

# Prevalence, Severity, and Self-Reported Characteristics of Taste Alterations in Patients Receiving Chemotherapy

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**OBJECTIVES:** To describe the prevalence, severity, and self-reported characteristics of taste alterations (TAs) induced by chemotherapy and to investigate TAs across chemotherapy regimens.

**SAMPLE & SETTING:** 243 adult patients from five outpatient practices in Northern Italy.

**METHODS & VARIABLES:** Correlation, univariate, and multivariate linear regression analyses. Variables include TAs, symptoms reported by patients, and the effect of TAs on quality of life.

**RESULTS:** A majority of the study sample reported TAs. Difficulty in tasting saltiness was most common, followed by difficulty in tasting umami and sweetness. The severity and characteristics of TAs changed across chemotherapy regimens. TAs correlated with quality of life and were significantly associated with patient's age and a 21-day chemotherapy schedule.

**IMPLICATIONS FOR NURSING:** TAs are a frequent side effect of chemotherapy, with varying characteristics that have a negative effect on quality of life. Healthcare professionals should routinely assess for TAs and provide patients with specific management strategies depending on the nature of TAs.

**KEYWORDS** taste alterations; antineoplastic agents; dysgeusia; quality of life; taste disorders

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Advances in antineoplastic therapy, particularly in chemotherapy, have improved survival among patients with cancer (Ribrag et al., 2016). However, chemotherapeutic agents can cause a wide range of side effects, including taste alterations (TAs) (Bolukbas & Kutluturkan, 2014; Gift, Jablonski, Stommel, & Given, 2004). Although the prevalence, severity, and clinical course of TAs may depend on disease stage, combinations of chemotherapeutic agents, and dose intensities (Ravasco, 2005), more than 75% of patients receiving chemotherapy report that food tastes like metal, cardboard, or sandpaper; is too salty, sweet, sour, or bitter; or is simply tasteless (Bernhardson, Tishelman, & Rutqvist, 2008; Hutton, Baracos, & Wismer, 2007; Jensen et al., 2008; Rehwaldt et al., 2009). TAs have been a neglected side effect of chemotherapy, and healthcare professionals continue to overlook chemotherapy-related TAs, possibly because they are not considered life-threatening, unlike vomiting and diarrhea (Zabernigg et al., 2010). However, moderate to severe TAs affect more than half of all patients who receive chemotherapy (Brisbois, de Kock, Watanabe, Baracos, & Wismer, 2011; Hutton et al., 2007).

Impaired gustatory function can have a negative effect on clinical outcomes and reduce food enjoyment (Boltong, Keast, & Aranda, 2012), leading to malnutrition and weight loss, which, in turn, may prolong the side effects of treatment or even reduce treatment response (Bressan et al., 2016; Brisbois et al., 2011; Kubrak et al., 2013; Sánchez-Lara et al., 2010). TAs can also affect the social and emotional aspects of quality of life (QOL) by causing a loss of enjoyment of food, which can lead patients to withdraw from social situations and recreational activities that may involve food (Alvarez-Camacho et al., 2016). The