Age at presentation
Newman(1) demonstrated that the overall mean age at which African women present with breast cancer is 35 - 45 years, 10 - 15 years earlier than their Caucasian counterparts.[1] A 3-year retrospective review of 374 breast cancer patients in Kenya showed a median age of 44 years at presentation.[2] only 26 of 250 (10.4%) had early breast cancer. Of 250 patients reviewed by Adebamowo et al.,[3] 72.8% presented with advanced breast cancer (Manchester stage III and IV disease). In South Africa, no national data exist. However, individual breast centres increasingly report their experience with early breast cancer.[4]

Stigma
Stigma refers to the attachment of negative connotations to a diagnosis. The Livestrong Foundation Report determined that stigma is an important part of cancer diagnosis.[3] Studies in African American women show that fatalism, stigma and privacy are some of the key factors influencing non-attendance in regions where national screening programmes exist.[3] These are accentuated in low-resource environments where facilities do not exist.

Patients in low-resource settings face unique challenges in having to cope with breast cancer. Not only do they have to deal with the emotional impact of a cancer diagnosis, but also with the additional constraints of poverty, lack of access to care and dependence on their partners for financial support.

A study of 81 women with breast cancer in Nigeria showed that married African women have significant emotional, physical and social problems following primary treatment of breast cancer.[9] Of the 81 patients included in the study, 38.3% had divorced or separated 3 years after therapy compared with the national average of 2.6%.

Survivorship
The American College of Surgeons classifies survivorship as ≥5 years since the initial diagnosis of cancer.[10] Little has been written on survivorship in low- and middle-income countries owing to the frequent lack of national cancer registries and poor patient follow-up. Hayanga and Newman[11] described a high incidence/mortality ratio of breast cancer in women on the African continent, 1:2 compared with 1:5 among white American women. While these low ratios may be due to late presentation, more vigilant follow-up of patients in the immediate post-treatment phase could potentially identify other key contributing factors.

The quality of life (QOL) of patients who survive cancer may be positively or negatively affected.[12] QOL is defined as the perception of well-being that arises from an individual’s satisfaction or dissatisfaction with those aspects of life that are important to the person.[13] QOL may differ depending on the stage of breast cancer, the treatment modalities and the survivorship after the initial treatment phase. Breast cancer patients are at an increased risk of developing physical and psychological conditions that affect their overall QOL.[14] Lack of knowledge of recovery patterns and evidence-based guidelines for follow-up care may result in persistent and late effects of cancer treatment.[15]

Uncertainty remains a major concern among patients with breast cancer and has a strong impact on their coping behaviour and QOL.[15] Uncertainty is defined as the inability of a person to understand the meaning of illness-related events such as the disease process, treatment, or hospitalisation.[15] It develops if the patient has no understanding of the disease process, either due to lack of knowledge, complex treatment regimens or the unpredictable nature of the disease. This may be exacerbated in low-income settings where resource constraints may hamper effective management of tumours. Concerns over disease recurrence, side-effects of treatment and threat of death and dying continue to have significant implications on a patient’s functional status.[16]

Health-related QOL encompasses the physical, psychological and social functioning of patients.[17] The QOL model for cancer patients, which was initially proposed by Ferrell,[18] consists of four dimensions, i.e. physical, psychological, social and spiritual well-being. Physical
dimensions infer that the patient can continue with activities of daily living. The psychological domain emphasises a sense of control over the disease and its threat to life. The social domain refers to an individual’s ability to re-integrate and maintain meaningful relationships, whereas the spiritual domain requires that an individual maintains hope and an understanding of their disease.

QOL may be determined by the health, professional and family environment. These factors may be further modified as a result of the disease and its treatment. QOL plays a very important role in breast cancer survivors, and the overall physical, psychosocial and spiritual considerations need to be addressed. Physical limitations, such as the impaired ability to return to work, and psychological distress and uncertainty over the future, have implications on the individual’s QOL.

Survivorship in resource-poor settings
Survivorship in developing countries constitutes a newly emerging concept. With the transition to survivorship come new concerns along the Ferrell domains,[18] all of which may warrant interpretation in a regional context. Breast cancer survivors encounter unique socioeconomic challenges and a lack of an established support system.

There are very little data on breast cancer survivorship in low-income countries. Therefore, not much is known about factors affecting the population, and the absence of a national cancer register makes patient follow-up difficult.

Solutions
Regardless of the patient’s environment, the US-based Institute of Medicine of the national academies recommends that a comprehensive care plan be developed for cancer survivors (Tables 1 and 2). There is a need to optimise ways to ameliorate the overall level of suffering and to remove the stigma attached to breast cancer. Practical strategies in low-resource environments include increasing breast cancer awareness, promoting cancer advocacy, strengthening the survivorship base by providing positive role models who have survived cancer, and the development of an effective cancer navigation system.

Breast cancer awareness
Breast health awareness can contribute towards reducing the stigma of the diagnosis and increasing earlier presentation. Stockton et al.[21] in the 1980s were able to demonstrate an earlier presentation of breast disease due to an increase in media campaigns. Health-seeking behaviour of communities is very important. Lack of community involvement has led to initiatives not being readily adopted, as illustrated by Pisani et al.[22] in Asia. Innovative strategies are required to define the barriers to health-seeking behaviour and to try to overcome them.

Community healthcare workers may be used to determine barriers to access to healthcare. Studies by Abudris et al.[23] in Sudan, using healthcare workers who were educated in breast health promotion and then returned to their communities, helped to decrease the stigma of breast pathology and provide a forum for safe communication of healthcare problems with familiar people. Similar studies in Bangladesh by Ginsburg et al.,[24] where community healthcare workers shared testimonials of successfully treated patients with the general public, helped to decrease the stigma of breast cancer.

Community ‘buy in’ is key and a synergistic dialogue should be maintained between communities and breast cancer awareness organisers. Non-governmental organisations (NGOs) play an active role in breast cancer awareness. In developed countries, organisations such as the Susan G Komen Foundation and the Avon Foundation have increased awareness of breast cancer internationally. In South Africa, a number of breast cancer NGOs exist. The recent creation of a national coalition of these NGOs should be commended, as it is a model designed to effect change.

Creation of a survivorship model
Involving key cancer survivors in a community can contribute towards removing the stigma of cancer. Positive role models with whom patients can identify can go a long way towards removing the myths surrounding cancer – in Uganda, studies have demonstrated the benefit of using patients’ spouses and cancer survivors.[25]

Survivorship navigation
Alongside the use of positive role models, the creation of a successful navigation programme has dramatically increased attendance in low-resource areas. Raj et al.[26] described a decrease in the stage at presentation and an improvement in clinical treatment adherence when using navigators in underserved areas of the USA, which may reflect the situation in low-resource environments. The adaptation of a survivorship navigation model to our local scenario could have a positive impact in the region. The purpose of survivorship navigation is to assist with mitigating barriers that survivors may experience in accessing survivorship services and attaining a good QOL.[27] The use of community healthcare workers for navigation has also been successfully demonstrated by Ginsburg et al.[24] in Bangladesh.

Call for cancer advocacy
There is a role for cancer advocacy. It employs a multipronged approach with different arms of advocacy contributing to the overall advancement of cancer knowledge. Educational advocacy involves

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**Table 1. Essential components of survivorship care**

1. Prevention of recurrent and new cancers, and other late effects
2. Surveillance for cancer spread, recurrence, or second cancers; assessment of medical and psychosocial late effects
3. Intervention for consequences of cancer and its treatment
4. Co-ordination between specialists and primary care providers to ensure that all the survivors’ health needs are met

*Adapted from Hewitt M, et al. [28]*

**Table 2. Essential components of psychosocial survivorship care**

1. Identify psychosocial difficulties and develop care plans with patients
2. Connect patients with appropriate services
3. Support patients in managing their illnesses
4. Co-ordinate psychosocial and biomedical care
5. Provide follow-up assessment to monitor and evaluate outcomes and to make appropriate alterations in care plans

*Adapted from Adler N, et al.[29]*
improving cancer awareness among patients, their families and the public by using different modalities, such as the print media and radio. Social gatherings such as weddings, fundraising events, preplanned town meetings or worship gatherings can all be employed as platforms where this knowledge can be disseminated.  

Community outreach advocacy involves a bidirectional dialogue between the target community and cancer advocates. An assessment is done to determine the cancer needs of the community and how advocates can address these concerns. Dissemination of information back to a community and working with key stakeholders help to develop an effective community advocacy model. The community feels engaged in the process, and advocates avoid imposing their perceived plans on a community.  

Support advocacy involves trying to address the concerns of patients and families living with cancer. This is of particular importance, especially in newly diagnosed patients, who may frequently be bewildered by the implications of a cancer diagnosis. The African Organisation for Research and Treatment in Cancer (AORTIC) support advocacy working group defines cancer support as connecting patients, families and caregivers for help, hope, and inspiration throughout cancer management and need. This support attempts to ensure holistic living of patients and could involve emotional support, financial advice, and nutritional recommendations. Support advocacy aims to address all of Ferrell’s domains of concern.  

Research advocacy involves ensuring that community-relevant research is carried out. This demands a continuous assessment of the priorities of cancer patients and partnerships with scientists for active involvement in grant proposals and research. It may involve sitting on the medical ethics/institutional review boards of research facilities to involve in grant proposals and research. It may involve sitting on the medical ethics/institutional review boards of research facilities to involve in grant proposals and research. It may involve sitting on the medical ethics/institutional review boards of research facilities to involve in grant proposals and research. It may involve sitting on the medical ethics/institutional review boards of research facilities to involve in grant proposals and research. It may involve sitting on the medical ethics/institutional review boards of research facilities to involve in grant proposals and research. It may involve sitting on the medical ethics/institutional review boards of research facilities to involve in grant proposals and research. It may involve sitting on the medical ethics/institutional review boards of research facilities to involve in grant proposals and research. It may involve sitting on the medical ethics/institutional review boards of research facilities to involve in grant proposals and research. It may involve sitting on the medical ethics/institutional review boards of research facilities to involve in grant proposals and research. It may involve sitting on the medical ethics/institutional review boards of research facilities to involve in grant proposals and research. It may involve sitting on the medical ethics/institutional review boards of research facilities to involve in grant proposals and research. It may involve sitting on the medical ethics/institutional review boards of research facilities to involve in grant proposals and research. It may involve sitting on the medical ethics/institutional review boards of research facilities to involve in grant proposals and research. It may involve sitting on the medical ethics/institutional review boards of research facilities to involve in grant proposals and research. It may involve sitting on the medical ethics/institutional review boards of research facilities to involve in grant proposals and research. It