

Johannsson G et al. Once-weekly Somapacitan is Effective and Well Tolerated in Adults with GH Deficiency: A Randomized Phase 3 Trial. J Clin Endocrinol Metab. 2020;105(4):e1358-76. doi: 10.1210/clinem/dgaa049.

CONTEXT: Growth hormone (GH) replacement requires daily GH injections, which is burdensome for some adult patients with GH deficiency (AGHD).

OBJECTIVE: To demonstrate efficacy and safety of somapacitan, a once-weekly reversible albumin-binding GH derivative, versus placebo in AGHD.

DESIGN: Randomized, parallel-group, placebo-controlled (double-blind) and active-controlled (open-label) phase 3 trial, REAL 1 (NCT02229851).

SETTING: Clinics in 17 countries.

PATIENTS: Treatment-naïve patients with AGHD (n = 301 main study period, 272 extension period); 257 patients completed the trial.

INTERVENTIONS: Patients were randomized 2:2:1 to once-weekly somapacitan, daily GH, or once-weekly placebo for 34 weeks (main period). During the 52-week extension period, patients continued treatment with somapacitan or daily GH.

MAIN OUTCOME MEASURES: Body composition measured using dual-energy x-ray absorptiometry (DXA). The primary endpoint was change in truncal fat percentage to week 34. Insulin-like growth factor 1 (IGF-I) standard deviation score (SDS) values were used to dose titrate.

RESULTS: At 34 weeks, somapacitan significantly reduced truncal fat percentage (estimated difference: -1.53% [-2.68; -0.38]; P = 0.0090), demonstrating superiority compared with placebo, and it improved other body composition parameters (including visceral fat and lean body mass) and IGF-I SDS. At 86 weeks, improvements were maintained with both somapacitan and daily GH.

Somapacitan was well tolerated, with similar adverse events (including injection-site reactions) compared with daily GH.

CONCLUSIONS: In AGHD patients, somapacitan administered once weekly demonstrated superiority over placebo, and the overall treatment effects and safety of somapacitan were in accordance with known effects and safety of GH replacement for up to 86 weeks of treatment. Somapacitan may provide an effective alternative to daily GH in AGHD.