

**BREAST CANCER IN WOMEN IN THE CENTRAL AFRICAN REPUBLIC:  
EPIDEMIOLOGICAL, DIAGNOSTIC AND THERAPEUTIC FACTORS.**

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**ABSTRACT**

**Purpose:** To describe the epidemiological, diagnostic and therapeutic aspects of breast cancer in women in the surgery department of the community University Hospital Center of Bangui. **Material and method:** this was a prospective and descriptive study out of three (03) years, ranging from November 1, 2017 to December 31, 2019. **Results:** thirty-nine (39) cases of breast cancer in women were collected. The mean age of the patients was  $50.4 \pm 9.5$  years. Women over 45 were in the majority with 79.5%. The average of their body mass index (BMI) was  $28.5 \pm 3.2$ . The average consultation time was  $9.7 \pm 20.5$  months. The average age of the first menarche was  $11.4 \pm 1.1$  years. The breast nodule was the most common clinical manifestation (87.2%). The left breast was the most affected (69.2%). Ductal carcinoma was the most common histological type (74.4%). Neoadjuvant chemotherapy was used in 43.6% of cases. Mastectomy was the most used surgical procedure (51.3%). **Conclusion:** in Bangui, breast cancer in women is mainly a ductal carcinoma of low histological grade, of interest to elderly women, who have given birth and are breastfeeding. It is often treated by chemotherapy and surgery.

**KEYWORDS:** breast cancer, diagnosis, treatment, Central African Republic.

**INTRODUCTION**

Breast cancer is the leading cause of cancer-related death in women worldwide. While breast cancer mortality in women is decreasing in developed countries, it is increasing in sub-Saharan Africa.<sup>[1]</sup> In Africa, breast cancer is the 4th most common cancer in the general population after liver, skin and cervical cancer.<sup>[2]</sup> In sub-Saharan Africa, breast cancer in women ranks second after cervical cancer.<sup>[3,4]</sup> In the Central African Republic, few studies have been carried out on breast cancer in women. of our study was to describe the epidemiological, diagnostic and therapeutic aspects of breast cancer in women in the Central African Republic.

**METHOD**

This was a prospective and descriptive study on breast cancer covering a period of 3 years from June 2016 to June 2019, carried out at the community University Hospital Center of Bangui. It concerned all cases of breast cancer in women treated and followed in the surgical and oncology departments. The epidemiological, diagnostic and therapeutic parameters were collected from the patient files and from the registers of surgery and oncology departments. A data collection sheet was previously established for this purpose, respecting

confidentiality. The majority of patients were referred from other health facilities for surgical and oncological management. All patients treated and regularly followed up in services were included. of surgery and oncology and consenting. Patients who were lost to follow-up and those who did not consent were excluded. The UICC TNM classification was used to determine the stage of the disease. The histopathogenic grade of Scarff-Bloom-Richardson (SBR) was used to specify the degree of differentiation of tumors on pathology. The chemotherapy protocol FAC 60 (5-Fluoro-Uracile, Adriamycin and Cyclophosphamide) and CMF (Cyclophosphamide, Methotrexate and 5-Fluoro-Uracile) were used on the first line for 6 to 8 courses spaced 3 to 4 weeks apart (3 neo-adjuvant cures and 3 to 5 adjuvant cures). In the event of recurrence or metastatic cancer, the taxotere was used. Excel 2017 software and EPI Info 7.2.2.6 were used to analyze the results.

**RESULTS**

Thirty - nine cases of breast cancer in women were retained on 52 patients. Epidemiological data The average age of the patients was  $50.4 \pm 9.5$  years, with extremes of 27 and 78 years. The 46 to 55 age group represented 53.8% of cases (Table I). All the patients

came from Bangui and the surrounding area. The average consultation time was  $9.7 \pm 20.5$  months, with extremes of 4 and 27 months. The average of their body mass index (BMI) was  $28.5 \pm 3.2$ , with extremes of 23 to 32 (Table II). ECOG 0 status was in the majority with 92.3%. The average age of the menarches was  $11.4 \pm 1.1$  years, with extremes of 9 and 14 years. Thirty-five patients (89.7%) were multiparous, 3 were pauciparous (7.7%) and one patient nulliparous (2.6%). The average parity was 4 (extreme 0 and 7). The average age of the first pregnancy was  $15.1 \pm 1.6$  years, with extremes of 13 and 18 years. Breastfeeding was the majority (76.9%), mixed in 20.5% of cases. None of us received prolonged contraception. The average age of menopause was  $46.7 \pm 6.3$  years, with extremes of 43 and 50 years. Previous breast surgery was found in 7.7% of cases. Two histories of prostate cancer have been found in second-degree relatives. Diagnostic data The left breast was the most affected with 69.2%. The tumor mainly occupied the supero-external quadrant of the breast (56.4%). The breast nodule was the most common clinical manifestation (87.2%). Axillary lymphadenopathy was objectified clinically and on ultrasound in 12 patients (30.8%) Therapeutic data The majority of patients belonged to stages T2 and T3 with 27 cases (Table III). Ductal carcinoma was the most common histological type with 29 cases (74.4%), followed by lobular carcinoma with 10 cases (25.6%). Grade 1 of Scarff-Bloom and Richardson was in the majority with 35 cases (89.7%), followed by grade 2 (5.1%) and grade 3 (5.1%). The mean tumor size was  $45.2 \pm 32.8$ mm, with extremes of 8 and 90mm. Neoadjuvant chemotherapy was used in 43.6% of the cases, and it was systematic postoperatively in 89.7% of the cases. Mastectomy was the most used surgical procedure (51.3%), unlike lumpectomy (17.9%). The medium-term evolution was marked by 4 cases of loco-regional recurrence (10.3%), including 1 case associated with lymphedema and 1 death. It was a patient received at the T4N2M1 stage.

## DISCUSSION

Breast cancer is the most common cancer in women after cervical cancer in Sub-Saharan Africa.<sup>[3, 4]</sup> The average age of the patients in our series was 50.4 years which is comparable to 51 years found by Sarhaoui G<sup>[5]</sup>, but well above the 49.5 years of the Dem A series.<sup>[6]</sup> The average age found in our series is comparable to those found in the literature and confirms the idea that breast cancer occurs most often in postmenopausal women.<sup>[7, 8, 9, 10]</sup> The patients in our series were overweight in 71.8% of cases and the average age of menarche was 11.4 years; which constitute risk factors for the occurrence of breast cancer.<sup>[11, 12]</sup> In our study, multiparity and breastfeeding are controversial protective factors, contrary to the observation made by André Nkondjock.<sup>[13]</sup> The average consultation time was 9.7 months which is comparable to the 8.2 months found by Dem A.<sup>[6]</sup> This delay can be

explained by the lower cost of the medical consultation and the fears engendered by the disease. In our series, the left breast was the most affected (69.2%) as found by Tre-Yavo M.<sup>[14]</sup> Breast nodule was the main clinical manifestation (87.2%), same finding made by Essiben F with 63.1%.<sup>[15]</sup> Tumors were diagnosed at stages T2 and T3 mainly (76.9%), with a average tumor size of 45mm, this is explained by a relatively short consultation period and a low grade of Scarff-Bloom and Richardson (89.7%). Canal carcinoma is the most common histological type (74.4%), comparable to the 80% found by Khalil AI.<sup>[16]</sup> Surgery was the most used first-line treatment (56.4%), followed by chemotherapy (43.6%) due to the characteristics of the tumor at time of diagnosis as evidenced by the study by Yang MT.<sup>[17]</sup> Chemotherapy has led to a considerable reduction in size of tumors, improvement of local signs preoperatively and prevention of recurrences and extensions, as found by Essiben F.<sup>[15]</sup> Overall survival at 2 years was 94.9% of cases which are well below the 53.2% found by Doui Doumga A.<sup>[18]</sup>

**Table I: Distribution of patients according to age group.**

Age group	Effective	%
[26 – 35[	03	7,7
[36 – 45[	04	10,3
[46 – 55[	21	53,8
[56 – 65[	10	25,6
[66 – 75[	00	00
[76 – 85[	01	2,6
Total	39	100

**Table II: Distribution of patients according to the Body Mass Index (BMI).**

BMI	Effective	%
25 – 30 (overweight)	28	71,8
30 – 35 (moderate obesity)	09	23,1
18,5 – 25 (normal build)	02	5,1
Total	39	100

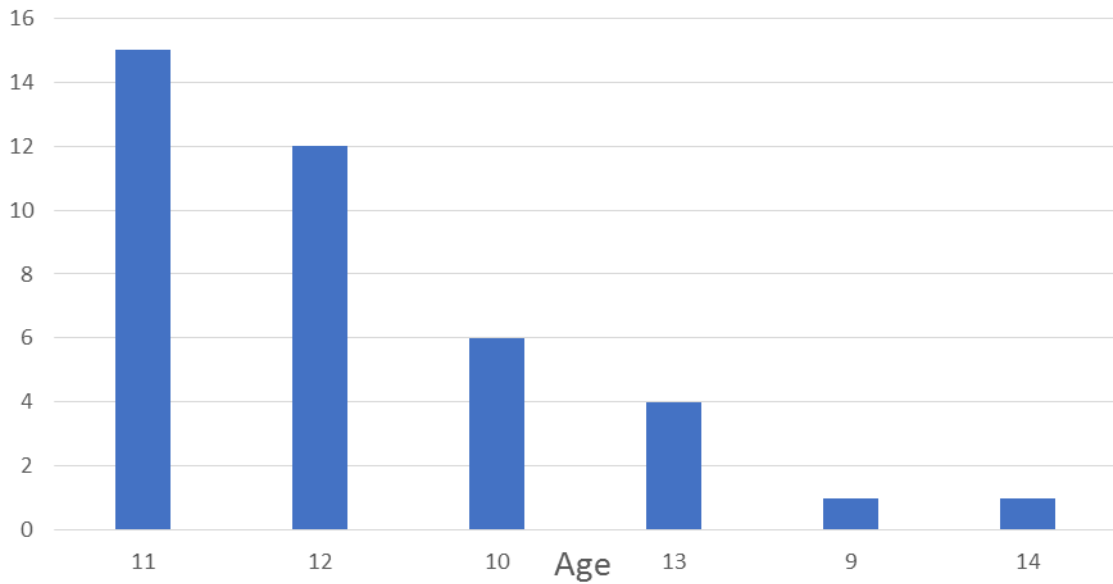


Figure 1 : Frequency of the age of the first menarche.

Table III : Distribution of patients according to TNM classification.

TNM	Effective	%
T2N0M0	18	46,2
T3N0M0	05	12,8
T3N1M0	04	10,3
T1N0M0	04	10,3
T4N1M0	04	10,3
T3N1M0	03	7,6
T4N2M1	01	2,5
Total	39	100

First line treatment

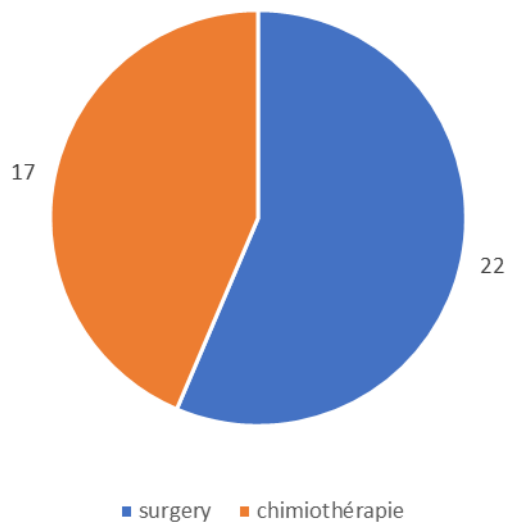


Figure 2 : Frequency of the first line treatment.



Figure 3 : Breast nodule.



Figure 3 : Breast tumor with skin modification.



**Figure 5 : locally advanced breast cancer.**



**Figure 6 : Local recurrence of breast cancer after mastectomy**

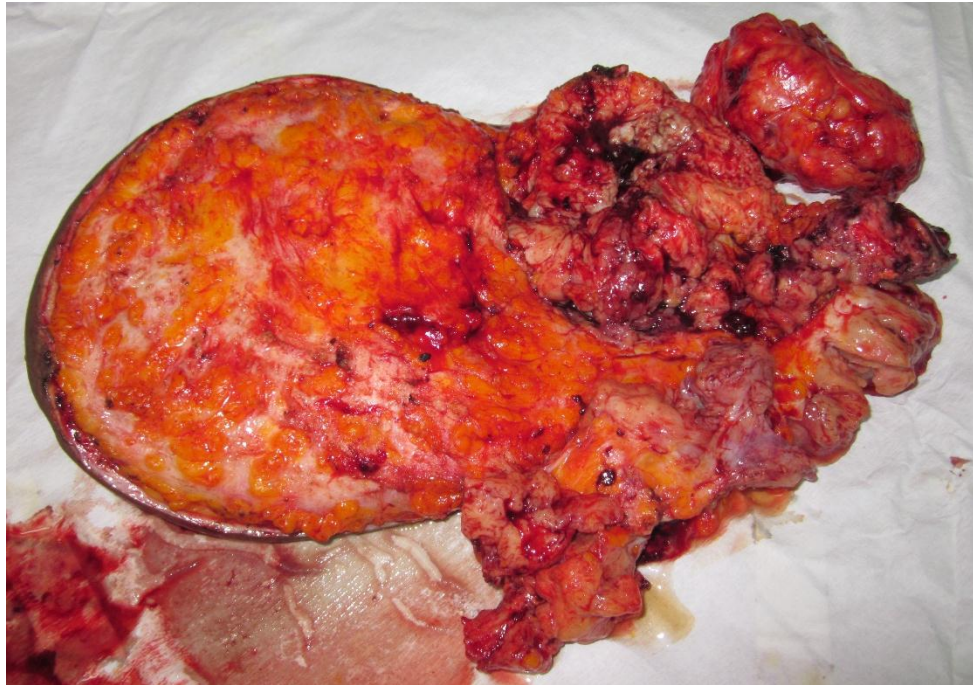


Figure 7 : mastectomy part

The Authors declare that there is no conflict of interest.

#### CONCLUSION

Breast cancer is a cancer in older women. Overweight and early menarche are the main risk factors. Multiparity and breastfeeding are not protective in themselves. Early diagnosis and management are guarantees of a good prognosis. A multicentre study over time would make it possible to better assess the frequency and risk factors in our country.

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