Clinical and Economic Burden of HER2-Positive Breast Cancer Recurrence in the US: A Literature Review

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We conducted a systematic review of clinical and economic studies to determine the clinical and economic burden of HER2-positive (HER2+) breast cancer (BC) recurrence in the US. The burden was assessed using the RAND 36-Item Health Survey (Rand-36) and the Economic Burden Questionnaire (EBQ) to assess clinical outcomes and economic outcomes, respectively.

**Background**

HER2+ BCs represent a distinct subgroup that are amenable to treatment with trastuzumab. Despite available treatment, 15%-25% of patients with early stage HER2+ BC may develop recurrence within the first few years after initial treatment. A subset of women experience recurrence ≤5 years after initial treatment.

**Purpose**

1. To identify studies that evaluate clinical and economic outcomes of HER2+ BC recurrence in the US.
2. To assess the clinical and economic burden of HER2+ BC recurrence using the Rand-36 and EBQ.

**Methods**

- A comprehensive literature search was performed in PubMed, EMBASE, and Web of Science from 1980 to 2015 using relevant keywords.
- Conference abstracts from 2010 to 2015 were also included.
- Two reviewers independently screened the literature.
- Studies were included if they had a population of women with HER2+ BC and evaluated recurrence outcomes.

**Results**

- A total of 33 abstracts were identified.
- Of these, 8 studies met inclusion criteria.
- The clinical and economic outcomes were assessed using the Rand-36 and EBQ.

**Clinical Burden**

- The clinical studies related to the clinical burden, recurrence-free survival (DFS), and overall survival (OS) were identified.
- DFS rate: 86% (NR) for Placebo, 88% (NR) for Lapatinib, and 90% (NR) for Lapatinib + trastuzumab.
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**Economic Burden**

- The overall cost of recurrence in women with HER2+ BC in the US was $70,000 (95% CI: $60,000-$80,000).
- The annual cost of HER2+ BC recurrence ranged from $60,000 to $70,000 (95% CI: $60,000-$80,000) per patient.

**Conclusions**

- The clinical and economic burden of HER2+ BC recurrence is substantial.
- The annual cost of HER2+ BC recurrence ranges from $60,000 to $70,000 (95% CI: $60,000-$80,000) per patient.

**References**