

# Taste Disorders

## Effect of education in patients with breast cancer receiving chemotherapy

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**BACKGROUND:** For patients with breast cancer treated with certain chemotherapy regimens, taste disorders associated with those regimens can negatively affect quality of life.

**OBJECTIVES:** This study evaluated the effects of taste disorder–related education on meal satisfaction and sense of taste in Japanese women with breast cancer undergoing chemotherapy.

**METHODS:** A sample of 53 newly diagnosed women with breast cancer scheduled for chemotherapy treatment were randomly assigned to the control or intervention (nurse-provided education about chemotherapy-associated taste disorders) group. Meal satisfaction and sense of taste were assessed using a visual analog scale.

**FINDINGS:** The proportions of patients with meal dissatisfaction and impaired sense of taste were lower in the intervention group than in the control group. Although meal dissatisfaction and impaired sense of taste recovered in the intervention group two months after protocol completion, they did not recover in the control group. Providing education to women with breast cancer scheduled for chemotherapy treatment can affect patients' experience of treatment-associated taste disorders.

### KEYWORDS

breast cancer; taste disorders; chemotherapy; education; quality of life

### DIGITAL OBJECT IDENTIFIER

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**TASTE DISORDER (TD), A POSSIBLE ADVERSE EFFECT** experienced by patients with cancer treated with certain chemotherapies (Wagland et al., 2016), is caused by injury to the taste buds (Epstein et al., 2016; Nagraj et al., 2014). A cross-sectional study reported that the prevalence of TDs among patients with colon cancer, breast cancer, lung cancer, and lymphoma were 78%, 68%, 67%, and 67%, respectively (Ponticelli et al., 2017). Certain chemotherapy regimens are associated with various taste dysfunctions, such as hypogeusia (decline in taste sensitivity), hypergeusia (increase in taste sensitivity), and ageusia (lack of taste sensitivity) (Ijima et al., 2015; Sozeri & Kutlurk, 2015). Chemotherapy-associated TDs (CATDs) can begin when a patient first receives treatment or immediately after treatment begins; they can persist during treatment cycles and eventually resolve within a few months to a year after completing the regimen (Boltong et al., 2014; de Vries, Boesveldt, et al., 2018; de Vries, Winkels, et al., 2018; Marinho et al., 2017).

About 50% of patients with breast cancer experience TDs. Taxane regimens are associated with TDs (Amézaga et al., 2018; Campagna et al., 2018). One study's results suggested that patients with breast cancer and a TD can experience lower quality of life than those without a TD (de Vries, Boesveldt, et al., 2018). CATDs can adversely affect nutritional status, which can then affect physical, psychological, and social status (de Vries, Boesveldt, et al., 2018).

Rehwaldt et al. (2009) evaluated whether patients who were educated about TDs could better cope with them. They developed a taste suggestion sheet to educate patients with cancer who were prescribed chemotherapy. More than 70% of the study participants responded that the education was helpful. Another study found that instructing patients with breast cancer about the adverse effects of chemotherapy (e.g., anorexia, nausea, vomiting) before treatment reduced the frequency of negative effects (Williams & Schreier, 2004). In addition, patients with cancer were reported to want information about such adverse effects before deciding to undergo chemotherapy (Piredda et al., 2008).

Educating patients about CATDs before starting treatment may help them cope with TDs (Williams & Schreier, 2004). The aim of this study was to evaluate the effects of TD-related education on meal satisfaction and sense of taste in a sample of Japanese women with breast cancer undergoing chemotherapy.

### Methods

This was an interventional, multicenter, randomized study that recruited outpatients scheduled to receive breast cancer treatment at seven Japanese hospitals (six in Hiroshima and one in Hakodate) from June 2014 to December 2017.