around 2% [8]. Just as the incidence may be affected by the Region's development, the level of education appears to be associated with risk; therefore, more advanced levels of education can be a protective factor [31], [32].

In the world, lung cancer is among the main incidences, occupying the first position among men. In 2018, lung cancer represented 1.37 million new cases in men, corresponding to an estimated risk of 35.5 / 100 thousand men. For Brazil, 17,760 new cases of lung cancer in men are estimated for each year of the 2020-2022 period. This value corresponds to an estimated risk of 16.99 new cases per 100 thousand men [1].

In Brazil, in 2017, there were 16,137 deaths from lung cancer in men, which represents an estimated risk of 15.98 / 100 thousand men [1], [13], [14]. Smoking and passive tobacco exposure are the main risk factors for the development of lung cancer. 85% of diagnosed cases are associated with tobacco use [14]. Smoking and passive tobacco exposure are the main risk factors for the development of lung cancer [33], [34]. Other

risk factors are occupational exposure to chemical or physical agents (asbestos, silica, uranium, chromium and radon) and high doses of beta-carotene supplements in smokers and ex-smokers [1], [14], [33].

It is estimated for Brazil, for each year of the 2020-2022 triennium, 20,520 cases of colon and rectal cancer in men. This value corresponds to an estimated risk of 19.63 new cases per 100 thousand men [1]. The most recent world estimate indicates that 1 million new cases of colon and rectal cancer have occurred in men [1]. It is the third most incident tumor among all cancers, with an estimated risk of 26.6 / 100 thousand. In terms of mortality, in Brazil, in 2017, there were 9,207 deaths due to cervical and rectal cancer (9.12 / 100 thousand) in men [1], [23].

The pattern of colon and rectal cancer incidence differs between the sexes, with much higher rates for men [9], [35]. The main factors related to the increased risk of developing colon and rectal cancer are: age 50 years or older, obesity, physical inactivity, prolonged smoking, high consumption of processed meat, low calcium intake, excessive alcohol consumption and diet low in fruits and fiber [1], [4], [15]. Colon and rectal cancer is a multifactorial disease influenced by genetic, environmental and lifestyle factors [36], [37].

Leukemia is a disease that occurs most often in adults over 55, but it is also the most common cancer in children under 15 [14]. There are more than 12 types of leukemia, the main four being: acute myeloid leukemia (MLA), chronic myeloid leukemia (CML), acute lymphocytic leukemia (ALL) and chronic lymphocytic leukemia (LLC) [1]. A worldwide estimate shows that there were 249,000 new cases of leukemia, the tenth most incident tumor among all cancers, with an estimated risk of 6.5 / 100,000 men [3], [9].

The number of new leukemia cases expected for Brazil, for each year of the 2020-2022 triennium, will be 5,920 cases in men. This value corresponds to an estimated risk of 5.67 new cases per 100 thousand men [1]. In 2017 there were 4,795 deaths from leukemia in Brazil with a mortality rate of 4.75 / 100 thousand men [1], [14]. The risk factors for leukemia are not yet well defined, but there is a suspicion of an association between risk factors with a greater chance of developing some types of diseases, among them: smoking (AML); ionizing radiation (X-rays and gamma); chemotherapy - some classes of drugs used to treat cancer and autoimmune diseases (AML and ALL); occupational exposure to formaldehyde in industries (chemical, textile, among others); rubber production (leukemias); Down syndrome and other inherited diseases (AML); myelodysplastic syndrome and other blood disorders (AML); family history; and, finally, exposure to pesticides, solvents and infection by hepatitis B and C viruses (leukemias) [1].

The world estimate pointed to 572 thousand new cases of esophageal cancer in the world, the incidence being twice as high in men as in women [1]. In men, 400 thousand new cases were registered, occupying the seventh position among all cancers, with an estimated risk of 10.4 / 100 thousand men. Approximately 70% of cases occur in men [3], [9]. The number of new esophageal cancer cases estimated for Brazil, for each year of the 2020-2022 triennium, will be 8,690 cases in men. This value corresponds to an estimated risk of 8.32 new cases per 100 thousand men [1].

The observed incidence and mortality rates are very close, of intermediate magnitude. Esophageal cancer is considered a disease of low prevalence and relatively low survival [8]. Esophageal cancer has the sixth leading cause of cancer death worldwide [3], [9]. In Brazil in 2017, there were 6,647 deaths from esophageal cancer with a crude mortality rate of 6.58 / 100 thousand in men [13].

Excessive consumption of alcoholic beverages and smoking are the main risk factors for esophageal cancer. Among other risk factors associated with the development of esophageal cancer, are obesity, Barret's syndrome (due to gastroesophageal reflux disease), hereditary tylosis syndrome (thickening of the skin on the palms and soles of the feet), achalasia (lack of sphincter relaxation between the esophagus and the stomach), causal lesions (burns) in the esophagus and Plummer-Vinson syndrome (iron deficiency) [3], [38]. Other relevant risk factors also stand out, such as a diet with a low intake of fruits, vegetables and whole fibers, consumption of processed meats and risk factors associated with occupational exposure, such as building dust, coal and metal, fossil fuel vapors, oil mineral, herbicides, sulfuric acid and carbon black [3], [38].

Worldwide, in terms of incidence, cancer of the central nervous system ranks thirteenth in men [1]. In 2018, 162 thousand new cases were estimated in men. This value corresponds to an estimated risk of 4.2 / 100 thousand men [3], [9]. For Brazil, 5,870 new cases of cancer of the central nervous system in men are estimated for each year of the 2020-2022 triennium [1]. This value corresponds to an estimated risk of 5.61 new cases per 100 thousand men. In Brazil, 4,795 deaths in men occurred in 2017, corresponding to the risk of 4.75 / 100 thousand [13].

As for risk factors, this disease is caused by the sum of changes acquired over time due to genetic predisposition or exposure [14]. The most well-known risk factors are exposure to ionizing radiation, deficiency of the immune system, environmental exposures (arsenic, lead and mercury), occupational exposures (workers in the petrochemical, rubber, plastic and graphic industries) and obesity [15].

Bladder cancer is one of the most common cancers of the urinary tract, being more common in men than in women. Incidence rates are much more frequent in men, two to four times higher than in women.

The most recent world estimate points out that bladder cancer was the sixth most frequent, with an estimate of 424 thousand new cases, with an estimated risk of 11.0 / 100 thousand men [1]. In terms of mortality, in Brazil, 3,021 deaths from bladder cancer occurred in 2017 (2.99 / 100 thousand) in men [13]. The number of new cases of bladder cancer estimated for Brazil, for each year of the 2020-2022 triennium, will be 7,590 cases in men. This value corresponds to an estimated risk of 7.23 new cases per 100 thousand men [1].

Bladder cancer is most often diagnosed in the 60 and 70 year old age groups [39]. However, the age range of patients varies between 45 and 75 years, with a higher incidence in the age group of 66 and 68 years [40].

The main risk factor for bladder cancer is smoking and is associated with the disease in 50% to 70% of cases [14], [41]. The risk of developing this disease among smokers is two to six times higher compared to nonsmokers [8]. There is also an association with risk factors related to occupational and environmental exposure that increase the risk of developing the disease [24].

Distribution of the 10 main neoplasms of men in the State of Rondônia by age at diagnosis of cancer.

Incidence rates increase rapidly after 50 years of age. In Rondônia, the age group of 50 to 79 years old reaches 76.4% of the 10 main types of cancer in men, with respectively 20.4% (between 50 and 59 years old), 26% (between 60 and 69 years old) and 30 % (between 70 and 79 years old). Prostate cancer has a high frequency from the age of 50. Non-melanoma skin cancer is the second most common in men aged 37% (between 70 and 79 years old). Stomach cancer is more common in men over 40 years of age.

Stomach cancer has the highest frequency 28.6% in the age between 60 and 69 years. Bronchial and lung cancer in men is more prevalent in patients with 45.8% in the 60 to 69 age group. Colon cancer has the highest incidence in the 50-59 age group (23.1%). Esophageal cancer concentrates the highest incidence in the age group of 50 to 59 years (40.9%). Rectal cancer is found more often in 30% in the 60 to 69 age group. Bladder cancer maintains the highest concentration of new cases in the 50 to 59 age group (27.3%) and the same relative frequency (27.3%) in the 70 to 79 age group.

Age is still one of the most important risk factors for cancer in men, according to national and international literature. In the study by Paraguassu-Chaves et al [6], there was a predominance in the profile of male patients aged between 55 and 74 years (54.5%). In another study by Paraguassu-Chaves et al [4], there was a predominance of cancer in men, aged between 55 and 59 years (14.6%), 60 to 64 years (14%), 65 to 69 years (12.2%), 70 to 74 years (12%) and extends to 75 to 79 years (11.3%). A study by Paraguassu-Chaves et al [42] found similar results, regardless of the type of cancer.

According to INCA [14], the main risk factor for prostate cancer is age and its incidence increases after 50 years. Also according to INCA [23] skin cancer is more common in people over 40 years of age, except for those who already have skin diseases. The age of 50 years or more is a risk factor for colon and rectal cancer [1], [4], [15]. Leukemia is a disease that occurs most frequently in adults over 55 years of age [14]. Bladder cancer is most often diagnosed in the 60 and 70 year old age groups [39]. The age of confirms with risk factor for most of the cancers studied in this work.

Distribution of the 10 main neoplasms in men, by ethnicity / color.

Neoplasms diagnosed in brown (64.6%) and white (28%) men are more frequent than in other ethnicities. Of the 10 main types of cancer, brown men predominated in all types in the following decreasing order: esophagus (77.3%), colon (69.2%), stomach (67.9%), bronchi and lungs (66.6%), non-melanoma skin (66%), rectum (65%) and prostate (63.3%). The only exception was bladder cancer, which predominated in white patients. This proportional distribution by ethnicity / skin color is similar to those found by Paraguassu-Chaves et al [2], [4], [5], [6], [42].

A study by Paraguassu-Chaves et al [2] found neoplasms diagnosed in brown (64.2%) and white (28.3%) men as the most frequent than in other ethnicities, such as: black, yellow and indigenous. Of the 10 main types of cancer in men, brown color predominated, in the following decreasing order: kidney (73.7%), esophagus (73.7%), colon (68.4%), stomach (66.7%) , non-melanoma skin (65.9%), prostate (62.8%), bronchi and lungs (62.5%), rectal cancer (62.5%) and liver (61.5%). The only exception was bladder cancer, which predominated in white people (47.4%).

In practically all types of cancer, there was a predominance of brown patients, justified by the fact that Rondônia has the majority of the population of that color [42]. For Nakandi H et al [18], skin color is relevant in the etiology of prostate câncer.

Distribution of the 10 main neoplasms in men by level of education.

The education of men diagnosed with cancer is 18.3% illiterate, 43.6% with incomplete primary education, 18.5% with complete primary education, 15.6% with secondary education and 4% with complete higher

education. The frequency of cancer in men with less education is much higher than the cases diagnosed in men with more education.

Prostate cancer concentrates its highest incidence in patients with low education (76.5%). For Alicandro et al [31] and Reques et al [32], the level of education seems to be associated with the risk factor for stomach cancer; according to these authors, the most advanced levels of education can be a protective factor. The same situation occurs with non-melanoma skin cancer (79.8%) of patients with low education. In the same trend of low education, patients with stomach cancer are 26.8% illiterate, 32.1% have incomplete primary education. Bronchial and lung cancer patients, 91.6% were educated patients up to complete elementary school. Colon cancer patients (88.6%) with educational level up to complete elementary school, esophageal cancer with 86.4% up to complete elementary school, rectal cancer with 60% of patients with elementary school and bladder cancer with 81 , 8% of patients with complete elementary education.

These findings are corroborated by Paraguassu-Chaves et al [2], [4], [5], [6], [42]. It is possible to identify that the cancer rate in men with less education is much higher than the cases diagnosed in men with more education. Understanding this information is an effective way to prevent and treat disease. Prostate cancer concentrates its highest incidence in patients with low education. The same situation occurs with non-melanoma skin cancer, with stomach cancer patients, in patients with bronchial and lung cancer, esophagus, colon cancer, bladder cancer and liver cancer [2].

Distribution of the 10 main neoplasms in men by conjugal state.

The highest frequencies of cancer in men were found in married men with 73.2% (without exception), distributed as follows: bladder cancer (86.5%), prostate (78.9%), non-melanoma skin (77.1%), rectum (72.7%), stomach (71.5%), bronchi and lungs (68.8%), esophagus (68.2%) and colon (61.8%). These results were similar to those found by Paraguassu-Chaves et al [4] in 2 years of studies in Rondônia.

Another study found that married people have the highest frequencies (74.9%). The highest frequencies of cancer in men were found in married men, without exception, distributed as follows: rectal cancer (90%), kidney (87.5%), esophagus (80%), prostate (77.2%), non-melanoma skin (76.4%), colon (75%), stomach (73.7%), liver (66.7%), bronchi and lungs (60%) and bladder (60%) [2].

Distribution of the 10 main neoplasms in men, by occupation.

Men diagnosed with cancer who work in agriculture represent 44.9% of the 10 most common types of cancer in men in Rondônia. Next, men who occupy the professions of commerce, banks, transport and others with 22.7%, public agents or employees of the federal, state and municipal public service with 10.8% and independent professional, teacher or technician with 10.8% %.

The proportional distribution of cancer in men by occupational activity is very well defined with agricultural activity, especially in relation to prostate cancers (73.5%), bladder (66.6%), non-melanoma skin (65.1%) , bronchi and lungs (40%), stomach (39.4%) and esophagus (31.8%) are the most frequent.

In the study by Paraguassu-Chaves et al [2] men who work in agriculture represent 67.7% of the cases diagnosed with cancer, followed by men who occupy the professions of commerce, banking, transport and others with 26.7%. The proportional distribution of cancer in men by occupational activity in agricultural

activity, cancer of the bronchi and lungs (88.9%), bladder (80%), esophagus with (80%), prostate (66.7%), kidney (66.7%), non-melanoma skin (63.3%), colon (30%) and liver (55.5%) are the most frequent [2].
In Rondônia cancer predominates in workers in agricultural activities, with 43.4%. The main hypothesis for the high frequency of cancer in agricultural workers is due to the fact of the economic vocation (agricultural activities) of the State of Rondônia. What should lead public health authorities to prioritize protection and assistance policies for this population group [4].

Distribution of the 10 main neoplasms in men by family cancer history.
Regarding the family history of cancer, 45.6% of men with cancer in Rondônia have a family history of cancer. The greatest evidence of cancer with a family history was found in esophageal cancer with 63.7% and rectal cancer with 50%. All 10 main types of cancer in men are related to family history of cancer, in the following order: cancer of the esophagus (63.2%), rectal cancer (50%), stomach cancer (48.2%), cancer of the stomach colon (46.2%), bronchial and lung cancer (45.8%), bladder cancer (45.5%), non-melanone skin cancer (34%) and prostate cancer (31.9%). These findings are corroborated by Paraguassu-Chaves et al [2], [4], [5], [6], [42].
Among the 10 main neoplasms in men with a family history of cancer, 34.6% of men with cancer have a family cancer history. Fifty percent of men with liver and rectal cancer have a family history of cancer. The greatest evidence of cancer with a family history was found in esophageal cancer, where 66.7% of patients have a family history of cancer. All 10 main types of cancer in men are related to family history of cancer, in the following order: stomach (47.7%), colon (45%), bronchi and lungs (42.8%), bladder (38.5%), prostate (26.8%), non-melanone skin cancer (24.6%) and kidney (22.2%) [2].
The American Cancer Society [15] recognizes family history and hereditary genetic factors as a risk factor for prostate cancer. For the American Cancer Society, a family history of skin cancer is an important risk factor for non-melanoma skin cancer [15]. According to Stewart and Wild [8], the family cancer history contributes less to stomach câncer (2%). According to Boyle [36] and Sandler [37], colon and rectal cancer is a multifactorial disease and is influenced by genetic factors. Family history was seen as a risk factor for leukemia [1]. INCA [14] attributes genetic predisposition as a risk factor for esophageal cancer. Therefore, the family history of cancer is one of the risk factors for most neoplasms in this study.

Distribution of the 10 main neoplasms in men by smoking.
The relative incidence of men who declared smokers was 22.8% and 20.9% ex-smokers. The sum of smokers and ex-smokers reaches a relative frequency of 43.7% of men with cancer in Rondônia. The sum of smokers (29.2%) and ex-smokers (45.8%) represents the highest relative incidence in patients with bronchial and lung cancer. Esophageal cancer has the second highest relative incidence of smoking and ex-smoking patients with respectively (45.4%) and (27.3%).
The main types of cancer in men are directly related to smoking, distributed as follows: bronchial and lung cancer (29.2% of smokers and 45.8% of ex-smokers); esophageal cancer (45.4% smokers and 27.3% ex-smokers); stomach cancer (23.2% smokers and 19.6% ex-smokers); colon cancer (23.1% smokers and 19.2% ex-smokers); bladder cancer (18.2% smokers and 22.7% ex-smokers); rectal cancer (20% smokers and 10%

ex-smokers); non-melanoma skin cancer (9.2% smokers and 17.4% ex-smokers); and prostate cancer (14.5% smokers and 5.4% ex-smokers).

According to Maule and Merletti [16], smoking is a risk factor for prostate cancer. Other factors such as tobacco use are at risk for stomach cancer [8], [30]. Eighty percent of bronchial and lung cancer cases are associated with tobacco use [14]. For INCA (1) smoking is associated with leukemia. Excessive smoking is one of the main risk factors for esophageal cancer [3], [38]. The main risk factor for bladder cancer is smoking and is associated with the disease in 50% to 70% of cases [14], [41].

Smoking as a risk factor for some types of cancer has been identified in the Amazon. The studies by Paraguassu-Chaves et al [2], [4], [5], [6], [42] have already shown smoking as a direct factor for the main neoplasms in men in Rondônia.

Distribution of the 10 main neoplasms in men due to alcoholism.

Of the men diagnosed with cancer, 19.5% consume alcoholic beverages and 17.2% are ex-consumers. The frequency of men who have never consumed alcoholic beverages is 63.3%. Men diagnosed with cancer who consume alcoholic beverages are distributed in the following decreasing order: cancer of the esophagus (36.4%), cancer of the bronchi and lungs (25%), stomach cancer (24.6%), colon cancer (23.1%), prostate (14.5%), bladder (13.6%), rectal cancer (10%) and non-melanoma skin cancer (9.2%).

Studies by Paraguassu-Chaves et al [2], [4], [5], [6] and [42] corroborate these findings. In their studies, alcohol consumption was predominant among men with cancer in Rondônia.

One of the studies carried out in Rondônia, showed that of the men diagnosed with cancer, 17.5% use alcohol and 12.9% are ex-consumers, 35.3% of patients with esophageal cancer consume alcoholic beverages, bronchi and lungs (27.8%), liver (26.7%), colon (23.8%), stomach (23.4%), kidney (15.8%), prostate (14.7%) and skin without melanoma (11.8%) are consumers of alcoholic beverages [2].

Other factors for stomach cancer include alcohol consumption [8], [30]. Among the main factors related to the increased risk of developing colon and rectal cancer is excessive alcohol consumption [1], [4], [15]. Excessive consumption of alcoholic beverages is a major risk factor for esophageal câncer [3], [38]. These are some references that associate the consumption of alcoholic beverages as a risk factor for the development of cancer in men.

Proportional distribution of cancer according to the first treatment.

As for the 1st treatment received, "Other isolated therapeutic procedures" had a higher frequency, with 40.1%. The second highest frequency was the surgery procedure with 20.4%, followed by chemotherapy with 7.4% and radiation therapy with 1.8% of the first treatments received by men diagnosed with cancer. Patients who have not received any type of therapeutic treatment, even after diagnosis, reach 30.3%. Patients who received “other isolated therapeutic procedures” are in decreasing order: cancer of the esophagus (45.5%), bladder (39.2%), non-melanoma skin (33%), rectal (30%), prostate (28.9%), colon (26.9%), bronchi and lungs (20.8%) and stomach (17.9%).

A study by Paraguassu-Chaves et al [2] shows that “Other isolated therapeutic procedures”, prevailed with 47.8% of the 1st treatment received by the patient. The second highest frequency was surgery with 18.2%

of the procedures. 27.3% of patients, even after diagnosis, did not receive treatment. These findings are also corroborated by Paraguassu-Chaves et al [4], [5], [6].

Distribution of the 10 main neoplasms in men by death / cancer.

By analyzing the distribution of the 10 most common types of cancer in men and the cause of death from cancer, it can be identified that 14.2% of diagnosed patients died from the disease. The main victims of deaths were men with stomach cancer (28.3%), esophageal cancer (27.3%) and bronchial and lung cancer with 16.7%. Bladder cancer (13.6%) and rectal cancer (10%) also have a significant frequency of death. Colon cancer with 7.7%, prostate cancer with 5.3% and skin cancer without melanoma with 4.5% complete the list of types of cancer that led men to death.

In the study by Paraguassu-Chaves et al [2], 9% of men diagnosed with cancer in Rondônia died of the disease. The main victims of death were men with liver cancer (28.6%), esophagus (27.3%), stomach (23.2%), bronchi and lungs (16.7%), kidney (8.3%) and colon (7.7%). These findings are corroborated by Paraguassu-Chaves et al [4], [5] e [6].

Proportional distribution of cancer by origin of the referral.

Almost 100% (99.8%) of patients admitted to Hospital de Barretos / Rondônia and Hospital de Base Dr. Ary Pinheiro were notified by the Unified Health System - SUS. In the study by Soares et al [43] 68.1% of cancer patients come from the Public Health System. The study by Mascarello et al [44] found that 84.2% of cancer patients are referred by the Unified Health System (SUS). Out of a universe of 3,333 diagnosed cases, 3,316 were reported by the Unified Health System - SUS, corresponding to 99.5% of patients admitted to Hospital de Barretos / Rondônia and Hospital de Base Dr. Ary Pinheiro [4].

The National Cancer Prevention and Control Policy guarantees comprehensive care to any cancer patient, through the High Complexity Assistance Units in Oncology (UNACON) and the High Complexity Assistance Centers in Oncology (CACON), which leads to looking for care with SUS.

This situation requires that the managers of the Unified Health System (SUS) make an immense effort to offer adequate care to the population. This perspective makes clear the need for major investments in health promotion, in the quest to modify the patterns of exposure to risk factors for cancer.

Proportional distribution of cancer according to entry clinic and clinic responsible for the 1st service**.**

The oncology clinic was responsible for 81.8% of all male cancer patients. Clinical oncology with 28.1% of all cases, urology with 12%, gastroenterology with 11.9% and head and neck clinic with 8.7% of all new cases are, respectively, the main clinics responsible for first appointments at Barretos hospital (Porto Velho) and Dr. Ary Pinheiro hospital.

In the study by Paraguassu-Chaves et al [4] the Oncology clinic was responsible for the entry of more than 80% of male patients. Gastroenterology, neurology, urology, pneumology and dermatology clinics are clinics that are also the gateway for male cancer patients. The sum of all other clinics corresponds to 10.7%. The oncology clinic, urology clinic, gastroenterology clinic, head and neck clinic, histology clinic, general surgery clinic and neurosurgeon clinic are the main clinics responsible for the first treatment of the patient [4].

Proportional distribution of cancer by entry clinic, according to previous diagnosis and treatment.

Of all patients, 67% were diagnosed and without previous treatment, 17.3% with diagnosis and previous treatment and 15.5% without diagnosis and without previous treatment. At the oncology clinic, 69% of patients have already been diagnosed, but without previous treatment.

In the neurology clinic, 22.9% had no diagnosis and had no previous treatment, in the hematology clinic 41.6% without diagnosis and without previous treatment, in the urology clinic 41.6% without diagnosis and without previous treatment, in the clinic of urology 14.6% without diagnosis and without previous treatment, in gastroenterological clinic 39.4% without diagnosis and without previous treatment and in head and neck clinic 28.9% without diagnosis and without previous treatment.

According to Soares et al [43], the prolonged time between clinical suspicion and confirmation of the diagnosis, diagnosis and non-immediate treatment are factors that hinder the treatment of the disease.

Proportional distribution of cancer by clinical stage, according to previous diagnosis and treatment.

There is a predominance of patients (62.1%) with unknown stage of the disease. Of the total of 316 patients with diagnosis and without treatment, 59.2% were unaware of the disease stage (unknown stage), 13.6% the disease was in stage IV and 11.4% in stage III. Of the 152 patients with previous diagnosis and treatment, 52.6% were unaware of the disease stage (unknown stage), 14.5% were in stage IV, 13.8% in stage III and 11.8% in stage III. Of the 141 patients without diagnosis and without previous treatment, 78.7% were unaware of the disease stage (unknown stage), 7.1% were in stage IV, 4.2% in stage III and 5.7% in stage III.

The few reference studies in the Amazon already warn about the lack of knowledge about the stage of the disease and the diagnosis of advanced cancer. The advanced stages of the disease make treatment difficult and, consequently, can cause a large number of deaths [43]. There was a predominance of patients (non-stage), that is, patients without defining the stage of the disease.

In the diagnostic categories of cancer stages studied by Paraguassu-Chaves et al [4] in Rondônia, there was a predominance in stages III and IV, considered advanced stages of the disease.

Proportional distribution of cancer, by examination performed for diagnosis, number of primary tumors and topography of the occurrence of the first metastasis.

According to the results of the study, 92% of the patients had their diagnosis confirmed by histological examination of the primary tumor. A single primary tumor was identified in 100% of the tests. Of the topographies of occurrence of the 1st metastasis, there was a predominance of cancer of the liver and intrahepatic biliary tract with 25% of the occurrences, bronchi and lungs with 23.1%, bones, joints and articular cartilages of the limbs with 23.1% and meninges 11.5% of occurrences.

In a study by Paraguassu-Chaves et al (4), ninety-two percent of patients had their diagnosis confirmed by histological examination of the primary tumor. A single primary tumor was identified in 99.96% of the tests. From the topographies of occurrence of the 1st metastasis, there was a predominance of cancer of the liver and intrahepatic biliary tract with 25% of the occurrences and bronchi and lungs with 23%. These results are almost the same as the current research.

Proportional distribution of cancer due to not undergoing treatment.

According to the survey data, 83% of patients who abandoned treatment justified "Other reasons" without convincing details or explanations. The abandonment of treatment after the first treatment of the patient, shows an extremely worrying situation. Well, it is a set of diseases that if not treated correctly can fatally lead the patient to death.

What is known that a small portion of these patients with better financial conditions abandon treatment in Rondônia and seek large centers specializing in cancer in other States.

Time interval according to the average, median, fashion, quartile, minimum and maximum.

The average time since registration / diagnosis is 19.5 days, the maximum is 209.5 days and the median is 10 days. The diagnosis / treatment period has an average of 79 days, a maximum of 2,444 days and a median of 40.5 days, while the registration / treatment period has an average time of 5.5 days, a maximum of 129.5 days and the median of 2 days. In the third quartile, the time between registration and diagnosis is 28 days and between diagnosis and treatment it reaches 82.5 days.

Previously, the time interval between the three most important moments in the care of a patient was not known in detail: date of admission, date of diagnosis and date of beginning of treatment. This information is crucial in assessing the quality of care at a referral hospital for cancer treatment.

Time interval between the 1st consultation and the 1st diagnosis; 1st diagnosis - start of treatment; 1st consultation and start of treatment in the main entry clinics for men with cancer.

The entry clinics with medians between registration and diagnosis with the longest elapsed time are: general surgery with 38 days, gastrosurgery clinic with 18.5 days, clinical oncology with 14.7 days and head and neck clinic with 11 days. The clinics with the most significant median between diagnosis and 1st treatment, in descending order, are: dermatology 106 days, urology 61 days, clinical oncology 49.5 days, head and neck clinic 43.5 days, general surgery 31.7 days, gastroenterology 27.5 days, gastrosurgery 24.5 days and neurology 23 days.

According to some experts, these mediators are reasonable, that is, they are on an intermediate scale. Little was known about the time interval between the first consultation and the first diagnosis; 1st diagnosis - start of treatment; 1st consultation and start of treatment at the main entrance clinics for men with cancer in Rondônia.

V. CONCLUSIONS

The present study concludes that, of the sample of 1,163 (74.9% of the total cancer in men) corresponds to the 10 (ten) main types of cancer diagnosed by the location of the primary tumor in men. The sample was obtained from data in 2 (two) referral hospitals for cancer treatment in Rondônia, for a period of 2 (two) years.

The 10 (ten) most common types of cancer in men were: prostate (30.9%), non-melanoma skin (22.9%), stomach (11.7%), bronchi and lungs (6.7%), colon (5.8%), leukemia (5.8%), esophagus (4.4%), central nervous system (4.2%), rectum (3.9%) and bladder (3.6%).

There was a predominance of the age group from 50 to 79 years old, reaching 76.4%, being 20.4% (between 50 and 59 years old), 26% (between 60 and 69 years old) and 30% (between 70 and 79 years old). old). elderly), respectively, men with brown (64.6%) and white (28%) skin color, low education, 73.2% of men with cancer are married, 44.9% of men work in agriculture, 45, 6% of men with cancer have a family history of cancer, 22.8% smokers and 20.9% ex-smokers and 19.5% consume alcohol and 17.2% are ex-alcohol users. In all types of diagnosed cancer, there is a relationship with smoking and alcohol consumption.

The first treatment received more frequently (40.1%) was "other isolated therapeutic procedures", followed by the surgical procedure with 20.4%. Of the 10 types of cancer in this study, 14% of patients died of the disease, 99.8% of patients were notified by the Unified Health System - SUS and the oncology clinic was responsible for 81.8% of all cancer patients and 28.1% for the first treatments. 67% of patients were diagnosed and without previous treatment, 17.3% with diagnosis and previous treatment and 15.5% without diagnosis and without previous treatment. There was a predominance in stages III and IV of the disease. Of the total of 316 patients with diagnosis and without treatment, 59.2% were unaware of the disease stage (unknown stage). These findings are extremely worrying. 92% of the patients had their diagnosis confirmed by histological examination of the primary tumor and a single primary tumor was identified in 100% of the tests.

From the topographies of occurrence of the 1st metastasis, there was a predominance of cancer of the liver and intrahepatic biliary tract (25%), bronchi and lungs (23.1%), bones, joints and articular cartilages of the limbs (23.1%) and meninges (11, 5%) of occurrences. 83% of patients who abandoned treatment justified "Other reasons" without convincing details and explanations. The average time since registration / diagnosis is 19.5 days, the maximum is 209.5 days and the median is 10 days, and the entry clinics with medians between registration and diagnosis with the longest elapsed time are: general surgery (38 days), gastrosurgery clinic (18.5 days), clinical oncology (14.7 days (and head and neck clinic (11 days). According to some experts, time considered intermediate. The results are similar to those found by Paraguassú-Chaves et al [2], [4], [5] and [6] in Rondônia.

For research carried out in Rondônia, the Hospital Cancer Registry (RHC) represents an extremely important tool for the knowledge and monitoring of cancer morbidity and mortality and that can provide hospital staff and management with information on the frequency and possible trends of the most types of diseases. cancer diagnosed and / or treated at the health facility and estimated patient survival. However, you may encounter some problems (inefficiency) in filling out medical records and other important information, which can compromise any analysis or interpretation more safely and efficiently.

The scenario of cancer projection in men in Rondônia is worrying and requires an urgent redirection of actions and strategies for cancer prevention, control, assistance and treatment.

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