**Subject:** CI update
**Date:** Wednesday, April 17, 2024 at 8:40:01 AM Eastern Daylight Time
**From:** Robert Stoekenbroek <robert.stoekenbroek@metsera.com>
**To:** Metsera <metsera@populationhp.com>
**Attachments:** image001.png, image002.png, image003.png, image004.png, image005.png, PHP_Logo_Primary_210826_01_1200x294_small_edb56208-d78e-4f54-ba89-2644d9621fe6.jpg



Metsera Reports

April 17, 2024

Trial Update

# Lilly reports positive data for SURMOUNT-OSE

## Summary and Implications

- Tirzepatide reduced sleep apnea severity by up to nearly two-thirds in adults with obstructive sleep apnea (OSA) and ovewrweight/obesity, which is considered highly clinically relevant
- Results were consistent in people with OSA who were and who were not on positive airway pressure (PAP) therapy
- The positive results will form the basis of a regulatory filing, and regulatory action would provide a path to Medicare Part D coverage for OSA patients (recall that obesity drugs are not covered in Medicare Part D)

## Context

Both Lilly and Novo are conducting several clinical trials in obesity-related diseases for their anti-obesity medications, both to establish the clinical value of those medications (beyond weight loss) and because label indications other than weight loss provide a path to reimbursement. We have previously seen read-outs in heart failure with a preserved ejection fraction and in osteoarthritis, for example.

OSA is a condition that affects roughly 43 million overweight / obese people in the US, but the majority is undiagnosed. It is characterized by collapses of the upper airway during sleep, which can lead to apnea or hypopnea and consequently a reduction in oxygen saturation and/or waking from sleep. OSA-related hypoxia can contribute to hypertension, coronary heart disease, stroke, heart failure, atrial fibrillation and type 2 diabetes. Obesity is the strongest causal risk factor for OSA. There are no pharmacological options available. Most diagnosed patients are treated with a PAP device, which is experienced as cumbersome and characterized by poor adherence.

---

**Content**

*Design*

This was a 52-week placebo-controlled trial in patients with moderate to severe OSA and overweight / obesity using a master protocol – sub-protocol approach. Sub-protocol 1 included patients who were unable or unwilling to use PAP, and sub-protocol 2 included patients who were and planned to stay on PAP therapy during the duration of the trial. A total of 469 participants were randomized to tirzepatide at maximum tolerated dose (10 or 15 mg) or placebo. The primary endpoint was the change in the apnea-hypopnea index (AHI).

*Efficacy*

In sub-protocol 1, tirzepatide led to a mean AHI reduction from baseline of 27.4 events per hour compared to a mean AHI reduction from baseline of 4.8 events per hour for placebo at Week 52. In key secondary outcomes, tirzepatide led to a mean AHI reduction from baseline of 55.0% compared to 5.0% from baseline for placebo; tirzepatide also led to a mean body weight reduction of 18.1% from baseline, compared to 1.3% from baseline for placebo.

In sub-protocol 2, tirzepatide led to a mean AHI reduction from baseline of 30.4 events per hour compared to a mean AHI reduction from baseline of 6.0 events per hour for placebo. In key secondary outcomes, tirzepatide led to a mean AHI reduction from baseline of 62.8% compared to 6.4% from baseline for placebo; tirzepatide also led to a mean body weight reduction of 20.1% from baseline, compared to 2.3% from baseline for placebo.

Across the two studies, mean weight loss was roughly 20%, consistent with the Phase 3 weight loss studies.

*Tolerability*

The overall safety profile of tirzepatide in SURMOUNT-OSA studies was similar to previously reported SURMOUNT and SURPASS trials.

*Implications*

Lilly indicated the intent to file for an indication expansion, which would facilitate Medicare Part D reimbursement in patients with obesity and sleep apnea. Currently, weight loss drugs are excluded from coverage.



POPULATION HEALTH PARTNERS

Robert Stoekenbroek | +1-908-206-6357
www.populationhp.com