

Abstract

Background: Cancer-related anorexia/cachexia syndrome (CACS) is characterized by anorexia and loss of body weight. Evidence is insufficient to strongly endorse any pharmacologic agent for the treatment of CACS. In this systematic review, we assessed the efficacy of oral anamorelin treatment for patients with CACS.

Methods: On July 6, 2022, we systematically searched the following databases for randomized controlled trials (RCTs) of adults with CACS comparing oral anamorelin versus placebo: CENTRAL, Pubmed, Embase, and ICHUSHI. The primary outcomes were total body weight (TBW), patient-reported quality of life (QOL), and adverse events (AEs). Secondary outcomes included lean body mass (LBM), overall survival (OS), non-dominant hand grip strength (HGS), and appetite. We assessed risk of bias using the revised Cochrane risk of bias tool 2 for randomized trials.

Results: We included seven RCTs with a total of 1944 CACS patients. Two RCTs were at low risk of bias and five had some concerns or were at high risk of bias due to missing outcomes and selection of the reported results. Anamorelin significantly increased TBW (mean difference (MD) 1.73, 95% confidence interval (CI) 1.34 to 2.13, $p < 0.00001$), LBM (MD 1.06, 95% CI 0.30 to 1.81, $p = 0.006$), and QOL (standardized mean difference (SMD) 0.16, 95% CI 0.04 to 0.27, $p = 0.006$) compared with placebo without a significant difference in all AEs, serious AEs, OS or HGS.

Conclusion: Anamorelin may be an effective treatment for CACS patients; however, further studies are needed to confirm the efficacy and safety of this drug.

Keywords: Anamorelin, cancer-related anorexia/cachexia syndrome, meta-analysis, systematic review