**Adjuvant and neoadjuvant therapy for breast cancer, A systematic review.**

**Abstract**

**Background:**

Breast cancer is the most frequent type of cancer among women. Either adjuvant or neoadjuvant therapy for the non-surgical treatment of breast cancer. The neoadjuvant therapy was administered prior to surgery, and the adjuvant therapy was administered post-surgery. The goal of this systematic review is to study the effects of adjuvant and neoadjuvant breast cancer therapy on patient outcomes and mortality.

**Method:**

In July 2023, systematic searches were conducted through the Cochrane Library, Web of Sciences, Google Scholar, EMBASE, and PubMed databases. The search method focused on studies that included all patients with breast cancer stage 1,2 and 3 and excluded studies that included patients with metastatic and recurrent breast cancer. Risk of bias in the included studies had been evaluated using the Cochrane risk of bias technique.

**Result:**

Throughout our search, 27 relevant studies with 161552 patients were discovered. Anti-human epidermal growth factor 2 therapy (Trastuzumab, pertuzumab), chemotherapy (anthracycline), endocrine therapy (tamoxifen, aromatase inhibitor), and bisphosphonates were recommended treatments for breast cancer patients. Choices for radiotherapy included whole breast, partial breast, tumor bed boost, regional nodes, and chest wall choices after breast-conserving surgery.

We discover that while the majority of treatments reduced the mortality or recurrence rates of breast cancer, anthracycline chemotherapy, and radiation led to an overall rise in non-breast cancer death.

**Conclusion:**

The systemic assessment discovered several variables that impact a patient's quality of life.

Based on these advantages and disadvantages, various treatment options for patients and recommendations for groups of women are made.

**Key words:**

Breast cancer, Adjuvant, Neoadjuvant, Oncology.