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Full Length Research Paper

Epidemiological, clinical and histological profile of breast cancers in Internal Medicine department at the National Teaching Hospital (NTH) Hubert Koudougou Maga (HKM) of Cotonou/Benin

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In Internal Medicine Department at the National Teaching Hospital of Cotonou, breast cancer accounted for 14.58% of cancer pathologies. The average patients age was 47.26 years with extremes ranging from 26 to 72 years. The administration of cancer chemotherapy was the most common reason for admission (20 cases), followed by the exploration of a breast nodule, asthenia and dyspnea. The consultation period after breast self-examination of a nodule was ≥ 3 months (31.25%). The inflammatory nature of breast (13 cases) was the most frequent suspicious clinical signs followed by draw back and breast ulceration. Histology was performed in 28 cases and objectively revealed in 85.36% cases ductal carcinoma. Cancers revealed to be at metastatic stage Stage III and stage IV for respectively 13 cases and 44 cases).

Keywords: Breast cancer, Epidemiological, Clinical, Histological, profile, Internal Medicine, Cotonou.

INTRODUCTION

Nowadays cancer has become a real public health issue especially in developing countries. According to the World Health Organization (WHO), cancer death toll accounts for 21% of deaths related to Non-Communicable Diseases (NCDs) (World Health Organization, 2010).

As far as women are concerned, breast cancer is the most common type of cancer. In Western countries, 1/8 of women will develop breast cancer during their lifetime (Key et al., 2001). In Africa, breast cancer is among the five most common women cancers (Sankaranarayan, et al., 2010). In Morocco, according to 2004 data from Casablanca's cancer records, breast cancer represents 36% of all women cancers (Belkacémi, et al., 2010).

In Benin, breast cancer epidemiology is poorly understood because of the lack of cancer national record. However, some cases are diagnosed and treated in different health centers in the country. The cases studied were based on data collected from hospital and anatomy pathology records. This research was initiated to study the epidemiological, clinical and pathological profile of breast cancers in internal medicine department.

MATERIALS AND METHODS

This is a cross-sectional and descriptive study conducted over a period of 6 years (June 2008 - June 2014). All women screened in the period and diagnosed with breast cancer were included. Data were collected from records of admitted patients in the ward during the study period. A study sheet allowed data collection.

The variables under study were age, sex, admission date, reason for admission, time limit between the early symptoms and the date of admission in ward, breast cancer detection, breast cancer risk factors, histology, and cancer stage at diagnosis. Data analysis was performed by using Epi Info 7 software.

RESULTS

General data

Among the 1,969 patients admitted in Internal Medicine Department during the last 6 years, 432 suffered from cancer, representing a frequency of 21.94%. Among those patients who were followed for cancer, 63 had breast cancer which accounted for 14.58% of all types of cancers. No male case of breast cancer has been reported.

The average age of patients was 47.26 ± 10.63 years, ranging from 26-72 years-old. The age range 35-54 years was the most represented (65%).

Figure 1 gives details about the progression of breast cancer proportion in all cancer cases during the study period.

Figure 2: Distribution of breast cancer cases per age group. Breast cancer is more common in age group 45-54 years (35%) in over one third of our patients (35%).

2-Reason for admission, clinical presentation

The table 1 show the distribution per reason for admission in internal medicine ward.

29.41% of women admitted for realization of a cancer chemotherapy.

The time limit between the nodule discovery and hospitalization varies from one patient to another. Figure n° 3 gives details about the distribution of cases per time limit.

More than half of women could not specify the time limit between the discovery of the nodule and hospitalization.

The table 2 gives details of the distribution of cases per the position of malignant breast tumor.

Of the 58 women who had unilateral breast cancer, 33 women had the cancer of the left breast, i.e. 56.90 %. As for the bilateral localization, 4 among them had contralateral recurrence. Some signs were suspicious of malignancy. These signs are summarized into Figure 4.

Of the suspects signs of malignancy, the axillary lymphadenopathy were most encountered in 54.39% of cases

Figure 5 describe the Distribution of cases per type of alteration of the breast covering skin.

52% of women had a inflammatory nature of the breast skin

3- Pathological Presentation

Figure 6 shows the distribution of different histological types. Ductal carcinoma was the histological type most found in 85.86% of cases.

4- Metastatic sites and clinical stage of diagnosis

45.07% of women had lymphadenopathy's metastasis. Figure 7 show the distribution of cases per the metastatic nature

69.84% of breast cancer are unclassifiable. Figure 8 shows the distribution of cases of breast cancer according to the clinical stage.

DISCUSSION

Epidemiological aspects

The 63 breast cancer cases collected in 6 years do not reflect the disease reality, as it is known that in Benin just like in other African countries, the management of cancer is not codified and many patients do not go to the oncologist. These patients seek help from traditional healers either because of ignorance or lack of financial means.

By analyzing the progression chart of breast cancer from 2008 to 2014, we realized that the peak of incidence was recorded in 2010 with 25% of cases. This situation can be explained by the growing number of oncologists able to treat cancer at the National Teaching Hospital, and also the opening of other chemotherapy centers within the same hospital besides the Internal Medicine Ward. There are also other health centers in Zinvié (in the South of the country) and Tanguieta (in the north) that treat breast cancers. The consultation period at a health centers after discovering a lump in breast by self-examination was over 3 months in 7 cases, representing 31.25%. This finding was reported by Togo, et al., (2010) in Bamako with a consultation period over 2 months.

Our study showed that the population affected by breast cancer is young with average age of 47.26 ± 10.63 years. Many authors have made similar observations. Some found out an age group that is respectively around 45 years, 46.3 years and 48.5 years (Abbass, et al., 2011; Darre, et al., 2013 ; Mehinto, et al., 2007). Others found an average age of 40.8% for the age group between 45 and 50 (Belley Priso, et al., 2010). Breast cancer is more common in age group 45- 54 years (35%) in over one third of our patients (35%). Our results differ from those reported in France (Arveux, al. 2013; Togo, et al., 2010) which showed that the most affected age group is 54-64 years with respectively 22.49% and 24.94%. Thus in Africa, most often, breast cancer affects sexually active women.

Breast cancer is unusual before the age of 34. We recorded seven (Abbass, et al., 2011) cases of women aged 26-34 years. No risk factor was found with these women This scarcity was reported by Sano, et al., (1998),

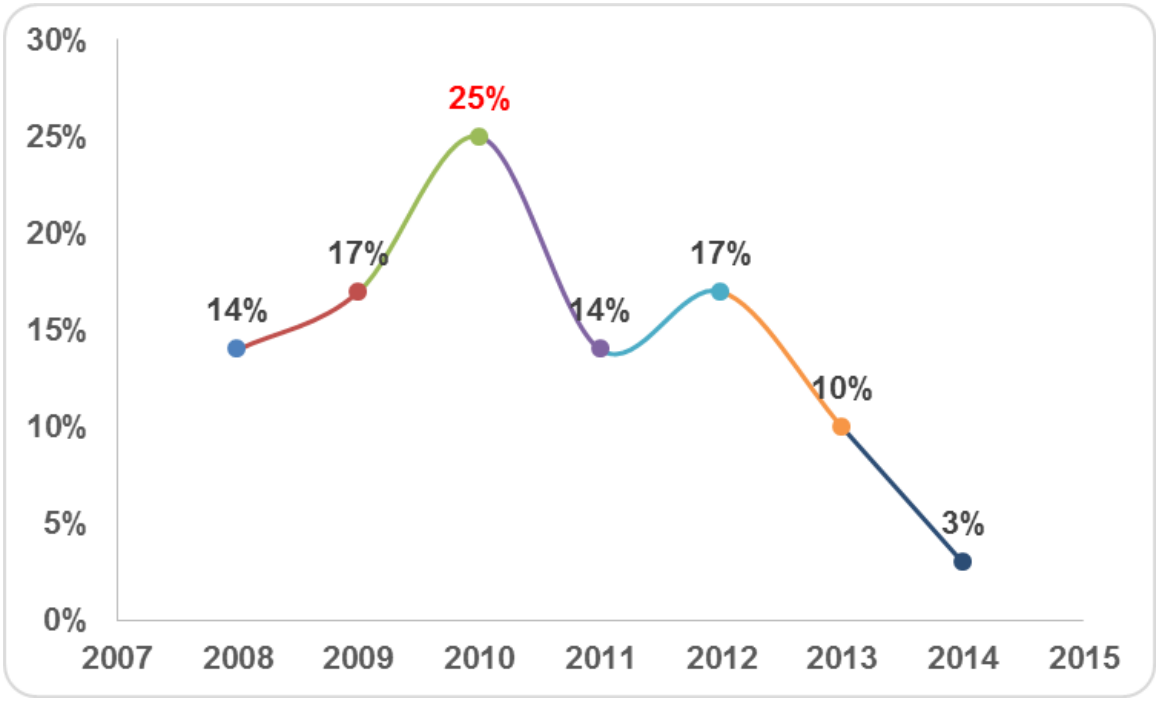

Figure 1. Progression of breast cancer proportion in cancer cases from 2008 to 2014.

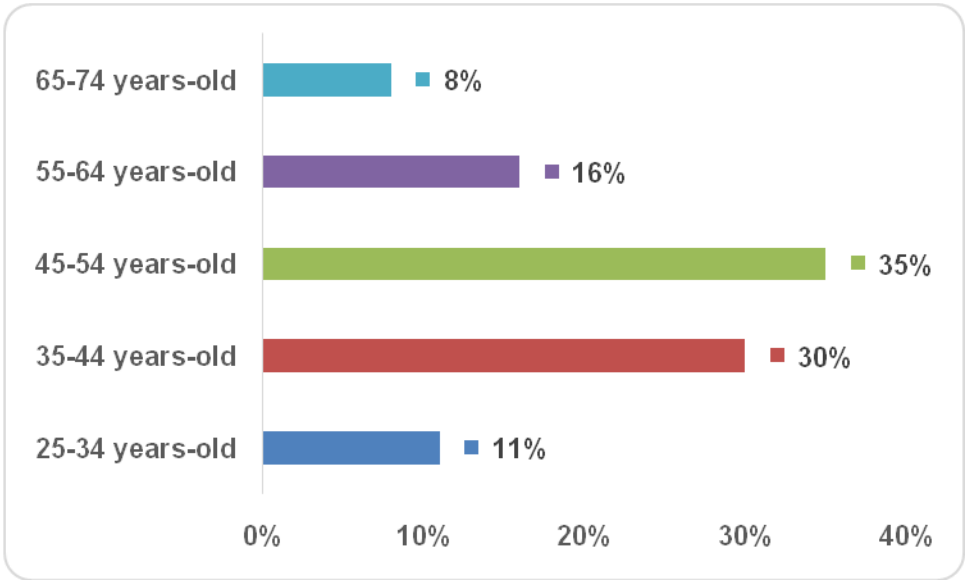

Figure 2. gives details about the distribution of breast cancer cases per age group.

in Burkina Faso, with one case of breast cancer with a young woman of 29 years in gestation.

Clinically

In our study, there were 58 cases of unilateral breast impairment; representing 92.06%, preferentially left breast impairment in 33 cases. Our results differ from those reported by Sano et al (1998), (Out, et al., 1989) who found predominant impairment in right breast without any objective explanation. The bilateral impairment is found in 5 cases with 4 contralateral recurrent situations. The 4 patients were aged between 36 and 57 years and only one patient had a family history of breast cancer from a relative of 1st degree. Contralateral recurrence occurred within 1 year. This finding was also reported by

Table 1. Distribution per reason for admission in internal medicine ward.

Reason of admission	Number	(%)
Cancer Chemotherapy	**20**	**29.41**
Breast nodule self-examination	16	23.53
Asthenia	9	13.24
Dyspnoea	8	11.76
Coughing	5	7.35
Weight loss	3	4.41
Reduced consciousness	2	2.94
Alteration of the général condition	1	1.47
Hemiparesis	1	1.47
Lymphedema	1	1.47
Hepatomegaly	1	1.47
Total	**68**	**100**

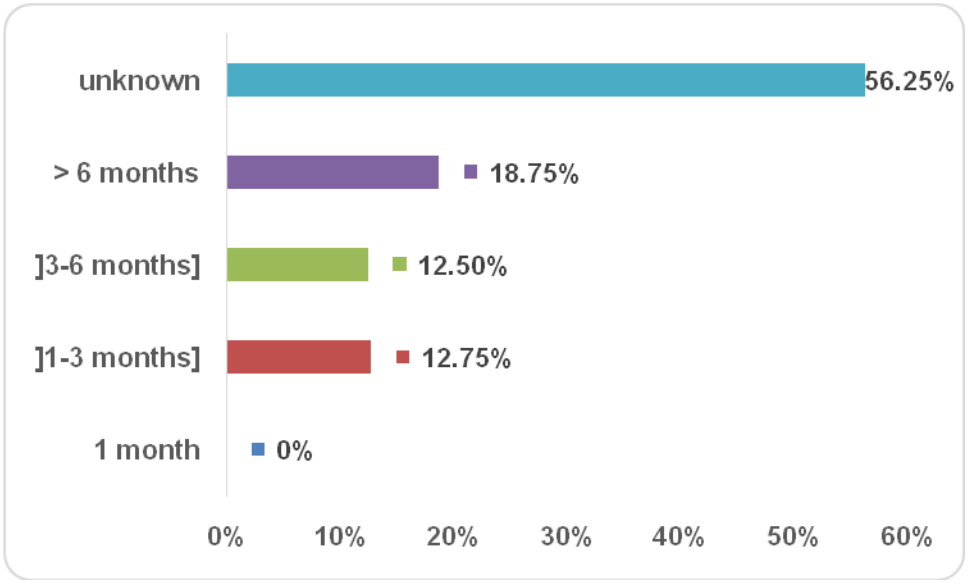

Figure 3. Distribution of cases per time limit between the discovery of a nodule and hospitalization.

Table 2. Distribution of cases per the position of malignant breast tumor.

Tumor position	Number (n=63)	%
Unilateral	58	92.60
Left breast	33	56.90
Right breast	25	43,10
Bilateral	5	7,94
Contralateral recurrence	4	80
Bilateral outset	1	20

Mayi-Tsonga, et al., (2009) in Gabon. Some authors found that family history of breast cancer is the essential risk factor as first-degree relative (Espie, et al., 2001; Chen, et al., 1999).

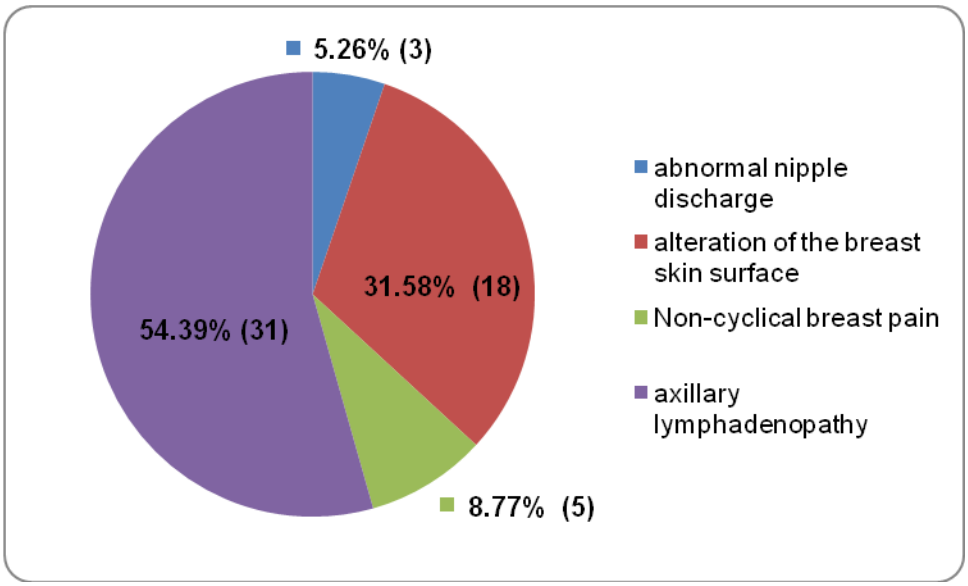

Figure 4. Distribution of suspect's clinical sign of malignancy.

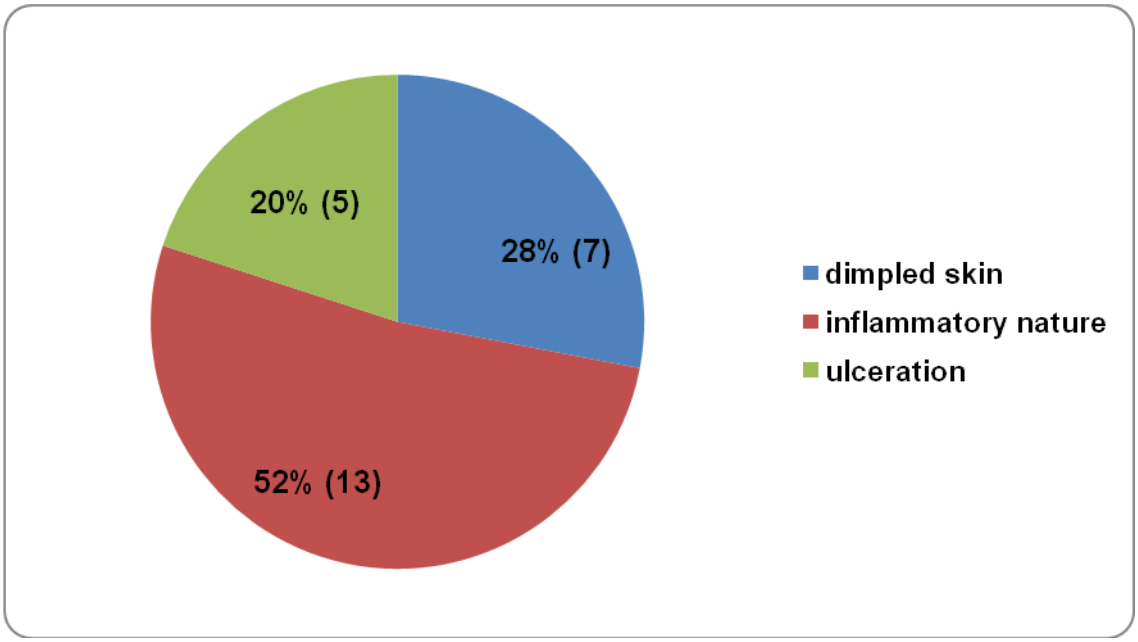

Figure 5. Distribution of cases per type of alteration of the breast covering skin.

Suspicious clinical signs that led to the diagnosis of breast cancer are axillary lymph nodes in 31 cases, representing 54.39% followed by alteration of breast covering skin. In Mali, (Togo, et al., 2010) have found those same signs, but the alteration of the breast skin was predominant in 262 cases (37.54%), followed by adhesive or non-adhesive palpable mass and lymphadenopathy with respectively 247 cases (35.39%) and 189 cases (27.08%). This difference may be related to the sample size.

Histological aspects

The histological confirmation was only carried out in 28 patients cases, representing 44.44%. Ductal carcinoma represents 85.36% of all confirmed cases. In Benin, in 2007 this trend was reported by Mehinto, et al., (2007) with a percentage higher than ours, which is 86.38% (95 cases), (Togo, et al., 2010; Darre, et al., 2013) also reported a predominance of this histological type with respectively, 57.14% (68 cases) and 73.16% (289 cases).

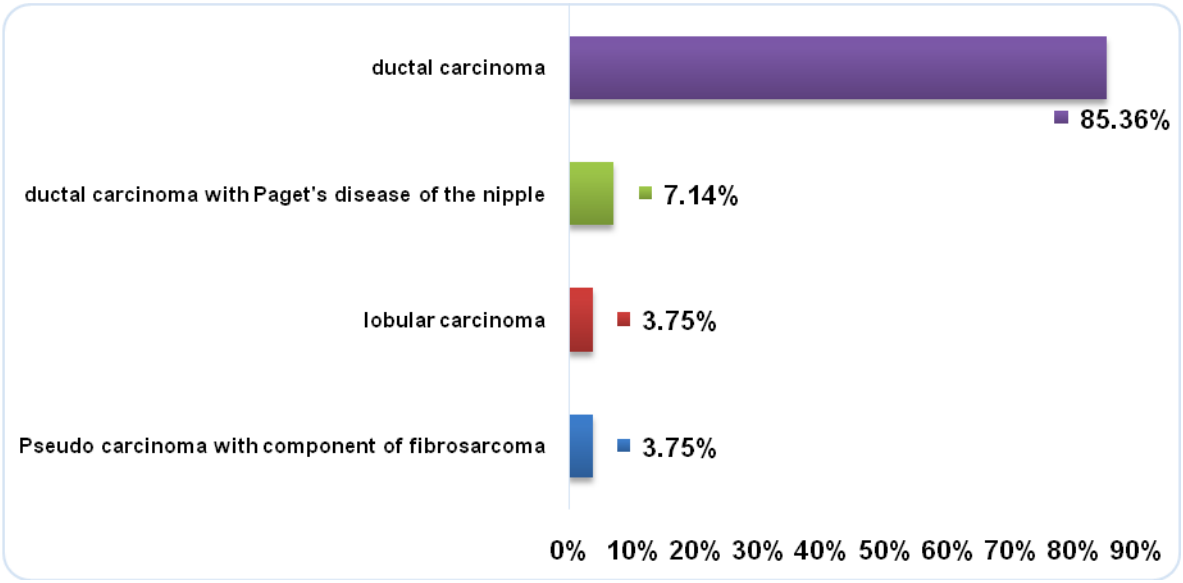

Figure 6. Distribution of cases per histology.

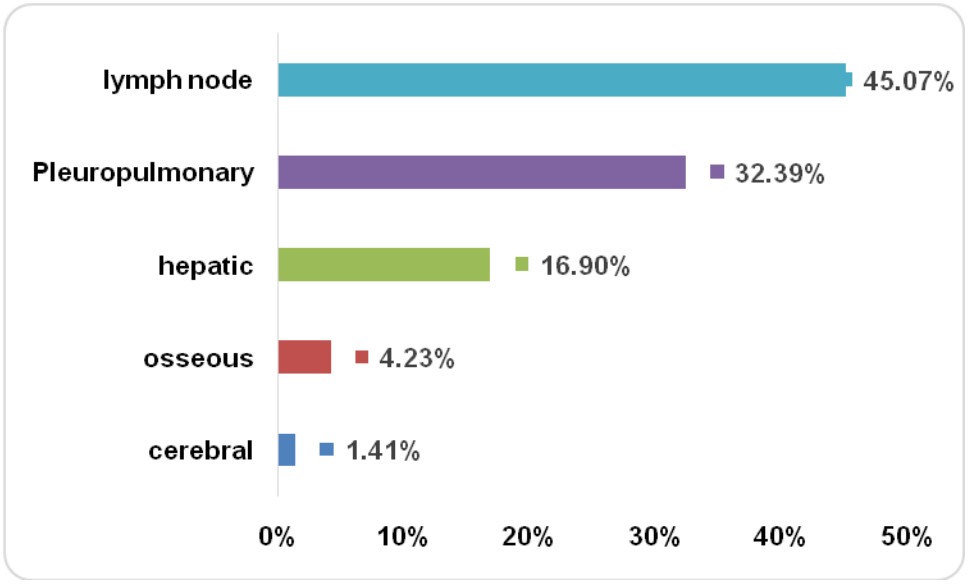

Figure 7. Distribution of cases per the metastatic nature.

In our study, 2 cases (7.14%) of Paget's disease of the nipple associated with ductal carcinoma have been reported. This is a histological rare form which may be associated with intrusive ductal carcinoma or ductal carcinoma in situ (Chen, et al., 2006). This scarcity was highlighted by Darre, et al., (2013) and (Fregene, et al., 2005) with 0.89% and 1% of the cases respectively. Breast cancer associated with Paget's disease of the nipple is generally more aggressive than the one that is not associated. Breast cancer prognosis associated with Paget's disease of the nipple depends mostly on intrusive or non-intrusive character of associated carcinoma (Chen, et al., 2006).

Search for hormone receptors (estrogen and progesterone) and HER 2 protein was conducted in Europe on two patients. The research was negative for both HR and HER 2 protein on the first patient. That was triple negative tumor. The patient was aged 47 and her tumor is infiltrating ductal carcinoma with Paget's disease of the nipple. On the second patient of 48 years, only the estrogen receptor was positive. That case of infiltrating ductal carcinoma is hormone-sensitive.

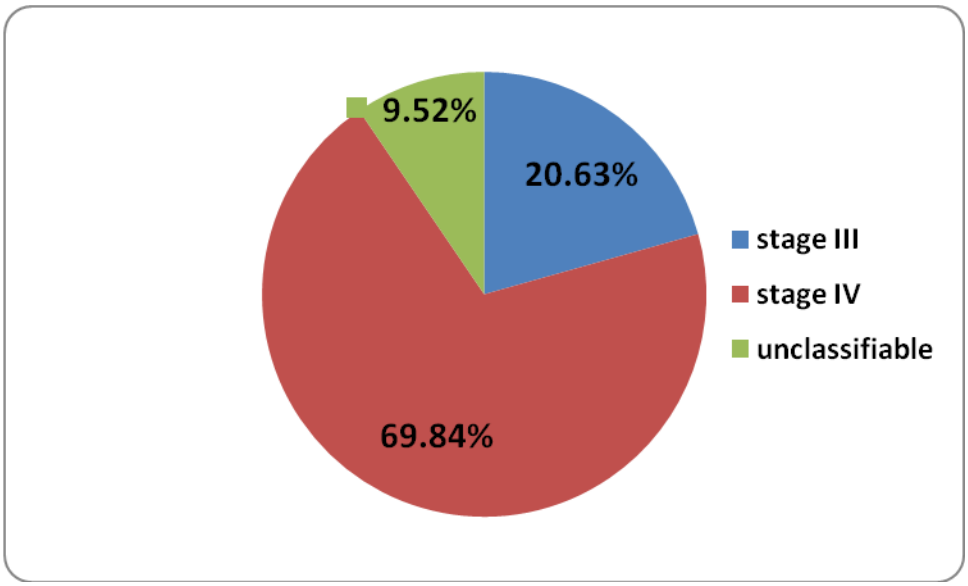

Figure 8. Distribution of breast cancer according to the clinical stage.

Staging

Diagnosis at an early stage (Stage I and II) is very important in the treatment choice and response. This is not the case in our patients who are consulted in advanced stages of their disease at stage III and VI, respectively with 13 cases (20.63%) and 44 cases (69.84 %). Our results superimposed those reported by Togo, et al., (2010) in Bamako with respectively 39.05% (82 cases) and 33.81% (71cases) for stage III and IV.

CONCLUSION

The finding of non-metastatic breast cancer is almost nonexistent in our context. Patients came for consultation at an advanced stage where there was no healing possibility Cancer management requires raising awareness in our society for early diagnosis, in view of better management.

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