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Characterization of tirzepatide-treated patients achieving HbA1c <5.7% in the SURPASS 1-4 trials

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Abstract

Background: Tirzepatide, a GIP and GLP-1 receptor agonist, demonstrated clinically meaningful improvements in glycemic control with 23% to 62% of patients achieving a normal HbA1c (<5.7%) at the primary endpoints in addition to robust weight loss in adults with type 2 diabetes (T2D) in the SURPASS program.

Objective: Herein we report results from exploratory analyses to better characterize subsets of tirzepatide-treated patients who achieved different HbA1c targets (<5.7%, 5.7-6.5%, or >6.5%) in the SURPASS 1-4 clinical trials.

Methods: Baseline characteristics and change from baseline to Week 40 for several efficacy parameters were analyzed for compliant patients (≥75% doses received), on treatment without rescue medication. Background medication at baseline included metformin only (63%), combination of oral anti-diabetic medication (OAM) (26%), and no treatment (9%).

Results: Those achieving HbA1c <5.7% were noted to be slightly younger, with shorter duration of T2D, and lower HbA1c at baseline. Furthermore, greater reductions in HbA1c, FSG, BW, BMI, waist circumference, BP, liver enzymes as well as greater improvement in lipid parameters were observed at Week 40 in the HbA1c <5.7% subset.

Conclusion: Patients who achieved HbA1c <5.7% showed greater improvements in several biomarkers which may be associated with a reduced risk of long-term cardiometabolic complications.

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Abbreviations: FSG = Fasting Serum Glucose; BW = body weight; BMI = Body Mass Index; BP = Blood Pressure