

# Breast cancer among women in sub-Saharan Africa: prevalence and a situational analysis

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Breast cancer is the most common cause of death in women worldwide. The incidence of breast cancer in sub-Saharan Africa (SSA) has been rising and yet many cases remain undetected. Studies reveal that the prevalence of breast cancer in most SSA countries does not give the true picture as many of these countries lack national cancer registries. A number of risk factors such as alcoholism, age and hormones predispose women to breast cancer and several challenges are currently faced in detecting and managing breast cancer in SSA, especially in the domain of medical imaging technology and finances. The purpose of this review is to document the prevalence of breast cancer among women in SSA.

**Keywords:** Africa, Breast Cancer, Prevalence, Women

## Introduction

Breast cancer is the most common cause of death in women globally.<sup>1-3</sup> In 2012, about 14.1 million women were diagnosed with cancer, of which 1.7 million were breast cancer cases; 56.8% of the 1.7 million cases were from low-income countries. Some 522 000 deaths due to breast cancer were recorded the same year, with the majority from sub-Saharan Africa (SSA), from which, when compared with the WHO report of 2008, the incidence of breast cancer is seen to be on the rise.<sup>2</sup> It is estimated that by 2025 over 19.3 million women, with the majority from SSA, will be suffering from breast cancer.<sup>2</sup> The five-year survival rate of breast cancer in SSA is less than 40% compared with countries like the US, with survival rates of 86%. Factors contributing to the low five-year survival rate are a low level of awareness and lack of documentation on prevalence of breast cancer. Most cancers are usually in advanced stages at presentation.<sup>4-6</sup> Of 184 countries in the world, breast cancer is the most diagnosed form of cancer in 140 countries.<sup>2</sup> According to a report from the International Agency for Research in Cancer (IARC), 14.1 million cancer cases were diagnosed worldwide in 2012, of which 8 million were from low-income countries (LICs). A total of 8.2 million deaths were recorded the same year from cancer and 5.3 million were from LICs; it is stated that by 2030 an estimated 21.7 million people will suffer from cancer. Breast cancer remains the leading cause of death among women in Africa. An estimated 882 900 cases in LICs were diagnosed, of which 324 300 women died. The highest prevalence rate is noted in East, North and West Africa. A balanced approach is required for breast cancer control in SSA, which will include prevention, early detection, effective treatment and palliative care.<sup>7</sup> However, it should be noted that most SSA countries lack cancer registries and the exact burden of the disease is therefore unquantified. Consequently, breast cancer is likely to be a neglected healthcare issue in these settings. Moreover, governments in SSA countries have other healthcare priorities, such as combating communicable diseases; and inadequate GDP expenditure on health care. Non-communicable diseases such as cancers, despite comprising significant healthcare burdens, are neglected healthcare matters in sub-Saharan African countries (SSA).

The prevalence in most of SSA is undocumented. This explains the motivation for this opinion paper, whose objectives are to:

- (1) document the prevalence of breast cancer among women in some sub-Saharan African countries (SSA);
- (2) evaluate the risk factors associated with breast cancer in SSA;
- (3) report on the situational analysis: knowledge, attitudes and practices in respect of breast cancer in SSA women;
- (4) explore the challenges faced in the detection, diagnosis and management of breast cancer in SSA.

## Prevalence of breast cancer

Little information is available in most SSA countries as regards the prevalence of breast cancer among women. Some of these countries lack national cancer registries.<sup>3,4</sup> Limited published data show that the breast cancer prevalence in Cameroon is 5.8% and in the Central African Republic 15.27%.

According to Surbhi *et al.*, 30/100 000 women in SSA with breast cancer have associated HIV, with South Africa topping the list.<sup>5</sup> In a review from South Africa,<sup>8</sup> it was seen that HIV-positive patients have an increased risk of developing breast cancer, as well as an increase in mortality and morbidity from the disease. The relationship between HIV and breast cancer needs more research. The accuracy of prevalence rates and statistics on breast cancer and HIV in SSA and South Africa in particular is limited. The strong association between HIV and breast cancer could be due to the impaired immune system as a result of AIDS.<sup>8</sup> Breast cancer is less common in black women than in white women in SSA with an age standardised rate of 11.3/100 000 in Central Africa and 70.2/100 000 for white women in South Africa.<sup>5</sup>

By 2050, it is projected that the breast cancer prevalence in SSA will double.<sup>5</sup> Most cases of breast cancer are not detected early: this is seen in countries like Cameroon, Malawi, South Africa, the Central African Republic and Tanzania.<sup>4,6</sup> Some factors accounting for this are poverty, limited health infrastructures and staffing, as

**Table 1:** Annual increases in breast cancer incidence from selected cancer registries<sup>12</sup>

Registry	Annual increase in incidence/100 000
Zimbabwe (black population)	4.9%
Uganda	3.7%
Mozambique	6.5%
South Africa (rural area)	4.3%

well as a low rate of sensitisation. Only a few educated women visit healthcare centres.

Comprehensive statistics on the prevalence of breast cancer in SSA are lacking.<sup>9</sup> However, compared with the developed countries, breast cancer incidence and mortality rates are rising in SSA. The incidence and mortality ratio ranged from 0.55 in Central Africa and 0.16 in the US, due primarily to ignorance of breast cancer manifestations and other related challenges.<sup>9</sup> Many challenges remain in identifying affected women in SSA.<sup>8</sup> A related review on the Breast Cancer Update in Africa shows that there is an increase in breast cancer incidence in all parts of Africa, with is projected to double by 2050. Zimbabwe has an incidence of 4.5%, based on data gathered between 1991 and 2010.<sup>10</sup> Southern Africa has an incidence of 38.9/100 000 women; the figure is 38.6 in West Africa, 30.4 in East Africa and 26.8 in Central Africa.

### Risk factors associated with breast cancer in sub-Saharan Africa

Studies show that many risk factors are associated with the development of breast cancer. Some of these risk factors include obesity, hormonal factors, family history of breast cancer, sedentary lifestyle (though most common in women in developed countries), cigarette smoking and alcoholism. Some

of these risk factors, such as cigarette smoking and alcoholism, are avoidable through health education.<sup>3,7,8,11</sup> Risk factors increase the chances of women in SSA developing breast cancer. The situation is further exacerbated by the lack of awareness regarding breast cancer.

### Situational analysis: knowledge, attitudes and practices among women in respect of breast cancer in SSA

Breast cancer awareness is crucial in reducing the chances of developing the disease.<sup>8,9</sup> In a related study, some women were ignorant about certain changes in their breasts that are usually associated with breast cancer.<sup>11</sup> Signs and symptoms most commonly noticed are nipple discharge, change in size and shape of breast, discoloration of the breast, nipple itches, breast pains, tenderness and inflammation. Myths concerning the causes of breast cancer were equally reported by some researchers. The results shown in Table 1 are a collection of responses from various women involved in studies carried out in parts of SSA.<sup>7,13-15</sup> The belief system of these women is a major challenge in breast cancer management. Moreover, many displayed ignorance about breast self-examination, and believed breast cancer was an affliction and the will of God.

This shows gross ignorance of breast cancer among SSA women and programmes for breast cancer need to focus on awareness campaigns.<sup>9</sup>

### Challenges faced in identifying, screening, diagnosing and managing breast cancer

The major challenge in most SSA countries is that of lack of awareness.<sup>2,4,5</sup> Most women have limited knowledge or information, especially those in rural areas.<sup>5</sup> Women in SSA are more at risk due to lack of access to quality health care, stigmatisation and the emotional trauma of breast cancer.<sup>2,3</sup>

**Table 2:** Risk factors for breast cancer, beliefs regarding causes, breast self-exam practices and symptoms of breast cancer<sup>14,15</sup>

Knowledge on breast cancer risk factors	Beliefs on causes of breast cancer	Breast self-examination practice	Symptoms of breast cancer
<ul style="list-style-type: none"> <li>Alcohol</li> <li>Women who do not breast feed</li> <li>Obesity</li> <li>Lack of physical activity</li> <li>Early onset of menstruation and late menopause</li> <li>Smoking</li> <li>Family history of breast cancer</li> <li>Increasing age</li> <li>Diet</li> <li>Obesity</li> <li>Induce abortion</li> <li>Dense breast tissues</li> <li>Hurting the breast</li> <li>Having no child and first child birth after 30 years</li> <li>Constant use of hair dyes</li> </ul>	<ul style="list-style-type: none"> <li>Putting money under the bra</li> <li>Attack from the enemy</li> <li>Will of God</li> <li>Scratching the breast</li> <li>When a child bites the mother during breast feeding</li> <li>Prolonged fondling of the breast by a man</li> <li>Large breasts</li> <li>Small breasts</li> <li>Breast feeding for a long time</li> <li>Guinea worm infection</li> </ul>	<ul style="list-style-type: none"> <li>Never heard of it</li> <li>Heard of it but do not practise</li> <li>Heard of it and practise occasionally</li> <li>Heard of it and practise monthly</li> <li>Don't know clinical breast exam</li> <li>Never heard of it</li> <li>Heard of it but never had an exam</li> <li>Heard of it and had at least one exam</li> </ul>	<ul style="list-style-type: none"> <li>Painless lump</li> <li>Soreness of nipple</li> <li>Dimpling of the skin of the breast</li> <li>Change in breast shape</li> <li>Redness of the breast</li> <li>Thickening in the breast</li> <li>Wrinkling of the skin of the breast</li> </ul>

**Table 3:** Barriers/personal reasons for late presentation and diagnosis of breast cancer<sup>15</sup>

Barriers to late presentation and diagnosis of breast cancer	Personal reasons for late presentation and diagnosis of breast cancer
<ul style="list-style-type: none"> <li>Limited knowledge</li> <li>Low participation in breast screening programmes and also practices</li> <li>Limited facilities and health-care services</li> <li>Poor health-seeking behaviour</li> <li>Socio-demographic characteristics</li> <li>Socio-cultural barriers</li> </ul>	<ul style="list-style-type: none"> <li>No self-examination</li> <li>Ignorance of nature of disease</li> <li>Financial constraints</li> <li>Belief in alternative treatments</li> <li>Busy/forgot</li> <li>Fear of having cancer/death</li> <li>Fear of stigma</li> <li>Unaware of available facilities/appropriate procedures</li> <li>Health inaccessibility</li> <li>Fear of being examined (unwilling to expose body)</li> <li>Not referred</li> <li>Fear of procedure</li> <li>Attitude of health staff and culture interferences</li> </ul>

There are not always functioning national cancer registries in these countries (a factor that could influence foreign aid), and therefore most documented statistics are not a true reflection of the breast cancer prevalence of the country.<sup>3-5,12</sup> Governance through healthcare policies is a major challenge. In most SSA countries little attention is given to the plight of cancer patients. In addition, looking at Table 3, researchers have identified barriers to late presentation and diagnosis of breast cancer. Factors such as the lack of finances, poverty, insufficient health care facilities, low staffing and limited number of Community Healthcare workers as factors influencing the management of breast cancer in SSA.<sup>1</sup> The lack of knowledge regarding breast cancer among women in SSA is high. Several myths are held dear by some of these women, which also affects their health-seeking behaviour, in which case many presentations at diagnosis are in the late stages. Table 2 summarises several barriers in accessing healthcare services.<sup>15</sup> Financial constraints, ignorance, negligence and busy schedules are major challenges in effective breast cancer management. The need for awareness programmes and preventive measures to reduce late presentation and access to rehabilitative care are solutions that could be exploited to overcome the challenges.<sup>9</sup> Effective cancer management requires radiological services and professionals besides oncology specialists and associated healthcare specialists. The radiology services include the various diagnostic and therapeutic instruments for cancer management; however, these are limited in SSA countries.<sup>1</sup>

### Recommendations

Governments of all SSA countries need to create and facilitate the running of national cancer registries. Community sensitisation, especially in the rural areas, is equally paramount

for early detection and effective treatment of early-stage breast cancer. Besides these, the creation and maintenance of diagnostic and therapeutic centres for cancer management are indispensable for proper care. The population needs to be educated via public health programmes, and increased budgetary allocations should be considered for cancer care, and breast cancer in particular.

### Conclusion

Breast cancer in SSA countries remains a vital healthcare issue, needing urgent attention. Awareness is key to reducing the increased prevalence and to improve early detection/effective management.

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