Anorexia Evaluation Table 2023: Olanzapine

General Evidence

Citation	Design/Method Sample/Setting	Variables and Intervention	Outcome Measures	Results/Analysis	Limitations	Quality and Nursing Implications
Sandhya, L., Devi Sreenivasan, N., Goenka, L., Dubashi, B., Kayal, S., Solaiappan, M., Govindarajalou, R., Kt, H., & Ganesan, P. (2023). Randomized double-blind placebo-controlled study of olanzapine for chemotherapy-related anorexia in patients with locally advanced or metastatic gastric, hepatopancreatico biliary, and lung cancer. *Journal of Clinical Oncology, 41*(14), 2617–2627. https://doi.org/10.1200/JCO.22.01997	**Design:** Randomized, double-blind, parallel-group, placebo-controlled trial **Method:** 2.5 mg olanzapine orally versus placebo with measurements taken at baseline, interim, and 12 weeks to determine effect on weight and appetite. **Sample:** n = 112 adult patients with newly diagnosed and locally advanced or metastatic gastric hepatopancreaticobiliary (HPB) or lung cancer receiving first planned cycle of conventional chemotherapy. Sample had a mean age of 55 years (male: 64%; female: 36%) **Setting:** Tertiary cancer center in South India	**Independent Variable(s):** Olanzapine **Dependent Variable(s)**: Weight gain, appetite improvement, nutritional status, anthropomorphic measurements, caloric intake **Intervention**: 2.5 mg daily olanzapine orally versus placebo daily for 12 weeks. Antiemetic regimens were homogenous despite patients having various cancers and treatment regimens.	Weight gain greater than 5% Visual analogue scale (VAS) for appetite score (0–10) with higher score indicating greater appetite Functional Assessment of Chronic Illness Therapy system of quality of life (QOL) questionnaires Anorexia Cachexia subscale (FAACT-ACS) (a score of 37 or above was the validated cutoff predictive of anorexia in previous trials) Triceps skin fold thickness, midarm circumference Reported caloric intake of 75% of required calories Global QOL Subjective global assessment (SGA) Rated A: Well nourished, B: moderately malnourished, or C: severely malnourished Adverse events (AEs)	Greater percentage of weight gain over 5% was noted in the olanzapine group (35 of 58, or 60%) compared with the placebo group (5 of 54, or 9%, $p < 0.001$). Appetite increased in the olanzapine group (25 of 58, or 43%) compared to the placebo group (7 of 54 or 13%) as measured by the VAS ($p < .001$) from baseline to week 12 and by FAACT-ACS (scores of 37 or above: 13 of 58 or 22%, compared to 2 of 54 or 4%, $p = 0.004$). Caloric intake of 75% of required calories was 52% in the olanzapine group versus 18% in the placebo group ($p < 0.0001$). Nutrition scores assessed by the SGA improved in the olanzapine group (25 of 58) compared to the placebo group (5 of 54, $p < 0.0001$). Scores of “severely malnourished” on the SGA were 7 of 58, or 12% in olanzapine group compared to 21 of 54, or 39% in the placebo group. Global QOL scores improved in the olanzapine group in 44 of 58, or 70% of participants compared to 27 of 54, or 50% in the placebo group. Adherence to trial medication in the olanzapine and placebo groups was 90% and 93%, respectively. AEs attributable to olanzapine were equal between groups (transaminitis, constipation, hyperglycemia, drowsiness, headache). Chemotherapy tolerance was improved in intervention group.	Heterogeneous cancer types (gastric, lung, HPB). Differences in chemotherapy regimens among participants, although antiemetic regimens were the same and emetogenicity was equal between groups.	Study methodology was valid, and reported findings are reliable. Olanzapine is a cost-effective intervention. Because olanzapine in short doses is already incorporated to antiemetic regimens, this treatment option is accessible and offers improvement in anorexia and associated symptoms without increase in AEs when taken in the long term (12 weeks). This study supports offering low-dose olanzapine to patients with anorexia, in addition to standard-of-care nutritional guidance, at the time of diagnosis and initiation of treatment. It is important to note that this study was done with IV chemotherapy patients and not oral chemotherapy or other treatments.

Clinical Practice Guidelines

Guideline Citation	Purpose	Sample / Setting	Significant Recommendations	Limitations	Quality and Nursing Implications
Arends, J., Strasser, F., Gonella, S., Solheim, T.S., Madeddu, C., Ravasco, P., . . . Ripamonti, C.I. (2021). Cancer cachexia in adult patients: ESMO Clinical Practice Guidelines☆. *ESM O Open, 6*(3), 100092. https://doi.org/10.1016/j.esmoop.2021.100092	To provide answers to questions regarding the diagnosis and treatment of cachexia-related physical and psychological problems, relying on evidence-based information whenever possible.	Adult patients with cancer cachexia	1. Regular nutritional screening and nutritional support is recommended based on expected survival (weighing burden to patient). Screen and assess nutritional metabolic status and risk. Rescreen for those not at risk every 3 months. 2. Anorexia/cachexia interventions include: • Ensuring adequate intake for energy, protein requirements, and muscle training; • Using pharmacological agents to increase appetite; and • Engaging in psychosocial interactions to alleviate distress. 3. Pharmacologic interventions include: • Corticosteroids and progestins may improve appetite for brief periods of time and must be weighed against potential risk. • There is moderate evidence for olanzapine use. • Cannabinoids showed no significant effect on appetite or QOL, and safety data is lacking. • There is insufficient evidence to support use of NSAIDs. • Ghrelin receptor agonist anamorelin is approved in Japan but showed only modest effects in the ROMANO study in Europe and is not currently recommended. 4. Cachexia care should be delivered using a combination of nutrition; physical activity; psychological, oncologic, and palliative/supportive/rehabilitative care; and oncologist competencies. 5. Comprehensive assessment and patient-centered approach to care includes consideration of cost effectiveness, availability, multitargeted and multimodality treatment options.	1. Level and strength of evidence not reported for each article. 2. Search strategy not defined. 3. Adults only 4. Overall aim of the guideline was cachexia, therefore limited focus was given to anorexia.	Search strategy per European Society for Medical Oncology standard operating procedures for clinical practice guidelines. Findings and recommendations are feasible and relevant for cancer-related anorexia. Strong evidence is provided with numerous recommendations for cachexia, of which anorexia is one subjective component. Care must be multimodal, interprofessional, and patient- and family-centered. Pharmacologic interventions such as corticosteroids and progestins may improve appetite for brief periods of time and must be weighed against potential risk. There is moderate evidence for olanzapine use. Nursing education regarding the management of patients considering pharmacologic interventions is necessary and should include financial review.

Roeland, E.J., Bohlke, K., Baracos, V.E., Bruera, E., Del Fabbro, E., Dixon, S., . . . Loprinzi, C.L. (2020). Management of cancer cachexia: ASCO Guideline. *Journal of Clinical Oncology, 38*(21), 2438–2453. https://doi.org/10.1200/JCO.20.00611	Provide an evidence-based clinical guideline for the management of cancer cachexia in adult patients with advanced cancer.	Sample: Adult patients with advanced cancer and one or more of the following: loss of body weight, lean body mass, and/or appetite	1. Guidelines are moderately in favor of nutritional support and counseling with a registered dietitian. 2. Considerations for pharmacologic interventions for cancer cachexia include: • Moderately in favor of recommending short trials of progesterone analogs or corticosteroids, weighing risk and benefit for patient. Megestrol improves appetite and body weight (adipose not skeletal mass) but has risk of thromboembolic events, adrenal suppression, and edema. • No recommendation was made for anamorelin, which was FDA-reviewed but not approved. It is not commercially available in the U.S. • Cannabinoids and derivatives did not show improvement in appetite, weight change, or QOL alone or in combination with megestrol. Guideline panel ranks strength as weak against use of this intervention. • Olanzapine data is lacking to make a recommendation on use in cachexia. • No recommendation on use of thalidomide because of low strength of evidence and low benefit with side effects of somnolence and constipation. • Exercise was not included in any eligible trials related to cachexia in patients with advanced cancer.	Small sample sizes High rates of patient dropout reported in several studies. The majority of the RCTs had risk of bias assessed as intermediate or high.	The methodology was valid and rigorous. A panel of experts reviewed the literature, developed the draft guideline, and allowed public comment prior to finalizing the guideline. A thorough process was followed for the finalization, publication, and implementation of the guideline. The recommendations ranked "moderately in favor" are feasible, relevant, and can be applied to the patient population of interest. Nurses work collaboratively with interprofessional colleagues to manage patient symptoms; awareness of the interventions, the harm versus benefit grading, and the strength of the recommendation will enable the nurse to actively participate in discussions regarding the management of cachexia. The guideline also provides key information regarding how to reduce patient and caregiver frustration related to changes in eating habits, nutritional intake, and physical manifestations associated with cachexia. Nurses will be able to use this information in addition to information related to out-of-pocket costs and health disparities when caring for patients with cancer-related cachexia.