Anorexia Evaluation Table 2023: Creatine

General Evidence

Citation	Design/Method Sample/Setting	Variables and Intervention	Outcome Measures	Results/Analysis	Limitations	Quality and Nursing Implications
Jatoi, A., Steen, P. D., Atherton, P.J., Moore, D.F., Rowland, K.M., Le-Lindqwister, N.A., . . . Loprinzi, C. (2017). A double-blind, placebo-controlled randomized trial of creatine for the cancer anorexia/weight loss syndrome (N02C4): An Alliance trial. *Annals of Oncology*, *28*(8), 1957–1963. https://doi.org/10.1093/annonc/mdx232	**Design:** Randomized, double-blinded, placebo-controlled study **Method:** Patients were randomized to receive creatine or placebo powder daily. **Sample:** 263 patients (134 in intervention group, 129 in control group) with incurable cancer, except for brain malignancy, with life expectancy longer than or equal to 3 months. **Setting:** Multisite	**Independent Variable(s):** Creatine **Dependent Variable(s):** Weight gain, quality of life, appetite **Intervention:** Creatine powder or placebo. Day 1–5: 20 g/day; day 6 and after: 2 g/day orally mixed powder in any beverage. Placebo powder was given to the control group.	Self-report on questionnaires including weight diary North Central Cancer Treatment Group (NCCTG) anorexia scale Functional Assessment of Anorexia-Cachexia Therapy (FAACT) Linear analog self-assessment (LASA) Fist grip strength and body composition were measured by validated methods.	There was no evidence of effectiveness of the treatment group over placebo for all study end points: Weight gain of 10% or more of baseline over 1 month (p = 1.0) Weight gain of 10% or more of baseline over 5 months (p = 0.03, favoring placebo group) Questionnaire data found negative or neutral results for NCCTG, FAACT, and LASA scores, and 1-month Frailty index was not statistically significant between groups. Fist grip strength mean scores did not change significantly at 1 month (p = 0.76). Grade 3 and 4 adverse events were not statistically different between arms, and included nausea, vomiting, constipation, abdominal pain, and shortness of breath. Survival was unchanged between groups (230 days versus 239 days, p = 0.7)	Patient population had preexisting extensive weight loss, potentially limiting ability to respond. The primary endpoint of 10% or more weight gain is a limitation in this case.	Methodology was valid, and results were reported with reliability. No study findings were found to be effective for the patient population, and therefore the intervention is not relevant for practice. Use of creatine should not be recommended for cancer anorexia or weight loss syndrome. Weight, appetite, fist grip strength, body composition, and survival were not improved with treatment with creatine. No change in education or practice are implicated by the findings in this study.