

## What does Breast Cancer Screening mean from economy point of view- a Pakistani Perspective?

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Breast cancer is known for centuries, where oldest evidence reported from Edwin Smith Papyrus who called it as having no cure. However that is still true in some way when it comes to advance disease, however for early breast cancer its not true. The credit for cure goes to screening techniques followed by appropriate treatment options with availability of modern drugs. Breast cancer screening has been in practice for decades and reportedly reduces breast cancer mortality. In developed countries where there are national breast cancer screening programs widely practiced breast cancer survival in screened population has reached to almost 100%.

Developing countries have seen considerable rise in breast cancer incidence in the recent past and suspected to rise even more in the upcoming years. Apparently national screening programs pose a great economic burden on any country. The screening tools such as mammogram machines, training of the human resource the start then recurring cost of X-ray films if digital mammograms are not being used. Therefore many developing countries do not consider it cost effective including Pakistan.

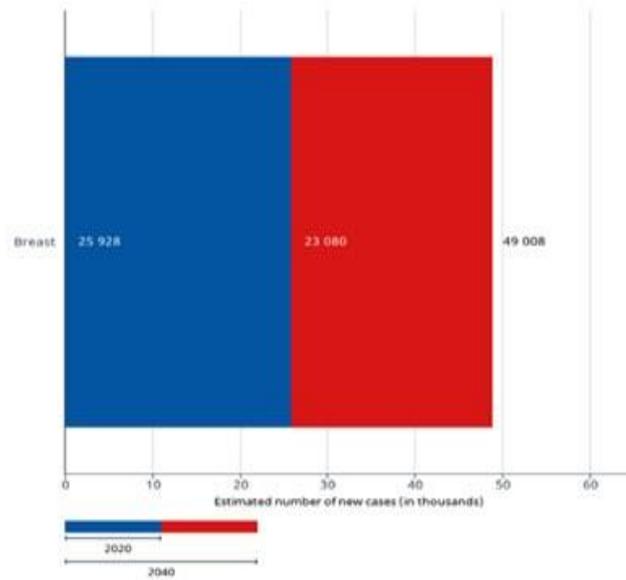
Now let's take a look at the upcoming burden of breast cancer as predicted by GLOBOCAN 2020 (figure 1). The reported rate of breast cancer in 2020 in Pakistan was Approximately 26000, this rate will approach to 50000 by 2040[1]. When we say 50000 per annum means 137 women per day will be coming with breast cancer. As reported earlier that a great majority of breast cancer in Pakistan comes with advance stage. Thus the burden of treatment on one hand and poor survival is a challenge of the other hand. The benefit of Breast cancer screening are multifaceted:

1. As screen detected cancer are very small, can be successfully treated by surgery only minimal or even without any further adjuvant therapy, thus saving cost on expensive chemotherapy, immunotherapy and hormonal therapy.
2. As a less aggressive treatment is given thus less hospitalization and early discharge with less morbidity, reducing the cost of hospitalization and additional expenditure of prolonged hospital stay.
3. Early detection improves survival producing positive impact on the family and saving them from stress they can potentially go through in case of breast cancer mortality.

There are direct and indirect economical benefits are chemotherapy. Lets take it in the cost comparison. Each patient going through breast cancer treatment government even through sehat card pays 2.0 million rupees per patient. Thus for 50000 patients the amount will be 100 Billions per year, with the mortality rate of more than 26000 per annum. On the other hand providing screening service at selected points or each BHU (taken that there are approximately 5300 BHUs in the country) will cost less than one year cost of the treatment for all these women.

In conclusion it is utmost important to develop strategies at provincial and national level to start mass screening following International guidelines followed by audits and extensive research programs to make national guidelines in order to improve survival outcome and reduce economic burden.

Estimated number of new cases from 2020 to 2040, Both sexes, age [0-85+]  
Pakistan



| Totals |        |
|--------|--------|
| 2020   | 25 928 |
| 2040   | 49 008 |

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International Agency for Research on Cancer  
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Figure 1. Globocan 2020: cancer statistics data of Breast cancer in Pakistani women and prediction -2040  
References:

1. Globocan, *Cancer Statistics*. 2020

