

# Depressive Symptoms and Quality of Life Associated With the Use of Monoclonal Antibodies in Breast Cancer Treatment

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**OBJECTIVES:** To assess the relationship between (a) chemotherapy and monoclonal antibody (mAb) treatments and (b) depressive symptoms and quality of life (QOL) in patients with breast cancer.

**SAMPLE & SETTING:** 182 women with breast cancer in Spain who were undergoing chemotherapy with or without mAbs.

**METHODS & VARIABLES:** An observational, cross-sectional study was carried out. The European Organisation for Research and Treatment of Cancer (EORTC) QOL Questionnaire–Core 30 and the EORTC QOL Questionnaire–Breast Cancer were used to assess QOL. Patients were screened for depressive symptoms using the Beck Depression Inventory-II.

**RESULTS:** No relationship was found between the use of mAbs with chemotherapy and QOL, except for incidence of diarrhea. However, depressive symptoms had a negative and highly significant influence on the majority of the QOL parameters.

**IMPLICATIONS FOR NURSING:** The presence of depressive symptoms negatively affects QOL. Used concurrently, mAbs and chemotherapy do not negatively influence QOL, but some adverse effects, such as diarrhea, are common.

**KEYWORDS** chemotherapy; monoclonal antibodies; depression; quality of life; breast cancer

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Breast cancer is the most common malignancy diagnosed in women worldwide (Sung et al., 2021). Treatment with chemotherapy has had an important impact on the prognosis of individuals diagnosed with breast cancer, significantly improving their overall survival and disease-free survival (Rossi et al., 2015) and quality of life (QOL) (So et al., 2010). Nevertheless, about 30% of women who are initially diagnosed with early-stage disease still eventually develop metastatic disease (Redig & McAllister, 2013). The emergence of cancer immunotherapies and other strategies for treating tumor cells has been promising in the treatment of breast cancer, particularly when compared to conventional treatments, which lack tumor selectivity and cause more side effects (García-Aranda & Redondo, 2019). Immunotherapies in the form of monoclonal antibodies (mAbs), such as trastuzumab and pertuzumab, have had an impact on human epidermal growth factor receptor 2 (HER2)-positive breast cancer treatment through antibody-dependent cellular cytotoxicity.

Treatment options for relapsing breast cancer are determined based on time to relapse, histologic subtypes and tumor burden, patient and tumor characteristics, aggressiveness of the disease, response to previous therapies, time since last exposure, agents used in the previous line of treatment, and cumulative doses (Jones, 2008). Breast cancer classification is based on the expression or lack of expression of protein receptors, including estrogen receptor, progesterone receptor, and HER2 (Bertucci et al., 2008). HER2 is overexpressed and/or amplified in about 15%–20% of cases of early-stage breast cancer at the time of first diagnosis and is correlated with a worse prognosis (Wuerstlein & Harbeck, 2017). The