



## Breast Cancer: An Overview

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### Abstract

Breast cancer (BC) is the most common cancer in females in both developing and developed countries. Incidence is more in developed world whereas mortality is higher in developing countries. Cases of breast cancer in South East Asian region has been on a steady rise. The incidence rates in India begin to rise in the early thirties and peak at ages 50-64 years. In urban areas, 1 in 22 women develops breast cancer during her lifetime as compared to rural areas where 1 in 60 women develops breast cancer in her lifetime. Quality of life in Breast Cancer patients is also affected by this disease. Breast cancer is the most common cancer in women in India and accounts for 27% of all cancers with many being diagnosed at an advanced stage.

**Keywords:** Breast Cancer; Quality of Life

### Introduction

Cancer is a leading reason behind mortality and morbidity all over the world. World Health Organization estimated 9.6 million deaths due to cancer in the year 2018 and the number is expected to rise to 12 million deaths by the year 2030. Globally, about 1 in 6 deaths is due to cancer [1].

According to the estimation of GLOBOCAN, almost 141 lacs new cancer cases and 82 lacs deaths occurred in the year 2012 globally. More than 60 percent of the world's total new cases of cancer occurred annually in Asia, Africa and Central South America. Roughly one million new cases of cancer are added every year in India, which is one-fourth of that recorded in Europe [2].

Population ageing is often assumed to be the main factor which causes increase in cancer incidence, death rates, and health-care costs [3]. In High Income Countries age-institutionalized disease mortality is currently normally diminishing in all age gatherings, albeit the greater part of all growth passing are individuals more established than 70 years. In India, regardless of the shortcoming of information as far as populace scope, no proof exists for a lessening in age-institutionalized disease death rates, and most deaths

happen in people who were younger than 70 years [4]. In recent decades, measure of Quality of Life in breast cancer patients has been focus of clinical research and it's conjointly gaining the importance within the assessment of treatment consequences (Perry, *et al.* 2007; Grimison, *et al.* 2007).

Breast Cancer is the most common cancer in women both in the developed countries and less developed world. Globally, breast carcinoma comprises twenty three percent of all feminine cancers that are newly diagnosed, in over 11 lac women every year [5].

It is estimated by WHO that worldwide over 5.71 lacs women died in the year 2015 due to Breast carcinoma (Global Health Estimates, WHO 2013). Although, Breast cancer is believed to be a disease of the developed world, very nearly half of Breast cancer cases and 58 percent of mortality happens in less developed nations (GLOBOCAN 2008). Incidence rates varies worldwide from 19.3 for each 100,000 women in Eastern Africa to 89.7 for each 100,000 women in Western Europe. In most of the developing regions the incidence rates are below 40 per 100,000 (GLOBOCAN 2008). The least incidence rates are found in most African nations yet here incidence rates of breast cancer are additionally expanding.

Breast cancer survival rates vary incredibly around the world, extending from 80 percent or over in North America, Sweden and Japan to around 60 percent in middle-income nations and beneath 40 percent in low-income nations (Coleman et al., 2008). The low survival rates in less developed nations can be explained mainly by the absence of detection programs, bringing about a high extent of women presenting with late-stage disease, and by the lack of adequate diagnosis and treatment facilities [6].

### Epidemiology of breast cancer

Although the incidence of breast carcinoma has multiplied globally over the last several decades [7-9]. The greatest increase has been in Asian countries (Green., et al. 2008) peaks among women aged 40 years, whereas within the United States of America and Europe, it peaks among women aged around 60 years. 50 percent of all premenopausal patients of Breast carcinoma is constituted by India. In the coming years it is expected that these nations, will account for most of the breast cancer patients all over the world. In India, over one lac new breast cancer cases are estimated to be diagnosed annually [10,11]. Data from the International Agency for Research on Cancer (IARC) registry suggest that 45 percent of newly diagnosed cases of breast cancer and 55 percent of breast cancer-related mortality currently occur in low- and middle-income countries. It was seen in the past that there was a twenty to thirty percent increase in breast cancer incidence in the developing countries. (Curado., et al. 2009).

As per the ICMR-PBCR data, the commonest cancer among female in urban cancer registries of India was breast cancer and it constituted more than thirty percent of all cancers in females. Similarly, cancer of cervix is the most common cancer in rural women of the rural cancer registry of Barshi. For per lac Indian women the age standardized incidence rates range from 6.2-39.5. The AARs vary from region, religion, ethnicity, with the highest incidence reported at 48.3 per 100,000 women in the Parsi community of Mumbai (NCRP, ICMR 2001).

Unlike other cancers, breast cancer is effectively treatable if the diagnosis is made early. However, there is an eminent need for effective campaigning, education and intervention strategies for breast cancer. There is also a need to set up a fully dedicated cancer hospital setups so that they can cater to the needs of 25 lacs affected cancer patients (Shukla, 2010).

The Incidence rates of Breast cancer are varying highly with higher rates in Northeast and major metro cities in India. (NCRP, ICMR 2013). Reasons for this variation include differences in demographic, reproductive, anthropometric and lifestyle factors.

### Quality of life and survivorship

In 1993, the WHO defined Quality of Life as "individuals' perceptions of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns [12]. To improve survival and enhance Quality of life it is very important that breast cancer is diagnosed early to provide more curative options to a women. This is clearly reflected in the 5 year survival of Breast cancer patients in India (46.2 percent) which is much lower than High Income Countries [13].

The patients surviving primary cancer treatment are called cancer survivor and they experience several physical symptoms and treatment-related side effect, psychological disturbance, persisting long after completion of active treatment. There are also some late side effects of cancer seen in patients leading to cognitive impairment, depression, and development of secondary cancers. Anxiety about recurrence and the future are the main concerns for breast cancer survivors. This distress creates a significant problem among cancer survivors which in turn impact their Quality of Life. Studies have shown that coping with such chronic stressors, over a long-term, can lead to immune suppression and dysregulation of body's defense mechanisms [14].

This has lead to the rise of questions for Quality of Life. To see the impact of the on Quality of life, the treatment should be evaluated simultaneously. The developed countries have researched most of the studies on Quality of Life in breast cancer as compared to developing nations. It could be imagined that patients from developing nations with lower socioeconomic status may not have similar characteristics and thus mastectomy could be an acceptable option in most of the patients. There are only few studies that have been carried out in India related to Quality of Life among the patients suffering from breast cancer. Quality of Life has been used as a primary outcome measure in recent years. It is a multidimensional assessment of the physical, psychological, and social well-being of individuals. The adverse effects of breast cancer or treatment-related symptoms and types of treatment have been associated with different domains of Quality of Life [15,16].

It is important to study Quality of Life aspects in breast cancer patients because of chronic nature of the disease, regular follow-up by the patient, different types of treatments given (radiation, surgery and chemotherapy), influence on sexual life, motherhood and self-identity of women and suffering through the adverse effects of chemotherapy like alopecia, nausea, vomiting, weakness, etc. Some clinical presentations of the disease such as breast lump, pain in the bones, jaundice, breathing difficulty, and changes in mental status may also play an important role in Quality of Life of breast cancer patients. Moreover, a woman plays vital role in the family as a wife, sister, mother, and daughter. As per Montazeri study, the health of all the family members gets affected when a woman develops breast cancer [17].

Quality of life is affected by many factors and only the sufferer would be able to give accurate information what he/she is feeling at that moment of time. Therefore, it is important to know and understand the patient perspective about the disease, treatment and overall aspects of Quality of Life.

### Discussion and Conclusion

As the majority of breast cancer patients can be treated with a curative intent and therefore live for extended periods of time, assessment of their long-term Quality of Life is important for several reasons [18]. First, identifying specific late various sequelae of breast cancer may help clinicians target possible late effects that need special attention in patients' follow-up care. Second, information on long-term Quality of Life may help health care planners determine those patient services that should be maintained or ones that should be developed. Breast cancer diagnosis severely impacts and heavily burdens the life of a woman. Its treatment triggers chronic effects of chemotherapy, radiotherapy, hormonal replacement therapy that may significantly contribute to a distressing decline in Quality of Life [19]. It is seen that being overweight and obese, lack of physical activity, alcohol consumption, smoking and low dietary fiber intake are associated with an increased breast cancer risk after menopause. Exogenous factors increase breast cancer risk by 40 percent during post-menopausal years [20-22]. In conclusion, our study has identified a need for further development of oncological concepts in relation to breast cancer survivors to take into account the rebound effect in Quality of Life. The objective must be the integration of oncological support into the plan of care to improve the quality of life through various interventions to ensure effective and comprehensive care for breast cancer survivors.

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