

## Breast Cancer Recurrences at the of Senology Unit and Medical Oncology of the Aristide Le Dantec Hospital of Dakar

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### ABSTRACT

*Cancer recurrence is a decisive turning point in the disease, from which the patient's physical condition declines. The prognosis of the patients depends to the time of its occurrence and its location.*

**Patients and Methods:** *From 2013 to 2016, we collected 49 cases of patients treated for locally advanced breast cancer and documented recurrence. The data were collected from the computerized continuous monitoring records using the Filemaker software and then analyzed with the SPSS software.*

**Results:** *The average age of patients at diagnosis was 41 years. More than half of our patients (51%) had a body mass index (BMI) greater than or equal to 25. The average consultation time at the center after the tumor's discovery was 9.4 months. The mean size of the breast tumor was 55.2 mm, 63% at the T3 stage, 18.4% at the T4d stage, 10.2% at the T2 stage and 8.2% at the T4b stage. Hormone receptors were negative in 40% and tumors did not overexpress the HER-2 oncoprotein in 55.1%. Only 14.2% of our patients received hormonal therapy. The surgery was radical in 95.9% of the cases. Recurrence occurred on average after 18 months after treatment and overall survival was 23.5 months. The outcome was fatal for 35 patients (71.4%).*

**Conclusion:** *Breast cancer is in the process of becoming the first woman cancer in Senegal as in many other developing countries and is increasingly interested in the useful portion of society due to the young age of the patients. Steps must be taken to improve the quality and duration of their survival.*

### Introduction

The recurrence event constitutes a decisive turning point in the illness from which the patient's physical condition is only declining. The time of its occurrence and its location influence the prognosis of the patients. If it's better in the case of local recurrence, it remains reserved in the case of metastatic forms. Moreover, although there exists some advanced therapeutics escalation in developed countries at every stage of the disease, in Africa, on the other hand, resources are limited and multidisciplinary care teams are not very extensive; the management quickly becoming palliative. Currently, this search for recurrences or metastasis is based on periodic systematic imaging examinations or clinical

signs. Biological markers, although commonly used, are not yet the subject of consensus [1,2]. The objective of this study, was to evaluate factors related the recurrence, the recurrence mode, and prognosis at the of Senology Unit and Medical Oncology of the Aristide Le Dantec University Hospital of Dakar.

### Patients and Methods

From 2013 to 2016, we collected all the files of patients treated at the Senology Unit and Medical Oncology in the Gynecological and Obstetrical Clinic of the University Hospital Aristide Le Dantec of Dakar. During this period, 159 patients were treated for locally advanced breast cancers, including 49 documented

recurrence cases. The data were collected from computerized continuous monitoring records using Filemaker-Pro 14 software and analyzed with SPSS version 23 (Statistical Package for Social Science) software.

## Results

### Socio-demographic and clinical characteristics

During the recruitment period, 159 patients were cared for in our department, 49 of whom had a documented recurrence of 30.81%. The average age of patients at diagnosis was 41 years old, with extremes of 18 and 70 years. Patient's age did not appear to be a risk factor for tumor recurrence ( $p = 0.10$ ). The mean body mass index (BMI) was 25.7 kg/m<sup>2</sup> with extremes of 17 and 38 kg/m<sup>2</sup>. More than half of our patients (51%) had a BMI greater than or equal to 25 kg/m<sup>2</sup>. The reason for the consultation was the breast mass in 81.7% of cases, including 12.2% associated with axillary adenopathy and 4% of inflammatory cancer (carcinomatous mastitis). The average consultation time at the center after the detection of tumor was 9.4 months. The mean size of the breast tumor was 55.2 mm with extremes of 4 and 150 mm, 63% at stage T3, 18.4% at stage T4d, 10.2% at stage T2 and 8.2% at Stage T4b (Table 1) according to the classification of the International Federation of Gynecology and Obstetrics. Tumor size was not associated with risk of recurrence ( $p = 0.233$ ). Only lymph node involvement was strongly related to the risk of recurrence in our population ( $p = 0.002$ ).

Stages	Frequencies	Percentages (%)
<b>Tumor (T)</b>		
T2	5	10.2
T3	31	63.3
T4b	4	8.2
T4d	9	18.4
<b>Nodes (N)</b>		
N-	17	34.7
N+	32	65.3

**Table 1:** initial stage of disease.

### Antecedents

Only seven of our patients were menopausal. A history of breast surgery of the same breast was found in 8.1% of patients where the primary tumor was considered benign. Fourteen percent (14.2%) had a known family history of breast cancer. Cancer was associated with pregnancy in 6 patients, 12.2%.

### The anatomo-pathological and immunohistochemical characteristics

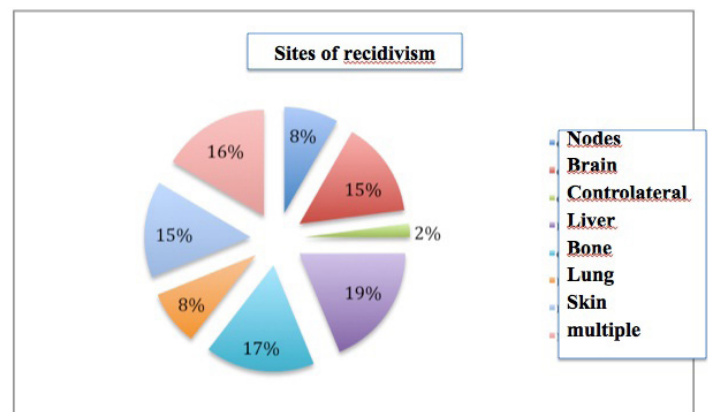
The most common histological type was infiltrating ductal carcinoma (89.8%). The grade of the tumor according to Scarf Bloom and Richardson (SBR) was evaluated at 3 in 46.9%. Hormone receptors were negative in 40% and tumors did not overexpress the HER-2 oncoprotein in 55.1%; Which makes us 40% of triple negative tumors. Table 2 summarizes the histological characteristics of the tumors.

Histological type	Fréquences	Percentages (%)
<b>Type</b>		
<b>Metaplastic carcinoma</b>	2	4.1
DC	44	89.8
LC	1	2
<b>SBR grade</b>		
<b>Unknown</b>	8	16.3
1	1	2
2	17	34.7
3	23	46.9
<b>Hormonal receptors</b>		
<b>Negative</b>	20	40.8
<b>Positive</b>	14	28.6
<b>Unknown</b>	16	32.7
<b>HER-2</b>		
<b>Negative</b>	27	55.1
<b>Positive</b>	6	10.2
<b>Unknown</b>	16	32.7

**Table 2:** Caractéristiques histologiques des tumeurs. DC: ductual carcinoma; LC: lobular carcinoma.

### Therapeutic and prognostic data

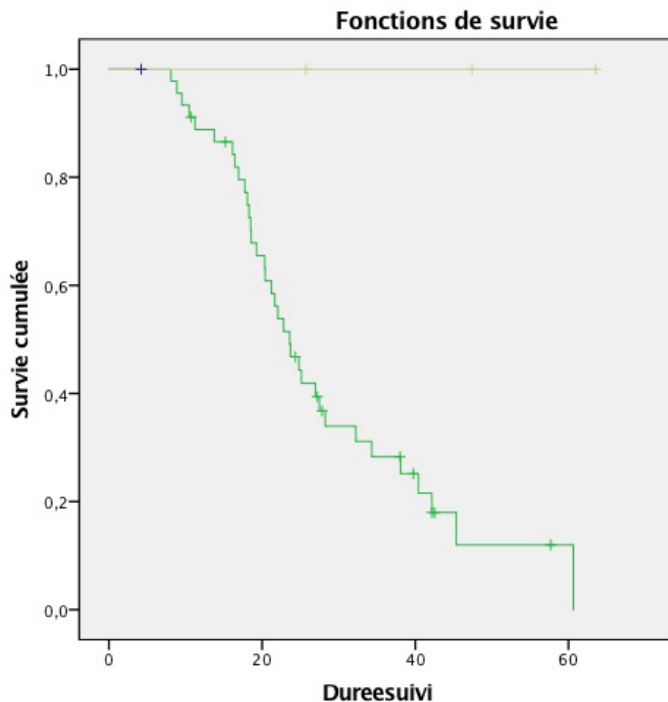
Chemotherapy was administered in neoadjuvant treatment to 34 patients, ie 69.3%. The therapeutic protocol was based on anthracyclines in 53%. The clinical tumor response was greater than 50% in more than half of the cases (55%). And it was complete in 45% of them. All the patients benefited the surgery, which was radical in 95.9% of the cases. Patients had adjuvant chemotherapy in 87.6% of cases, hormone therapy in 16.3% of cases and 18.3% of radiotherapy. Among patients with overexpression of hormone receptors (28.6%), only seven patients had hormone therapy (14.3%). None of the six HER 2 positive patients received trastuzumab, due to lack of resources. Recurrence occurred on average 18 months after treatment. It was hepatic in 22.4%, bone in 18.3%, pleuropulmonary in 18.2%, cerebral in 14.3%, multiple in 16.1% and a case of parietal recurrence (Figure 1).



**Figure 1:** localization of recidivism

Overall survival was 23.5 months with extremes of 8 and 60

months. Fourteen patients were lost to follow-up. The outcome was fatal for 35 patients (71.4%) and 9 were followed-up (18.4%) currently. Figure 2 shows the survival calculated by the Kaplan Meier method.



**Figure 1:** survival curve according to Kaplan Meier method.

## Discussion

Breast cancer's mortality is disturbing in Africa. The recurrence event constitutes a decisive turning point in the illness from which the patient's physical condition is only declining. Moreover, although there exists some advanced therapeutics escalation in developed countries at every stage of the disease, in Africa, on the other hand, resources are limited and care is outdated. Thus, in the absence of systematic screening and the numerous advances cases, these factors of bad prognosis are added to the histological and immunological characteristics of the tumors. The prognosis thus becomes bad. The natural history of most cancers shows that recurrences occur most often in the first three years, making the survival rate at 5 years and a fortiori at 10 years reliable estimates of the likelihood of curing cancer [3]. This study reports the prognosis of the patients followed in the medical oncology unit of the gynecological and obstetric clinic of the Aristide Le Dantec Hospital.

## Socio-demographic and clinical characteristics

The onset age of breast cancer is becoming younger [4]. This young age is unfortunately associated with a poor prognosis of the disease. For several years, the interactions between overweight and obesity on the occurrence of cancer in general on the one hand and on survival on the other hand are widely studied. Several anthropometric criteria have been studied, including the ratio of waist circumference on hip circumference (abdominal obesity) to body mass index (BMI) [5,6]. As a result, obesity appeared to

be protective in pre-menopause and deleterious after menopause. More than half of our patients (51%) had a BMI greater than or equal to 25 kg/m<sup>2</sup>. The young age of our patients at the diagnosis places them immediately in a category with high risk and with a worse prognosis than those menopausal. Moreover, it is in this young population that the rates of mutations BRCA 1 and 2 are the highest [7]. Fourteen percent of our patients had a history of breast cancer in their family. In the absence of a consensus on the screening of young women under the age of 40, the discovery of cancer is therefore at an advanced stage. Thus, the most common reason for consultation was the tumor at that age and a history of surgery of the same breast was found in 8.1% of the patients for tumors treated as if they were benign due to poor initial exploration.

## Therapeutic and prognostic data

The treatment of breast cancer is well codified and apart from factors related to the histological type, the early stage of the disease is a guarantee of success. Surgery remains a must in the treatment of cancer. Advances in radiotherapy, chemotherapy and the sentinel node allowed him to be less mutilated. However, due to the relatively young age of our patients, the histological type largely dominated by negative triple tumors and advanced at diagnosis, mastectomy was the rule in our series, as recommended by most authors [8,9]. In our study, 32.6% of our patients were under 35 years of age at the time of diagnosis. All these findings converge towards a poor prognosis of our patients.

## The anatomic-pathological and immunohistochemical characteristics

Negative triple tumors are recognized to be very aggressive [10]. In our study, their rate was 40% and the SBR grade was 3 in 46.9% of the cases. For these patients, it is recognized that hormone therapy and targeted therapies such as trastuzumab greatly improve the prognosis both in adjuvant and neoadjuvant settings [11-13]. However, only 7 of our repeat patients had hormone therapy and no targeted therapy. Thus, the average duration of recurrence was 18 months. The survival at 5 years in our study was appalling with one fatal for 35 patients (71.4%). It would have been better with earlier diagnosis and better regularity in chemotherapy sessions and access to other adjuvant therapies. Indeed, apart from a subsidy of the drugs used for chemotherapy (anthracyclines and taxanes), all the expenses of the care are the responsibility of the patients and their families; Hormone therapy and trastuzumab being available only in private pharmacies.

## Conclusion

Breast cancer is in the process of becoming the first woman's cancer in Senegal as in many other developing countries. It unfortunately affects the useful section of society and all the factors contribute to a poor prognosis of this cancer (poverty, sub-medicalization, young age and late stage of diagnosis). Moreover, certain characteristics of tumors at this age make them very aggressive tumors. A better care policy and free healthcare should improve the duration and quality of survival like all the countries that have improved the survival of patients living with this cancer.

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