

## Profile of people living with cancer followed in the palliative care unit of Parakou, Benin in 2021

Adébayo ALASSANI <sup>1, \*</sup>, Albert Comlan DOVONOU <sup>1</sup>, Khadidjatou SAKE <sup>1</sup>, Armand WANVOEGBE <sup>2</sup> and Anthelme AGBODANDE <sup>2</sup>

<sup>1</sup> Department of medicine and medical specialties, Faculty of Medicine of the University of Parakou, Benin.

<sup>2</sup> Department of medicine and medical specialties, Faculty of Medicine of the University of Abomey-Calavi, Benin.

World Journal of Advanced Research and Reviews, 2023, 18(01), 168–173

Publication history: Received on 24 February 2023; revised on 04 April 2023; accepted on 07 April 2023

Article DOI: <https://doi.org/10.30574/wjarr.2023.18.1.0536>

### Abstract

**Introduction:** Cancer is a global public health problem. This study focused on the the profile of people living with cancer in Parakou.

**Study method:** This was a cross-sectional, descriptive and analytical study which enrolled people living with cancer followed in the palliative health care of the internal medicine unit at the Regional University Health Center of Borgou who had given their consent. The variables of the study were: sociodemographic data, nutritional status, comorbidities, circumstances of cancer screening and their location. Data analysis was performed using Epi Data 3.1 software.

**Results:** The study population consisted of 264 people with cancer. A male predominance was observed with a sex ratio of 2.66. The average age was 47.51 years  $\pm$ 13.20. Alcohol consumption was observed in 15.2%. Arterial hypertension was found in 63.6% of subjects. On the nutritional level, malnutrition and weight loss were observed respectively in 68.2% and 98.1% of patients. Abdominal pain, asthenia and weight loss were the main circumstances for cancer screening and were present in 37.1%, 27.6% and 16.7% of participants respectively. Liver cancer was found in the majority (72%) of the participants. Viral hepatitis B was the most common cause with 98.3%

**Conclusion:** cancer affects young adults and is often detected at an advanced stage. The main site is the liver and infection with the hepatitis B virus is found in most of the cases.

**Keywords:** Profile; Cancer; Parakou; Benin

### 1. Introduction

Cancer is a major global public health problem, especially in developing countries which are still struggling with infectious diseases such as HIV, tuberculosis, malaria and recently Covid 19. In 2020, the World Health Organization identified 19.3 million new cases with 9.9 million deaths. The part of Africa in these figures is respectively 5.7% and 7.2% in terms of incidence and number of deaths [1]. The mortality rate due to cancer is increased and ranks fourth in 2016, the second leading cause of death after cardiovascular diseases in 2020; projections estimate that it will be the leading cause of death in 2030 and responsible for 2.5 million deaths in 2060 [2, 3]. The global epidemiology of cancer is regularly studied. Global data in 2020 show that lung cancer is the leading in lung cancer, followed by breast and prostate cancer, sexes and ages combined. Deaths are mainly due to cancers of the colon, liver, breasts and oral cavity [1]. It is a condition that affects more men than women with a higher incidence in subjects over 60 years old with 50.8% of cases [2]. Mortality due to cancer is due to the destruction of the organ within which it is arised, to the locoregional

\* Corresponding author: Adébayo ALASSANI

extension favored by late diagnosis and treatment, but also to the accessibility of treatment, especially in developing countries. The cost of cancer treatment depending on the site and severity ranges from 180 to 2600 US dollars per month [4]. The factors favoring cancer are multiple and depend on the site. They relate to lifestyle, gender, age, family history, environment [5, 6, 7]. These risk factors are mostly modifiable, making cancer a condition whose incidence can be considerably reduced if preventive measures are observed. It is therefore essential to set preventive measures and to make an early diagnosis, especially in developing countries which do not have sufficient economic support. A focus on cancer is necessary in order to identify the contributing factors. In Benin and especially in the northern part, there are few studies on cancer. The present study fills this gap and will identify the way of screening cancer, the most frequent sites and the contributing factors.

---

## **2. Material and methods**

### **2.1. Study setting**

The study took place in the palliative health care of the internal medicine unit at the Regional University Health Center of Borgou in Parakou.

### **2.2. Type and period of study**

This was a cross-sectional analytical and descriptive study from April 1 to October 31, 2021.

### **2.3. Study population**

All people living with cancer are enrolled. All patients of both sexes, aged at least 18 years old and having given their consent were included in the study. Participants unable to answer the questions or admitted were not included in the study.

### **2.4. Sampling**

An exhaustive census of patients living with cancer followed in the palliative health care of the internal medicine unit at the Regional University Health Center of Borgou during the data collection period.

### **2.5. Variables**

The variables studied related to sociodemographic data, lifestyle and comorbidities. Arterial hypertension was defined for systolic blood pressure  $\geq 140$  mm Hg and/or diastolic blood pressure  $\geq 90$  mm Hg or subjects known and treated as such. Diabetes was defined for fasting blood sugar  $\geq 1.26$  g/L confirmed the next day or subjects known and treated as such. The assessment of the nutritional status was made by the body mass index defined by the ratio of the weight in kg by the square of the height in m<sup>2</sup>. The diagnosis of cancer is made by the combination of clinical, biological, histological or imaging finding.

### **2.6. Data collection technique**

Data collection was done through face-to-face interview and clinical examination. A data collection sheet and other appropriate tools were used.

### **2.7. Data processing and analysis**

The data were entered using EPIDATA version 3.1 software after checking each sheet, they were analyzed using EPIINFO version 7 and STATA 11 software.

---

## **3. Results**

### **3.1. General characteristics of the study population**

The study population consisted of 264 people living with cancer. A male predominance was observed with a sex ratio of 2.66. The average age was 47.51 years  $\pm 13.20$  with extremes of 22 years to 78 years. The duration of cancer screening was less than 2 years in 39.4% of patients. Alcohol consumption was observed in 15.2%. Arterial hypertension and diabetes were found respectively in 63.6% and 9.1% of the subjects. On the nutritional level, malnutrition and weight loss were observed respectively in 68.2% and 98.1% of patients. The cancer was metastatic in 169 (64%) patients (**Table 1**)

**Table 1** General characteristics of the study population (n=264)

	n	%
<b>Sex</b>		
Women	72	27.3
Men	192	72.7
<b>Age (years)</b>		
22-29	24	9.1
30-39	56	21.2
40-49	96	36.4
≥ 50	88	33.3
<b>Marital status</b>		
Married	32	12.1
Single	232	87.9
<b>Educational level</b>		
None	88	33.3
Primary	72	27.3
Secondary	80	30.3
University	24	9.1
<b>Duration of cancer screening</b>		
< 2 years	104	39.4
≥ 2 years	160	60.6
<b>Alcohol consumption</b>		
Yes	40	15.2
No	224	84.8
<b>Tobacco consumption</b>		
Yes	6	2.2
No	258	97.8
<b>Comorbidities</b>		
Hypertension	168	63.6
Diabetes mellitus	24	9.1
<b>Nutritional status</b>		
Undernutrition	180	68.2
Normal	49	18.6
Overweight	23	8.7
Obesity	12	4.5
<b>Loss weight</b>		
Yes	259	98.1

No	5	1.9
<b>Metastases</b>		
Yes	169	64.0
No	95	36.0

### 3.2. Cancer screening circumstances

Abdominal pain, asthenia and weight loss were the main circumstances for cancer screening and were present in 37.1%, 27.6% and 16.7% of subjects respectively. Other screening circumstances accounted for less than 20%. **(Table II)**

**Table 2** Cancer Screening Circumstances (n=264)

	n	%
Abdominal Pain	98	37.1
Asthenia	73	27.6
Loss weight	44	16.7
Pelvic limb edema	12	4.5
Cough	8	3.0
Anorexia	8	3.0
Fever	7	2.6
Constipation	6	2.4
Vomiting	6	2.4
Others	2	0.8

### 3.3. Cancer sites

Liver cancer was found in the majority (72%) of the subjects. Viral hepatitis B was the most identified cause in a proportion of 98.3%; viral hepatitis C was found in 1.2% and no cause was found in 0.5% of subjects. Among subjects with liver cancer, 87.56% had cirrhosis. The other sites are among others gastric (7.5%), pulmonary (4.4%), pancreatic (4.4%) or colonic (3.8%). **(Table III)**

**Table 3** Distribution of patients according to cancer site (n=264)

	n	%
Liver	190	72.0
Stomach	20	7.5
Pancreas	12	4.4
Lung	12	4.4
Colon	10	3.8
Main bile duct	8	3.0
Blood	6	2.2
Kydney	4	1.8
Gynecological	2	0.9

#### 4. Discussion

This study focused on cancer and provided a general overview of this pathology in the palliative care unit of Parakou. At the end of this study, it should be noted that there is a male predominance which could be partly explained by the fact that some women with cancer are followed in the gynecology department and are not referred to the palliative care unit. The male predominance was also reported by Kondé et al. [8] in Mali and Diallo et al. [9] in Senegal. This trend is already underlined by the WHO in the global report on cancer in 2016 [2] and in 2020 [1]. However, current data do not allow us to conclude that male is a risk factor for cancer in general. The risk factor relating to sex in relation to the site of the cancer is already known. This is a disease that affects young adults, confirming the results reported by Nnadi et al. [10] in Nigeria (48.16±16.55 years) and Nsondé et al. [11] in Gabon (45.02±12.3 years). However, a higher average age is reported by Musunuri et al [12] in India (62.8 years) and Trybus et al [13] in Brazil (61 years). This difference could be explained by the fact that India and Brazil have a more developed health system promoting better access to treatment and, in turn, an increase in patient survival. The cancer was discovered at the metastasis stage in 2 out of 3 cases; lower proportions of metastases have been reported by de Camargo et al [14] in Brazil and Hamizi et al. [15] in Algeria with respectively 41.25% and 19%. This higher prevalence of metastases in the present study is multifactorial and includes the delay in the consultation favored by the lack of financial support, the barrier to access of health centers but also the diagnostic wandering in developing countries. In Benin, there are few systematic cancer screening strategies apart from efforts made in women. It is the presence of the signs that constitutes the only diagnostic circumstance. In the present study, these circumstances of cancer diagnosis are dominated by abdominal pain, asthenia and weight loss, confirming the results reported by Somé et al. [16] in Burkina Faso and Déo et al. [17] in Nepal. Regarding the site, almost three quarters of the patients had liver cancer and in most (98.3%) of the cases, viral hepatitis B infection was found and cirrhosis in 87.56% cases. This poses the problem of vaccination coverage against viral hepatitis B. The predominance of hepatitis B virus infection is also reported by El-Kass [18] in Egypt, Nartey et al. [19] in Ghana and Somé et al. [16] in Burkina Faso. A low prevalence of viral hepatitis B virus infection in liver cancer is reported by Giannitrapani et al. [20] in Italy, Endo et al. [21] in Japan and Lui Yet al. [22] in China.

---

#### 5. Conclusion

The cancer affects young adult males and is often affect primarily to the liver in the palliative care unit of Parakou. It is in most cases due to infection with the viral hepatitis B virus and diagnosed at the stage of metastasis. Vaccination against viral hepatitis B will reduce the incidence of cancers and more particularly that of the liver in the future.

---

#### Compliance with ethical standards

##### *Acknowledgments*

All people living with cancer who participated in the study

##### *Disclosure of conflict of interest*

No conflict of interest

##### *Statement of ethical approval*

Data confidentiality is respected during the survey. After explaining to the patients the purpose of the work, they were free to participate in the survey and that once accepted, they were entitled to withdraw afterwards. Anonymity is required on the survey sheets. Permission from center officials is also obtained.

##### *Statement of informed consent*

Informed consent was obtained from all individual participants included in the study.

---

#### References

- [1] Sung H, Ferlay J, Siegel RL, Laversanne M, Soerjomataram I, Jemal A et al. Global Cancer Statistics 2020: GLOBOCAN Estimates of Incidence and Mortality Worldwide for 36 Cancers in 185 Countries. *CA Cancer J Clin* 2021;71:209–249

- [2] Mattiuzzi C, Lippi G. Current cancer epidemiology. *Journal of Epidemiology and Global Health* 2019 ; 9(4) : 217-22
- [3] Tran KB, Lang JJ, Compton K, Xu Rixing, Acheson AR, Henrikson HJ et al. The global burden of cancer attributable to risk factors, 2010–19: a systematic analysis for the Global Burden of Disease Study 2019. *Lancet* 2022 ; 400 : 563-91
- [4] Irigorri, N, de Oliveira C, Fitzgerald N, Essue B. The Out-of-Pocket Cost Burden of Cancer Care-A Systematic Literature Review. *Curr. Oncol.* 2021, 28, 1216–1248.
- [5] Han MA, Hwang EC, Jung JH, Kim S, Park SM. Population attributable fractions of modifiable cancer risk factors in Korea: a systematic review protocol. *BMJ Open* 2022; 12:e055758.
- [6] Lau E, Paniagua SM, Liu E, Jovani M, Li SX, Takvorian K. Cardiovascular Risk Factors Are Associated With Future Cancer. *J Am Coll Cardiol Cardio Onc* 2021;3:48-58
- [7] Sokolova A, Johnstone KJ, McCart Reed AE, Simpson PT, Lakhani SR. Hereditary breast cancer: syndromes, tumour pathology andmolecular testing. *Histopathology* 2023 ; 82, 70-82
- [8] Konde A, Sidibe L, Fofana Y, Malle O, Katile D, Samake D et al. Epidemiological aspects of hepatocellular carcinoma at the Somine Dolo hospital in Mopti. *Health Sci. Dis* 2022 ; 23 (11) : 66-8
- [9] Diallo I, Ndiaye B, Touré M, Sow A, Mbengue A, Diawara PS et al. Hepatocellular carcinoma in Senegal: epidemiological, clinical and etiological aspects about 229 cases at Hôpital Principal de Dakar. *Pan African Medical Journal.* 2021; 38(99). 10.11604/pamj.2021.38.99.25195
- [10] NnadIG, Olu-Eddo AN, Obaseki DE. Hepatocellular Carcinoma in Benin City, Nigeria: A Twenty-Five (1987-2011) Year Retrospective Histopathological Study. *Health* 2019, 11,1177-85
- [11] Nsondé Malanda J, Diané S, Bolenga Liboko AF, Nkoua Epala B, Moyikoua R, et al. Diagnosis profile and therapeutic of Hepatocellular Carcinoma (HC). *SAJ Cancer Sci* 2018 ; 5(1): 1-5
- [12] Musunuri B, Shetty S, Udupa K, Pai A. Profile of patients with hepatocellular carcinoma: An experience from a tertiary care center in India. *Indian Journal of Gastroenterology (March–April 2022)* 41(2):127-34
- [13] Trybus T, Victor LS, Silva RS, Carvalho DR, Cubas MR. Clinical applicability of the terminological subset of palliative care for dignified dying. *Rev Esc Enferm USP.* 2021;55:e20210126
- [14] de Cammergo JD, Delponte V, Costa AZS, da Silva Souza RC. Survival of cancer patients under treatment with the palliative care team in a Brazilian hospital in São Paulo. *Canadian oncology nursing journal* 2022 ; 32(2) : 182-9
- [15] Hamizi K, Filali T, Tebbal S, Aouidane S. Hepatocellular carcinoma: epidemiological profile, clinical and diagnostic aspects and therapeutic modalities. Experience of Batna’s Radiotherapy Center. *Batna J Med Sci* 2018;5(1):74-7
- [16] Somé EN, Guingané NA, Ouédraogo H, Tarnagda G, Kouanda S, Sombié R. The hepatocellular carcinoma’s risk factors among in-hospital patients at the university-teaching hospital Yalgado Ou’edraogo in Ouagadougou, Burkina Faso: A case-control study. *Clinical Epidemiology and Global Health* 2022 : 13 : 1-5
- [17] Deo RK, Chitalkar P, Malla S, Indu KC, Karki B, Thapa R. Epidemiology, Clinico-radiological Profile and Management of Hepatocellular Carcinoma in a Tertiary Care Center in Nepal. *MJSBH* 2021 ; 20(1) : 6-11
- [18] El-Kassas M, Elbadry M. Hepatocellular Carcinoma in Africa: Challenges and Opportunities. *Front. Med.* 2022 ; 9:899420
- [19] Nartey YA, Antwi SO, Bockarie AS, Hiebert L, Njuguna H, Ward JW, et al. Mortality burden due to liver cirrhosis and hepatocellular carcinoma in Ghana; prevalence of risk factors and predictors of poor in-hospital survival. *PLoS ONE* 2022 ; 17(9): e0274544
- [20] Giannitrapani L, Zerbo M, Amodeo S, Pipitone E, Galia M, Cavoli TVL et al. The Changing Epidemiology of Hepatocellular Carcinoma : Experience of a Single Center. *BioMed Research International* Volume 2020, Article ID 5309307, 9 pages
- [21] Endo M, Matsui K, Akaho R, Mitsui K, Yan Y, Imai Y et al. Depressive and anxiety symptoms among Japanese cancer survivors: Japan cancer survivorship research project. *BMC Cancer* 2022 ; 22 : 134-41
- [22] Liu Y, Cao X, Zhao X, Shi X, Lei M, Qin H. Quality of Life and Mental Health Status Among Cancer Patients With Metastatic Spinal Disease. *Frontiers in Public Health* 2022 ; 10(1) : 1-13