



Presentation 187-OR / 187 Efficacy and Safety of Once-Weekly Semaglutide vs. Exenatide ER in Subjects with Type 2 Diabetes (SUSTAIN 3)

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Abstract:

Semaglutide is a GLP-1 analog in phase 3 development for the treatment of T2D. In this 56-week, open-label study, 813 adults with T2D inadequately controlled on 1-2 oral antidiabetic drugs (OADs; MET, SU, TZDs) were randomized 1:1 to once-weekly semaglutide 1.0 mg or once-weekly exenatide ER 2.0 mg. Primary endpoint was change in HbA_{1c} from baseline to week 56.

Baseline characteristics were similar in both arms; mean age 56.6 yrs, duration of T2D 9.2 yrs. Mean HbA_{1c} (baseline 8.3%) was reduced by 1.5% with semaglutide and 0.9% with exenatide ER (estimated treatment difference vs. exenatide ER [ETD] -0.62%; $p < 0.0001$). HbA_{1c} $< 7\%$ was achieved by 67% and 40% of semaglutide- and exenatide ER-treated subjects. Mean body weight (BW; baseline 95.8 kg) was reduced by 5.6 kg with semaglutide and 1.9 kg with exenatide ER (ETD -3.73 kg; $p < 0.0001$).

For semaglutide and exenatide ER, serious AEs were reported by 9.4% and 5.9%; 9.4% and 7.2% had AEs leading to treatment discontinuation; 41.8% and 33.3% reported GI AEs and 1.2% and 22.0% reported injection site reactions, respectively. In the semaglutide arm, 2 fatal events occurred (both neoplasms judged as unrelated to treatment).

Once-weekly semaglutide was superior to exenatide ER in improving glycemic control and reducing BW in subjects with T2D inadequately controlled on 1-2 OADs. Semaglutide was well tolerated with a similar safety profile to other GLP-1 RAs.

Table. Selected primary and secondary outcomes from the SUSTAIN 3 study

	Overall baseline, mean	Change at Week 56		ETD (95% CI)
		Semaglutide 1.0 mg n=404*	Exenatide ER 2.0 mg n=405*	
Fasting plasma glucose, mmol/L	10.5	-2.8	-2.0	-0.83 (-1.20; -0.46) [†]
7-point self-measured plasma glucose mean, mmol/L	10.9	-2.2	-1.5	-0.73 (-1.02; -0.44) [†]
Post-prandial increment of 7-point self-measured plasma glucose, mmol/L	2.2	-0.6	-0.3	-0.24 (-0.44; -0.04) [‡]
Systolic blood pressure, mmHg	133.5	-4.6	-2.2	-2.36 (-4.28; -0.44) [§]
Pulse rate, beats/min	75.1	2.1	1.1	1.03 (-0.19; 2.25)
Overall treatment satisfaction (DTSQs)	27.3	5.0	4.0	1.02 (0.28; 1.76) [¶]

DTSQs, Diabetes Treatment Satisfaction Questionnaire Status Version.

*Overall, 813 subjects were randomized; 809 subjects were exposed to treatment; [†]p<0.0001;

[‡]p=0.0189; [§]p=0.0162; ^{||}p=0.0973; [¶]p=0.0068