

Impact of sequencing patient outcome & resource utilization for breast cancer

Abdalla Abotaleb

World Health Organization, Egypt

Abstract

Background & Objective: Due to incidence of breast cancer in low middle-income country like Egypt, which is the most prevalent cancer among women in Egypt, representing 18.9% of total cancer cases (35.1% in women and 2.2% in men) with an age-adjusted rate of 49.6 per 100000 population, stages III and IV constitute 68% of all breast cancer cases. The previous feature of disease lead to economic burden on budget for the health care system and raise the question- does the policy maker need to develop treatment policy based on prioritization and sequencing for treatment lines to enhance patient's outcome including (quality of life-economic value-clinical effectiveness). The objective of this study is to determine cost-effectiveness of Vinorelbine oral plus Capecitabine oral against Docetaxel IV plus as first line for metastatic breast cancer over time horizon three years from payer prospective. **Method:** A cost-effectiveness analysis from the perspective of the Ministry of Health and population was conducted. A Markov model was applied with three health states. Utility data were incorporated in the model to make adjusted results. Costs used were the local ones according to the national fund list. Discounting was applied at 3.5% annually both on costs and benefits. The results obtained were in term of ICER and number of QALYs. Robustness of our findings was checked using sensitivity analyses. Results are expressed in QALYs. **Result:** During the three-year time horizon for Vinorelbine oral 2017 exchange rate: 0.13 with a 2.46 QALY gained versus 0.84 QALY gained for Docetaxel IV, which yields a difference of 1.62 in QALY. Vinorelbine oral is economically dominating the Docetaxel strategy, producing more benefit at a lower cost. The one-dimensional sensitivity analysis indicated that the overall survival medians of both drugs had the largest impact on the results. When conducting sensitivity analysis using plausible ranges, Vinorelbine oral remained economically dominant in all. **Conclusion:** Developing prioritization and sequencing treatment policy by starting with Vinorelbine oral plus Capecitabine oral as first line of treatment for metastatic breast cancer may have positive impact on patient's outcome including (quality of life-economic value-clinical effectiveness) and cost saving effect on treatment budget. This saving effect may lead to treat more patients with same budget and enhance outcomes for those patients.

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Biography

Abdalla Abo Taleb, MD is a World Health Organization expert. He is also a consultant on health economics at the

Egyptian Ministry of Health, as well as a member of the Egyptian health care reforming committee Ispor.