International Journal of Medical and Health Research
ISSN: 2454-9142; Impact Factor: RJIF 5.54
Received: 08-05-2019; Accepted: 10-06-2019
www.medicalsciencejournal.com
Volume 5; Issue 8; August 2019; Page No. 35-39

What epidemiological profile of breast cancer patients treated at university clinics in Kisangani, DR Congo

Joseph – Désiré Oleko WA Oleko[1*], Richard Tongo Ngbanda[2], Pierre O Lohohola[3], Justin K Likoko[4], Chantal N Zingabako[5], Puis T Mpiana[6]

[1] Institute Superior of the Medical Techniques of Tshumbe, P.O. BOX. 64 Tshumbe, DR Congo
[2] Higher Institute of Commerce, P.O. BOX. 123 Lubumbashi, DR Congo
[3, 6] Faculty of Sciences, University of Kinshasa, P.O. BOX. 190, Kinshasa, DR Congo
[4] Higher Institute of Agronomic Studies of Bengamisa, P.O. BOX. 202 Kisangani, DR Congo
[5] Institute of Medical Techniques and Management/Cépromad P.O. BOX. 768 Kinshasa XI, DR Congo

Abstract
Cancer is now a public health problem worldwide. Most cases of cancer patients are found in underdeveloped countries, particularly in Africa. This study aims to determine the epidemiological profile of patients treated at clinics in Kisangani, Democratic Republic of Congo from 2015 to 2018.

In our retrospective descriptive study, we obtained the following data: the prevalence of breast cancer was 15.1%; the sex ratio (M / W) is 1/9; the reason for the consultation is the breast nodule (53.1%) and swelling (43.7%); cancer affects the left breast (65.6%) and the right breast (43.4); the most exposed patients are on average 50 years old (53.1%); the origin of patients: urban communes (74.1%) and rural communes (25.9%); the duration of hospitalization is generally greater than 17 days (53.1%); the current treatment is radical breast surgery + lymph node dissection (56.2%) and the discharge modality is generally in a state of improvement (40.6%).

Keywords: breast, breast nodule, swelling, breast cancer, cancers, Kisangani, DRC

1. Introduction

Cancer is a public health problem that is on the rise worldwide. Every year more than ten million new cases are reported, including six million in resource-limited countries, accounting for half of the world's cases; four million will die, one million more than those who die of HIV / AIDS [1]. Cancer in developing countries is a heavy burden that is not receiving the attention it deserves. There is little or no representation in the health agenda of most countries in sub-Saharan Africa, which will have more than one million new cases in 2020 [2, 3].

However, cancer is not only a disease of rich countries, on the contrary it becomes a scourge that affects more and more in low- and middle-income countries [4]: at the global level, cancers are among the main causes morbidity and mortality in the world. In 2012, there were approximately 14 million new cases and 8.2 million deaths from this disease (14% of deaths) and more than 60% of new cases of cancer occur in Africa, Asia, Central America and in Latin America. These regions account for 70% of all cancer deaths worldwide.

In sub-Saharan Africa, this situation is justified by:

- The growth and aging of the population, urbanization and lifestyle changes that rapidly lead to an increase in incidence;
- The lack of preventive measures, the delay in diagnosis, the lack of trained health workers in oncology, the lack of dedicated facilities and equipment which, if not quickly cancer will continue to grow at the same pace as the incidence.

Although the incidence of cancer is now lower in sub-Saharan Africa than in the rest of the world; Cancer mortality is higher in Africa than elsewhere in the world because cure rates are very low. Fewer than 25% of cancer patients in sub-Saharan Francophone Africa will recover, compared to an average of 55 to 60% in high-income countries [5].

This high mortality of cancers can be explained by: the health services responsible for the management of cancers and the insufficiency of the trained personnel do not allow a full management of the pathology; diagnoses are often late; complex and multiple therapeutic routes; the use of charlatans under cover of healers or churches, Some beliefs in Africa that cause patients to believe that their cancer is induced by mystical practices or witchcraft and The fear of surgery (mastectomy). Of this, he is estimated that more than 60% of patients die without diagnosis [6]. In addition, cancer care is dependent on economic and social factors such as: the lack of health insurance in most sub-Saharan African countries and the very limited financial capacity of patients.

Currently in the world, breast cancer is the most common cancer in women and it also affects men in the proportion of 3 to 4% according to the countries in Africa [7, 8]. And the countries of French-speaking sub-Saharan Africa, particularly the Democratic Republic of Congo, surgery is generally the first breast cancer treatment, it can be combined with other treatments such as: radiotherapy, hormone therapy and chemotherapy (these therapies are rarely accessible in DR Congo).

In general, breast cancer affects mostly women, but in the literature [9, 10], it is also found in men. However, the relative data show the following characteristics:

- Proportion much lower compared to all breast cancers, less than 1% in the West, but in Africa one regularly reaches 3 to 5%, which makes it an African particularity. The persistence of high estrogen seems to be one of the explanations [9].
- The average age of onset in Africa is over 55 years [11], 10 years older than in African women.

Breast cancer survival rates vary widely from country to country, ranging from 80% or more in North America, Sweden and Japan to nearly 60% in middle-income countries, and less than 40% in low-income countries [12]. The low survival rates in less developed countries can be explained mainly by the absence of early detection programs, which results in a high proportion of women with advanced disease, as well as the absence of appropriate diagnostic and treatment infrastructures.

Differences in the incidence of breast cancer between developed and developing countries can in part be explained by the effects of diet associated with a later first pregnancy, a smaller number of children, and a longer duration. shorter breastfeeding [13]. The growing trend toward western lifestyles in low- and middle-income countries is an important determinant of the increased incidence of breast cancer in these countries.

In the Democratic Republic of Congo, breast cancer remains a major health problem to promote despite recent statistical data that indicate a breast cancer incidence estimated at about 24% in a study conducted at Saint Joseph Hospital in Kinshasa / LIMETE in July 2006 [14]. To this end, the objective of our study is to determine the profile of patients treated for breast cancer at Kisangani university clinics.

2. Study Area and Method

2.1. Study area

This investigation is organized in the Kisangani University Clinic, specifically in the Department of Surgery. We requested the authorization of Rector of the University before starting our research and we went to the department of surgery where we used also used the documentary technique to study the register of curative care and the individual files of the patients hospitalized during the period from 2015 to 2018. This investigation began from l March 3 to May 15, 2019.

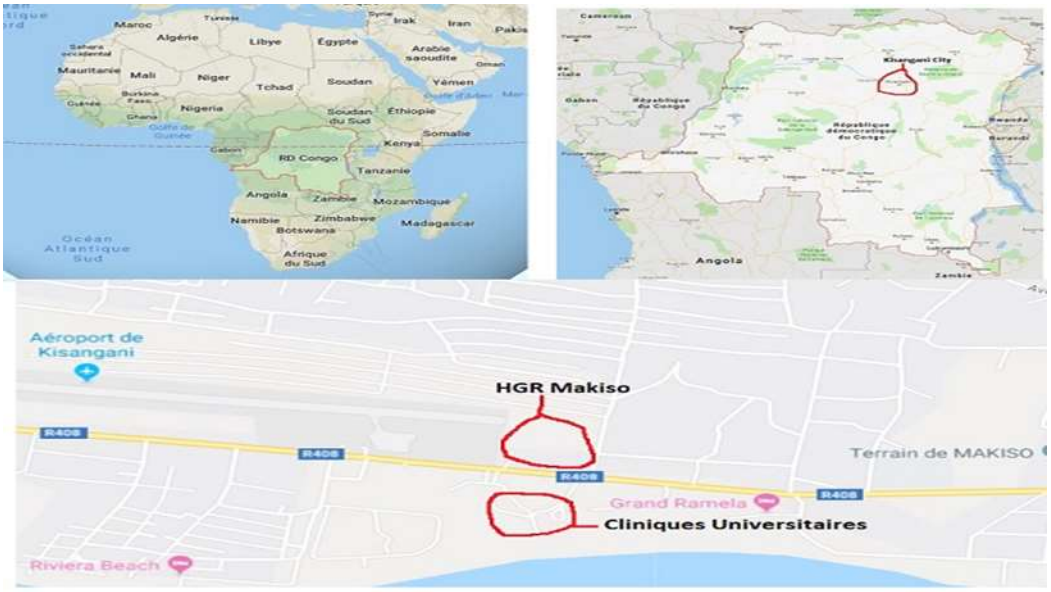

Fig 1: Location of Kisangani City in the province of Tshopo, DR Congo

2.2. Methodology

Based on a list of curative care and individual records of hospitalized patients in the Department of Surgery of Kisangani University Clinics, we identified 2,464 cases of hospitalized patients, of whom 32 suffered from breast cancer. The criteria for selection are: the inclusion criterion is any case of breast cancer and, that of non-inclusion child born in the city and raised in Kisangani or in its territories and, the criterion of non-inclusion is other pathology and types of cancer.

2.3. Type of survey

Our investigation is a retrospective descriptive study.

2.4. Parameters of survey

Our study exploited the following variables:

Table 1

Prevalence	Antecedents of the tumor	Exit modality
Gender	Reason for consultation	
Age	Duration of hospitalization	
Location of residence	Types of treatment used	

2.5. Analysis and data processing

The following statistical formulas were used:

Percentage calculation (P)

$$P = n / N \times 100$$

With n = number of observed cases

N = total number of cases

Average arithmetic calculation: $X = \Sigma n / N$

Legend:
n = observed frequency;
N = sum of frequencies or total frequency;
100 = conversion factor in percentage;
P = percentage;
X = arithmetic mean

3. Results

From the register of curative consultation of the Department of Surgery of the University Clinics of Kisangani, 2464 cases were recorded in relation to our period of study; of which 32 cases have suffered from breast cancer.

Table 2: Distribution of hospitalized patients by type of pathology

Neat pathologies	Prevalence	%
Breast cancer	32	1.3
Other hospitalizations	2432	98.7
Total	2464	100.0

The table above shows that breast cancer represents 1.3% of hospitalized patients in the Department of Surgery of Kisangani University Clinics.

Table 3: Distribution of hospitalized patients by prevalence of cancers

Treated cancers	Effective	%
Breast cancer	32	15.1
Colon Cancer	45	21.2
Prostate cancer	60	28.3
Bone cancer	75	35.4
Total	212	100.0

From this table, it emerges that among the 212 cases of cancers identified in our study, breast cancer represents 15.1%.

Fig 1: Distribution of breast cancer patients by sex.

The figure above shows 96.6% breast cancer is in women and 3.1% of cases in men.

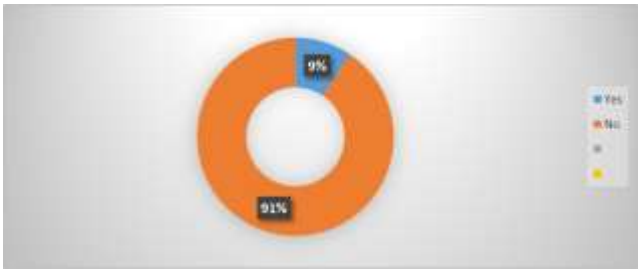

Fig 2: Distribution of breast cancer patients by family antecedent

In this figure, breast cancer with no family history represents 90.6% of cases and that related to family history is 9.4%.

Table 4: Distribution of Breast Cancer Patients by cause of the consultation.

Symptoms	Effective	%
Breast nodule	17	53.1
Swelling	14	43.7
Changing of the skin	1	3.2
Total	32	100.0

This table shows that the largest number of our patients was consulted for a breast nodule or 53.1% of cases and rare is the case of the change in the appearance of the skin, 3.2%.

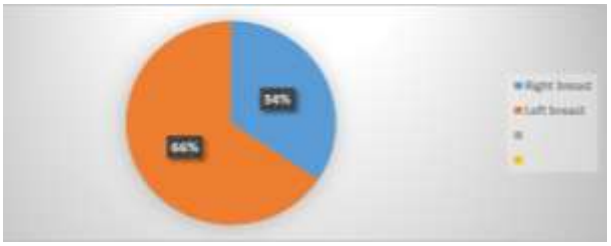

Fig 3: Distribution of Breast Cancer Patients by sick breast

This figure shows that the left breast is the most affected with 65.6% compared to the right breast.

Table 5: Distribution of Breast Cancer Patients by cause of age

Ages (years)	Effective	%
21-30	4	12.5
31-40	6	18.8
41-50	8	25.0
51-60	9	28.1
61-70	3	9.3
71- 80	2	6.3
Total	32	100.0

This figure shows that age groups 51 to 60 and 41 to 50 years are the most exposed to breast cancer with 28.1% and 25.0% of cases in this series, respectively.

Table 6: Distribution of hospitalized breast cancer patients by residence.

Town	Effective	%
Makiso	8	25.0
Tshopo	9	28.1
Mangobo	7	21.9
Lubunga	4	12.5
Out of Kisangani	4	12.5
Total	32	100.0

The table above shows that the largest number of patients comes from Makiso 25.0%, Tshopo 28.1% and Lubunga 12.5%.

Table 7: Distribution of hospitalized breast cancer patients by treatment.

Treatment	Effective	%
Conservative breast surgery (lumpectomy)	3	9.4
Radical breast surgery (total mastectomy)	4	12.5
Radical breast surgery + lymph node dissection	18	56.2
Surgery + Chemotherapy + Hormone Therapy	7	21.9
Total	32	100.0

The data in the table above shows that 56.2% of breast cancer cases undergo radical breast surgery associated with ganglion dissection.

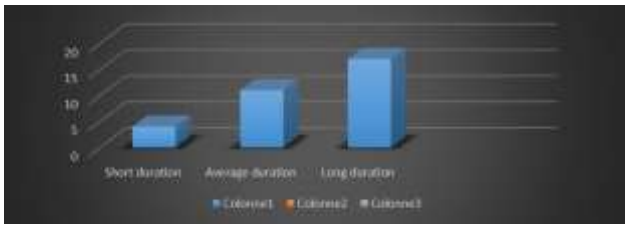

Fig 5: Distribution of hospitalized patients with breast cancer according to the duration of hospitalization.

From this table, we note that the majority of our patients had a long hospital stay of 53.1% and the shortest stay was 12.5%.

Table 8: Distribution of hospitalized breast cancer patients by exit mode.

Exit mode	Effective	%
Improved health	13	40.6
Deceased	6	18.7
Cured patient	7	21.9
Transferred patient	2	6.3
Output on request	4	12.5
Total	32	100,0

The data in this table show that the majority of breast cancer case treatment ends with a simple health improvement of 40.6% and the transfer of cases is rare at 6.3%.

4. Discussion

The study of the prevalence of breast cancer in the Department of Surgery of Kisangani University Clinics is 1.2%. This result is far inferior to that of the Mashinda team which had worked on 4137 cancer cases in the Democratic Republic of Congo, which gives a prevalence of 13.7% [15]. In Madagascar, a study conducted on breast cancer by the Rahararisolo team indicates that the prevalence of breast cancer was 22.4% in 2001 [16]; In Niger in 2003, the Nafia-led breast cancer study set the prevalence at 19.2% [17] and in Mali in 2003, the INRSP organized a study on all diagnostic cancers and found 5.7% in 2000 and this prevalence is high at 7.6% [18].

This difference would be due to several factors including poverty not only monetary but especially educational. This low prevalence of breast cancer in our study may be justified primarily by the high cost of medical consultation at the Kisangani University Clinics, as the Kisangani population is entirely poor (economically and intellectually). The lack of essential information of this disease for the population is the main cause that pushes some patients to resort to traditional healers, self-medication, churches and hospital services when the case becomes serious or complications become numerous.

The analysis of our data shows that age groups of 41 to 50 and 51 to 60 years are the most exposed to breast cancer with respectively 25.0% to 28.1% of cases in our study. In Cameroon, a study done in 2015 by Jean-Paul Engbang's team obtained the result of an average age of patients of 46 ± 15.87 years, that with extremes of 13 and 95 years [19]. The risk of having breast cancer increases with age, although it can reach women at very different ages, as our study shows. The risk of breast cancer in young women is low. About 25.0% of breast cancer cases occur in women aged 45 years and nearly 28.1% at around 55 years of age. In another study, men and women have breast cancer. But we often observe that the woman is more exposed to this disease, in 2012, there were 49,000 cases in women and the male incidence rate is 1 case per 100 000 Europeans [20].

The analysis of our results reveals that residents of Kisangani communes are the most affected by this disease. This observation is close to that of A. Ankondjock, P. Ghadirian and Labama who showed the high risk of breast cancer in the urban setting as rural. We believe that this would be linked to a high socioeconomic level, particularly in the food sector, and the proximity of these patients to the Kisangani University Clinics, thus facilitating diagnosis [21].

We note in this study that 90.6% of the observed breast cancer cases have no history of breast cancer in the family, these results are similar to the WHO statistic or history of malignancy. Breast in the family accounts for 5 to 10% of cases. This could be explained by the fact that breast tumors are known to have certain genes according to the theory [22].

The present study shows a clear predominance of left breast involvement with 63.3% of cases. However Sanod *et al*. also found the clear predominance of right breast involvement. Our observation is explained by the fact that the left breast is naturally a little bigger and more vascularized than the right breast [23].

Concerning the causes of the request for consultations, we note that our patients are often consulted for a swollen nodule or 53.1% of cases. This observation is also revealed by CHAWKI LEILA in his study conducted in Morocco where he noticed that the consultation was more motivated by the appearance of a nodule is 70% of cases. The latter could be explained during the course of subsequent research [24].

We also observe that in our study 40.6% of breast tumor patients came out of Kisangani University clinics to an improved state of health. Our result differs from that found by Al - Mangi Hospital in its study on breast cancer in Tunisia, which resulted in 92.6% of locoregional recurrences. We believe that this would be due to late

management of patients beyond the surgical possibilities, can justify this situation.

5. Conclusion

In Kisangani, breast cancer is a neglected health problem, many breast cancer patients do not have access to the services of university clinic parks they are poor or avoid breast surgery. Those who arrive do not benefit from good medical care, in most cases they leave university clinics without cure. To improve the management of breast cancer cases; Breast cancer awareness and screening will need to be intensified (essential for breast cancer control). If the Kisangani population is sensitized, they will easily accept testing for breast cancer; the patient will go to university clinics before the time.

6. References

1. World Health Organization. The World health report 2004: changing history. WHO, Geneva, 2004.
2. Anon. Uniting to defeat cancer. International Union Against Cancer, Geneva. Google Scholar, 2007.
3. Kanavos P. The rising burden of cancer in the developing world. Ann Oncol. 17 : viii15–viii23 Pub Med Cross Réf Google Scholar, 2006.
4. Bray F. Transitions in human development and the global cancer burden. In: Wild CP, Stewart B, Eds. World cancer report. Lyon: International Agency for Research on Cancer, 2014.
5. Jeune Afrique Santé : 10 choses à savoir sur le cancer en Afrique - 4 février, 2015.
6. Ndongo JS, Ntsama Essomba CM, Ongolo-Zogo P. Un observatoire pour améliorer l'accès aux médicaments contre les maladies chronique non transmissibles au Cameroun. Centre pour le développement des bonnes pratiques en santé – Hôpital central Yaoundé (Cameroun), 2014.
7. Adi Prince J, Ndom PBA, Atenguena EJP, Mambou Nouemssi JP, Ryder RW Cancer care challenges in developing countries. Cancer. 2012; 118:3627-35.
8. Ndom P1, Um G, Bell EM, Eloundou A, Hossain NM, Huo D. A meta-analysis of male breast cancer in Africa. The Breast. 2012; 21:237-41.
9. Sanguinetti A, Polistena A, D'Ermo G, Lucchini R, Triola R, Conti C, *et al*. Male breast cancer in the twenty first century: what's new? Ann Ital Chir. 2014; 7:85.
10. Yerushalmi R, Sulken A. Paget's disease and male breast cancer Isr Med Assoc J. 2015; 17:396.
11. Dem A, Kasse AA, Dieng MM, Dangou JM, Fall MC, Diop M, *et al*. Cancer du sein chez l'homme africain : 46 observations dakaroises Carcinol Prat Afrique. 2000; 5:19.
12. Coleman MP, *et al*. Cancer survival in five continents: a worldwide population-based study (CONCORD). Lancet Oncol, 9, 730-56.
13. Peto J. Cancer epidemiology in the last century and the next decade. Nature. 2001; 411:390-5.
14. Mbala NL *et al*., Profil épidémologique, clinique et histiopathologique du cancer du sein à l'hôpital Saint Joseph (Kinshasa-Limeté). Congo Médical vol iv, no 8, juillet, 2006.
15. Mashinda KD. *et al*., Prévalence du cancer en République Démocratique du Congo, Annales Africaines de la Faculté de Médecine de l'Université de l'Université de Kinshasa, Volume 5, n0 3 ; juin, 2012.
16. Rahararisolo V *et al*. Les cancers à Madagascar de 1990 à 2001, Archive Institut Pasteur de Madagascar, 2002; 68:104-108.
17. Nafia I *et al*. Abstracts du VII ième revue de la SAGO, Sanogo II, cancer du sein/communications libres. Bamako, 2003, p. 93.
18. Traoré CB. *et al*. Aspects épidémiologiques et histologiques des cancers du sein à l'INRSP de Bamako à propos de 110 cas. Livre des abstracts, Bamako, 2005, p. 180.
19. Ndamba Engbang JP. *et al*. Cancer du sein au Cameroun, profil histo-epidemiologique: à propos de 3044 cas. The Pan African Medical Journal. 2015; 21:242-7269.
20. Rapport de l'Institut de Veille Sanitaire (INVS), rendu ce 30 octobre.
21. Labama L *et al*. Gynécologie du praticien, Presse universitaire de Kisangani, 2004.
22. Zafrani B. et coll., Lésions et tumeurs bénignes du sein, Ann Pathol. 2000; 20:570-587.
23. Tavassoli F, Pathology of the breast, second ed. Nonwalk, Connecticut: Appleton Lange, 1999.
24. Ammor S, Baali A, Hubert A, et Cherkaoui M. Facteurs alimentaires et environnementaux de risque du cancer du rhino-pharynx dans la région de Marrakech, The Breast. 2016; 21:230-49.