

## PREVALENCY OF POPULATION BASED CANCERS REGISTRY AT REGIONAL REFERRAL HOSPITAL MUNICIPALITY COVALIMA TIMOR LESTE (CANREG5 SOFTWARE APPLICATION FOR ONCOLOGY REPORTS ON 2020-2022)

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### ABSTRACT

**Introduction:** Cancer is a leading cause of death worldwide, accounting for nearly 10 million deaths in 2020, or nearly one in six deaths, cancer predominantly afflicts older people. Routine data collection efforts are a necessary, often underappreciated, component of nearly all cancer research and prevention efforts.

**Objective:** To describe the most frequent type of cancers, age, sex and address based on canreg5 software application for oncology reports according to population based on cancer registry program in Regional Referral Hospital Municipality Covalima Timor-Leste since March 2020 until May 2022.

**Methods:** a descriptive cross-sectional study design with purposive sampling, all cases of cancers were registered by using a software CANREG5. Total number cancer registry were 35 patients. Data analysis use simple descriptive statistics.

**Results & Discussion:** Age over 65 years old are majority occurs cancer and have been registry with 40%. Majority female patients with 74.3% and male with 25.7%. Oral or mouth cancer is the most common cancer were identified with 34.2% and traditional care was predominant with 21 patients or 60% as optional choose for terminal phase patient with cancer.

**Conclusion:** This study conclude an important suggestion there are: reinforcement of the cancer registry program to all health facilities and develop public health interventions to reduce the risk of cancer.

**Keywords:** Prevalency Cancer Registry, CANREG5 Software, Regional Referral Hospital, Municipality of Covalima.

most common cancer form among women, representing about 30% of all female cancer<sup>5</sup>. During the past 10 years the incidence of breast cancer has increased by 1.5% annually<sup>6</sup>.

### INTRODUCTION

Cancer is a leading cause of death worldwide, accounting for nearly 10 million deaths in 2020, or nearly one in six deaths<sup>1</sup>. Cancer is the rapid creation of abnormal cells that grow beyond their usual boundaries and which can then invade adjoining parts of the body and spread to other organs; the latter process is referred to as metastasis<sup>2</sup>. Widespread metastases are the primary cause of death from cancer<sup>3</sup>. Around one-third of deaths from cancer are due to tobacco use, high body mass index, alcohol consumption, low fruit and vegetable intake, and lack of physical activity. Cancer-causing infections, such as human papillomavirus (HPV) and hepatitis, are responsible for approximately 30% of cancer cases in low- and lower-middle-income countries cited by Carlos Tilman & João Bosco, 2022<sup>4</sup>. Many cancers can be cured if detected early and treated effectively. Cancer predominantly afflicts older people. Two of three cases occur after age 65. Breast cancer is the

Cancer arise from the transformation of normal cells into tumour cells in a multi-stage process that generally progresses from a pre-cancerous lesion to a malignant tumour. These changes are the result of the interaction between a person's genetic factors and three categories of external agents, there are : Physical carcinogens, such as ultraviolet and ionizing radiation; Chemical carcinogens, such as asbestos, components of tobacco smoke, alcohol, aflatoxin (a food contamination) and arsenic (a drinking water contaminant); Biological carcinogens, such as infections from certain viruses, bacteria or parasites<sup>7</sup>. WHO through its cancer research agency, the International Agency for Research on Cancer (IARC), maintains a classification of cancer causing agents by used the International Classification of Diseases for Oncology (ICD-O, 2020) has been used for nearly 35 years, principally in tumor or cancer registries, for coding the site (topography) and the

histology (morphology) of the neoplasm, usually obtained from a pathology report<sup>8</sup>. The incidence of cancer rises dramatically with age, most likely due to a build-up of risk, for specific cancers that increase with age. The overall risk accumulation is combined with the tendency for cellular repair mechanism to be less effective as a person grows older. Tobacco use, alcohol consumption, unhealthy diet, physical inactivity and air pollution are risk factors for cancer and other non-communicable diseases. Some chronic infections are risk factors for cancer, this is a particular issue in low and middle-income countries<sup>9</sup>. Approximately 13% of cancer diagnosed globally were attributed to carcinogenic infections, including *Helicobacter pylori*, Human papilloma virus (HPV), hepatitis B virus, Hepatitis C virus and Epstein-Barr virus. Hepatitis B and C viruses and some type of HPV increase the risk for liver and cervical cancer, respectively<sup>10</sup>. Infection with HIV increases the risk of developing several other cancers such as Kaposi sarcoma.

The public health problem community has worked to achieve a mission of combating both infectious and chronic diseases through research and surveillance, public health programs, health communication activities and policy system changes<sup>11</sup>. Routine data collection efforts are a necessary, often underappreciated, component of nearly all cancer research and prevention efforts. Public health cancer surveillance data are crucial for identifying needs, planning interventions, directing public health resources, and evaluating the overall effectiveness of initiatives aimed at preventing or treating cancer and its negative health consequences<sup>12</sup>. As the nation's health protection agency, the Centers for Disease Control and Prevention (CDC, 2020) provides resources for disease surveillance systems to help protect our nation against expensive and dangerous health threats, including cancer. Therefore, public health surveillance is a core function of CDC. Effectiveness of public health strategies, comprising community and home based care are essential to provide pain relief and palliative care for patients and their families. However, a significant variation in treatment availability between countries of different income levels; comprehensive treatment is reportedly available in more than 90% of high-income countries but less than 15% of low-income countries. Although cancer affects individual patients and their families in different ways, studying its impact on large populations can provide important information that influences practices, poli-

cies, and programs that directly affect the health of millions of people<sup>13</sup>. (cited by Carlos Tilman & João Bosco, 2022).

Timor-Leste is the new country that was born in a new millennium, it's located near in Southeast Asia Region and the Pacific Region or between Indonesia and Australia. Timor-Leste is with the bulk of the Country part of a larger Island. The Island state is located in the Malay Archipelago. The land has a total area of 14,870 km<sup>2</sup> (5,741 mi<sup>2</sup>) and a total coastline of 706 km (438.7 mi). This land area is approximately 104% of the area of Connecticut. Timor-Leste is thus one of the smallest Countries in Asia by area and ranked 160th worldwide. Most of the population (68%) resides within rural regions. Majority of Timorese people were lived under the poverty, their socio-economic life expectancy were low. The culture were similar to the Pacific and Asian culture, chewing betel nut or areca nut, smoke tobacco and drink fermented alcohol was the part of their culture since before colonialism or annexed by Portuguese or Indonesian (Carlos Tilman & João Bosco, 2022). Covalima is a Municipality of Timor-Leste, it situated in the Southwest corner of the Country. Besides, Covalima borders the Timor Sea to the South, the Municipalities of Bobonaro to the North, Ainaro to the East and the Indonesian Province of East Nusa Tenggara to the West<sup>14</sup>. It has a population of 59,455 (Census 2010) and an area of 1,230 km<sup>2</sup>. The Post Administrative of Covalima are Fatumean, Fatululic, Fohorem, Maucatar, Suai-Villa, Tilomar and Zumalai. The Capital of the Municipality is Suai-Villa and the main centre of population and government public facilities, which lies 136 km from Dili, the National Capital<sup>15</sup>. According to the data reported by using a software application on cancer registry above, we think it is important to write about "prevalency of population based cancer registry at Regional Referral Hospital Covalima Municipality based on Canreg5 oncology reports 2020-2022", according to the research investigation (cited by Carlos Tilman & João Bosco, 2022).

**Objective :** To describe the most frequent type of cancers, age, sex and address based on Canreg5 software application for oncology reports according to population based on cancer registry program in Regional Referral Hospital Municipality Covalima Timor-Leste since March 2020 until May 2022.

## **METHODS**

We opted in this study is a descriptive cross-sectional study design with purposive sampling, all cases of cancers were registered by using a software CANREG5 after being confirmed from a pathology report by physician or medical doctors. Total number of oncology cases based on population cancers registry program were 35 confirmed cases under guideliness of The International Classification of Diseases for Oncology (ICD-O, 2020). The entry data of confirmed patients was done by a vocal point of cancer registry and medical officer for surveillance in Regional Referral Hospital Municipality of Covalima. The variables of this study are secondary data and documentation by photography to confirm the validity of the data cited by Carlos Tilman & João Bosco, 2022. For data analysis, we will investigate or use simple descriptive statistics<sup>16</sup> and the results are presented in table and graphic, according the result investigation (Timor-Leste, 2021).

## RESULT AND DISCUSSION

Table 3.1 Description of Cancer registry based on ages and sex.

Age	Quantity or Numbers of cases n (%)	Sex	
		Male	Female
0-15	3 (8.6)	0 (0)	3 (8.6)
16-30	1 (2.9)	0 (0)	1 (2.9)
31-45	7 (20)	1 (2.9)	6 (17.1)
46-55	6 (17.1)	0 (0)	6 (17.1)
56-65	4 (11.4)	2 (5.7)	2 (5.7)
< 65	14 (40)	6 (17.1)	8 (22.9)
<b>Total</b>	<b>n = 35 (100%)</b>	<b>9 (25.7)</b>	<b>26 (74.3)</b>

In table above variable age over 65 years old are majority occurs cancer and have been registry with 40% among all variety ages which had been registry as cancerous. Among 40% there were predominant female with 22.9% compare to male with 17.1%. The second most affected age were 31-45 years old with half of total over 65 years old with 20%, based on sex, female were predominant with 17.1% compare to male with 2.9%. At ages 16-30 years old were the lower percentage of cancer registry with 2.9% case. According to LOTTI BARLOW, 2006 at Centre for Epidemiologic, National Board of Health and Welfare, Stockholm, Sweden cancer predominantly afflicts older people. Two of three cases occur

after age 65 cited by Carlos Tilman & João Bosco, 2022<sup>17</sup>.

Table 3.2 Distribuion of cancer registry based on primary site or morphologic or nomenclature of cancer.

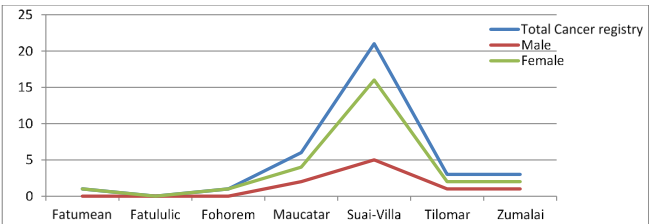
Types of Cancer	Quantity or Numbers of cases n (%)	Sex	
		Male	Female
Cervical	3 (8.6)	0 (0)	3 (8.6)
Breast	6 (17.1)	0 (0)	6 (17.1)
Liver	2 (5.7)	1 (2.9)	1 (2.9)
Rectum	1 (2.9)	0 (0)	1 (2.9)
Thyroid	1 (2.9)	1 (2.9)	0 (0)
Prostate	1 (2.9)	1 (2.9)	0 (0)
Pancrease	1 (2.9)	1 (2.9)	0 (0)
Gastrointestinal	4 (11.4)	1 (2.9)	3 (8.6)
Oral or mouth	12 (34.2)	4 (11.4)	8 (22.9)
Colon	1 (2.9)	0 (0)	1 (2.9)
Intestinal tract	1 (2.9)	0 (0)	1 (2.9)
Vagina	1 (2.9)	0 (0)	1 (2.9)
Ovary	1 (2.9)	0 (0)	1 (2.9)
<b>Total</b>	<b>n = 35 (100%)</b>	<b>9 (25.7)</b>	<b>26 (74.3)</b>

In table above, types of cancer which are majority in cancer registry program were oral or mouth cancers with 34.2% among all types of cancers in Regional Referral Hospital in Municipality of Covalima. Based on sex of oral or mouth cancer, it occurs predominant to female with 22.9% and male 11.4%. As we know in Timor-Leste consuming areca nut or chewing betel nut were a parts of timorenses socio-cultural life. People of timorenses who are lived in rural area majority consuming traditional fermented alcohol, smoke tobacco and chewing betel nut. In other study shown that smoke tobacco, using betel nut or areca nut is main cause of oral pre-malignancy diseases. Besides, mostly woman are using areca nut in their whole life. Otherwise another study indicated that Cancer risk can be reduced by: not using tobacco; eating a healthy diet, including fruit and vegetables; avoiding or reducing consumption of alcohol. Close to 25% of all cancer is caused by tobacco smoking, the single known factor that causes most cancer cases<sup>18</sup>.

The second most registered cancer in regional referral hospital were Breast cancer with total 17.1% among all types cancer and it occurs to female only. Breast cancer is the most common cancer form among women, representing about 30% of all

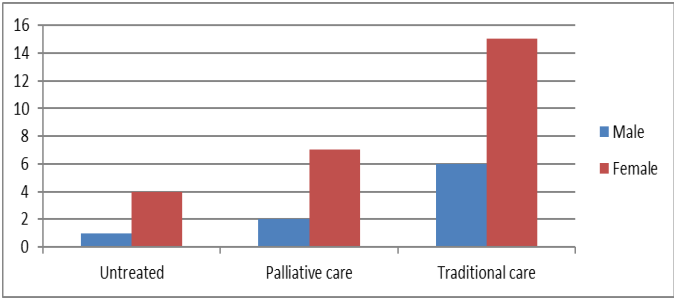
female cancer. During the past 10 years the incidence of breast cancer has increased by 1.5% cited by Carlos Tilman & João Bosco, 2022<sup>6</sup>. Early and improved diagnostics has led to detection at increasingly earlier stages, sometimes even in the primary stage; and many women can therefore be successfully treated. The direct causative mechanisms for breast cancer, but it is established that the female sex hormone (oestrogen) is of great importance. The risk of breast cancer is higher for women who have their first menstruation early in puberty and for women whose menstruation persists until an advanced age. Women who bore children when fairly young, and who have borne many, run a lower risk. Breast feeding also has a protective effect. Between 5% and 10% of all breast cancer is hereditary. Over 30-50% of cancers can currently be prevented by avoiding risk factors and implementing existing evidence based prevention strategies. The cancer burden can also be reduced through early detection of cancer and appropriate treatment and care of patients who develop cancer. Many cancers have a high chance of cure if diagnosed early and treated appropriately. Early diagnosis of symptomatic cancers is relevant in all settings and the majority of cancers<sup>19</sup>.

Graphic 3.1 Curve of Cancer registry based of Post-Administrative in Municipality of Suai Covalima Timor-Leste.



In graphic above, Post Administrative in Municipality of Covalima, the Capital of this municipality were Suai-Villa were majority cancer registry with total 21 patients or 60% among total of those Post Administrative with majority female 16 patients compare to male with 5 patients. The second most cancer registry were Maucatar Post Administrative with 6 patients or 17.1% among all patients, majority female with 4 patients compare to male with 2 patients. The Post Administrative with no case of cancer by cancer registry program was Fatululic with zero (0) case reported of research cited by Carlos Tilman & João Bosco, 2022.

Graphic 3.2 Chart of cancer registry based on Treatment (Untreated, Palliative Care and Traditional Cares)



In chart of cancer, majority all patients after confirmed diagnosed by physician or doctors choose to do traditional cares or go home for alternative treatment by traditional drugs by their families with 21 patients with predominant female 15 patients and male 6 patients. Other patients choose to do palliative care in hospital with total 9 patients with predominant female 7 patients and male 2 patients. The untreated mean patient just ask to go home with their own decision and their families ask to take patients go home after confirmed diagnosed of cancers with 5 patients with predominant female 4 patients and male 1 patient. Determining the goals of treatment is an important first step. The primary goal is generally to cure cancer or to considerably prolong life. Improving patients quality of life is also an important goal. This can be achieved by support for the patient’s physical, psychosocial and spritual well-being and palliative care in terminal stages of cancer. Palliative care is treatment to relieve, rather than cure, symptoms and suffering caused by cancer and to improve the uality of life of patients and their families. Palliative care can help patients live more comfortably. It is particularly needed in places with a high proportion of atients in advanced stages of cancer where there is little chance of cure. Improved access to oral morphine is strongly recommended for the treatment of moderate to severe cancer pain, suffered by over 80% of people with cancer in the terminal phase, according the need report annually (cited by Carlos Tilman & João Bosco, 2022).

This article based on the formal letter, Constitutes Ethical and Technical Committee approval official letter, Number Reference 1520/MS-INS/GGE/VIII/2022, Dili, 24/08/2022. Institute National of Health-Research Technical Committee (INS-RETC) has granted and the consideration of this research project, related to the safety of research participant accordance.

## CONCLUSION

In this study, among total of patients in cancer registry where had been identified majority were female 74.3% compare to male with 25.7%. patients in the Suai-Covalima Regional Referral Hospital. Otherwise, high incidence of cancer occurs in age over 65 years old with 40%, in addition group age 31-45 were the second high incidence of cancers with 20%. Based on types of cancer which had been identified and registry majority cases of cancer were oral or mouth cancer with 34.2% and breast cancers were the second most cancer where had been registered with 17.1%. Post Administrative with the most cancer cases were Suai-Villa with 21 patients and majority 16 female patients compare to male was 5 patients. Patients in the terminal phase majority choose to do traditional cares or go home for alternative treatment by traditional drugs by their families with 21 patients with predominant female 15 patients and male 6 patients. Furthermore, this study conclude an important suggestion there are: reinforcement of the cancer registry program to all health facilities and develop public health problem and interventions to reduce the risk of cancer, this a key point to Government of Timor-Leste, under Ministry of Health to considerate with recommendation (cited by Carlos Tilman & João Bosco, 2022).

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