



## **Presentation 114-LB / 114 Insulin Glargine/Lixisenatide Fixed Ratio Combination Improves Glycemic Variability in Type 2 Diabetes**

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### **Abstract:**

iGlarLixi is a once-daily titratable, single injection of fixed-ratio combination of insulin glargine 100 U/mL (Gla-100) and lixisenatide, and is in development for the treatment of type 2 diabetes.

This post-hoc analysis compared glycemic variability (GV) as measured by the high blood glucose index (HBGI) and area under the curve (AUC) of patient self-monitored plasma glucose (SMPG) 7-point profile data from the phase-3, 30-week LixiLan-O trial, comparing iGlarLixi, Gla-100 and lixisenatide in 1,170 patients uncontrolled on metformin  $\pm$  1 other oral antidiabetic drug [OAD], and LixiLan-L trial, comparing iGlarLixi with Gla-100 in 736 patients uncontrolled on basal insulin  $\pm$  1 or 2 OADs. In both trials, only metformin was continued upon study initiation and dosing was either optimized up to 2000 mg/d or stabilized  $> 1500$ mg/day. Compared with Gla-100 or lixisenatide alone, iGlarLixi resulted in statistically significant improvement in GV profiles as indicated by the HBGI and AUC metrics (see Table), without a clinically significant change in the low blood glucose index as a proxy for hypoglycemia (remaining  $< 1.0$  for all). In addition, statistically significant mean blood glucose level reductions were achieved.

In conclusion, iGlarLixi demonstrated a cumulative decrease in GV, greater than each of its components (Gla-100 and lixisenatide), in both the LixiLan-O and LixiLan-L trials.



## Patient characteristics and glycemic variability outcomes

Study	LLO Study			LLL Study	
	iGlarLixi	Gla-100	Lixisenatide	iGlarLixi	Gla-100
	n=300	n=284	n=144	n=246	n=238
<b>Baseline Characteristics</b>					
Age, Years	57.9	58.5	59.3	58.9	60.4
Female, %	56	53	44	57.3	52.9
A1c, %	8	8.1	8.2	8	8.1
FPG, mg/dL	176	173	177	135	131
<b>Mean SMPG*</b>					
Baseline	187	183.9	187.5	165.3	161.5
Week 30	126.5	139	153.9	139.1	154.8
Change vs Baseline	-60.5	-44.9	-33.7	-26.1	-6.6
P-value	<0.0001	<0.0001	<0.0001	<0.0001	0.002
Mean change vs iGlarLixi		15.6	26.8		19.5
P-value		<0.0001	<0.0001		<0.0001
<b>HBGI*</b>					
Baseline	10.3	9.8	10.4	7	6.3

Week 30	2.0	3.4	5.1	3.7	5.7
Change vs Baseline	-8.3	-6.3	-5.3	-3.3	-0.56
P-value	<0.0001	<0.0001	<0.0001	<0.0001	0.116
Mean change vs iGlarLixi		2.0	3.0		2.79
P-value		0.001	<0.0001		<0.0001
<b>AUCn*</b>					
Baseline	2633	2592	2641	2355	2294
Week 30	1775	1973	2149	1954	2205
Change vs Baseline	-858	-619	-492	-401	-90
P-value	<0.0001	<0.0001	<0.0001	<0.0001	0.004
Mean change vs iGlarLixi		239	366		312
P-value		<0.0001	<0.0001		<0.0001

\*Based on 7-point blood self-monitored blood glucose profiles values (pre-injection fasting glucose, 2 hours after breakfast, before lunch, 2 hours after lunch, before dinner, 2 hours after dinner, at bedtime) . AUCn, area under curve calculated for each subject; HBGI, high blood glucose index; SMPG, self-monitored plasma glucose. Comparisons used two sample t-tests.

NTC no. LLO study: NCT02058147; NTC no. LLL Study: NCT02058160.