

## Supplementary information

**Supplementary Table 1.** Baseline characteristics by ethnicity.

Characteristic	Chinese			Other Asian			All pooled participants			P-value
	PBO (n = 129)	LIXI (n = 122)	Total (n = 251)	PBO (n = 134)	LIXI (n = 170)	Total (n = 304)	PBO (n = 263)	LIXI (n = 292)	Total (n = 555)	
Age, years	55.3 ± 9.2	53.5 ± 9.4	54.4 ± 9.4	53.8 ± 9.4	53.2 ± 10.1	53.5 ± 9.8	54.6 ± 9.3	53.3 ± 9.8	53.9 ± 9.6	0.257
Male, n (%)	72 (55.8)	71 (58.2)	143 (57.0)	67 (50.0)	89 (52.4)	148 (48.7)	139 (52.9)	152 (52.1)	291 (52.4)	0.052
HbA1c, %	8.0 ± 0.7	7.9 ± 0.7	8.0 ± 0.7	8.0 ± 0.7	8.1 ± 0.8	8.0 ± 0.8	8.0 ± 0.7	8.0 ± 0.8	8.0 ± 0.8	0.170
Duration of diabetes, years	9.2 ± 5.3	9.5 ± 5.4	9.4 ± 5.4	11.1 ± 7.0	10.9 ± 6.9	11.0 ± 6.9	10.2 ± 6.3	10.3 ± 6.3	10.2 ± 6.3	0.015
Duration of basal insulin, years <sup>a</sup>	2.0 ± 2.1	1.9 ± 2.2	1.9 ± 2.2	2.7 ± 2.8	2.6 ± 3.0	2.7 ± 2.9	2.3 ± 2.5	2.3 ± 2.7	2.3 ± 2.6	< 0.001
FPG, mmol/L	7.4 ± 1.5	7.5 ± 1.9	7.4 ± 1.7	6.3 ± 2.0	6.8 ± 2.4	6.6 ± 2.2	6.8 ± 1.9	7.1 ± 2.2	7.0 ± 2.0	< 0.001
2-hour PPG, mmol/L	15.8 ± 3.3	15.4 ± 3.9	15.6 ± 3.6	12.4 ± 3.4	12.9 ± 4.5	12.7 ± 4.1	14.1 ± 3.7	14.0 ± 4.4	14.1 ± 4.1	< 0.001
Basal insulin dose, U/day	30.8 ± 10.5	29.0 ± 10.5	29.9 ± 10.5	45.2 ± 22.6	45.0 ± 18.7	45.1 ± 20.5	38.1 ± 19.1	38.3 ± 17.6	38.2 ± 18.3	< 0.001
Basal insulin dose, U/day/kg	0.4 ± 0.2	0.4 ± 0.1	0.4 ± 0.1	0.6 ± 0.3	0.7 ± 0.3	0.6 ± 0.3	0.5 ± 0.2	0.5 ± 0.3	0.5 ± 0.2	< 0.001
BMI, kg/m <sup>2</sup>	26.6 ± 3.3	26.2 ± 3.3	26.4 ± 3.3	27.5 ± 4.1	27.2 ± 4.0	27.3 ± 4.1	27.0 ± 3.7	26.8 ± 3.8	26.9 ± 3.7	0.038
Body weight, kg	73.6 ± 12.3	73.0 ± 13.4	73.3 ± 12.8	71.0 ± 13.4	70.3 ± 12.0	70.6 ± 12.6	72.3 ± 12.9	71.5 ± 12.6	71.8 ± 12.8	0.013

All values are given as mean ± standard deviation unless otherwise stated.

<sup>a</sup> Only available for GetGoal-L and GetGoal-L-C studies.

BMI, body mass index; FPG, fasting plasma glucose; HbA1c, glycated haemoglobin; LIXI, lixisenatide; PBO, placebo; PPG, postprandial glucose; U, units.

**Supplementary Table 2.** Change in basal insulin dose with lixisenatide or placebo add-on treatment to basal insulin therapy ± oral antidiabetic drugs in the overall pooled population and by baseline body mass index subgroup.

	BMI < 25 kg/m <sup>2</sup>		BMI 25 to < 30 kg/m <sup>2</sup>		BMI ≥ 30 kg/m <sup>2</sup>		All pooled participants		Interaction P-value
	PBO (n = 79)	LIXI (n = 104)	PBO (n = 142)	LIXI (n = 134)	PBO (n = 42)	LIXI (n = 54)	PBO (n = 263)	LIXI (n = 291)	
Basal insulin dose, U/day									
Mean ± SD at baseline	30.98 ± 11.62	33.19 ± 13.02	38.30 ± 15.19	37.34 ± 16.36	52.36 ± 31.81	50.08 ± 22.59	38.35 ± 19.26	38.28 ± 17.67	0.542
Mean ± SD at week 24	31.98 ± 12.75	31.25 ± 12.57	38.36 ± 16.20	36.57 ± 16.47	53.59 ± 32.00	48.29 ± 23.88	38.88 ± 19.99	36.91 ± 17.92	
LSM ± SE change from baseline	1.71 ± 0.90	-1.20 ± 0.82	1.46 ± 0.66	-0.06 ± 0.63	2.11 ± 1.13	0.41 ± 1.01	1.49 ± 0.47	-0.63 ± 0.43	
LSM difference (95% CI)	-2.91 (-4.85, -0.97)		-1.53 (-2.94, -0.11)		-1.70 (-4.43, 1.03)		-2.12 (-3.15, -1.09)		
P-value	0.004		0.035		0.219		< 0.001		
Basal insulin dose, U/day/kg									
Mean ± SD at baseline	0.51 ± 0.20	0.54 ± 0.22	0.54 ± 0.23	0.52 ± 0.24	0.59 ± 0.34	0.60 ± 0.27	0.54 ± 0.24	0.54 ± 0.24	0.333
Mean ± SD at week 24	0.52 ± 0.22	0.52 ± 0.22	0.54 ± 0.24	0.51 ± 0.25	0.60 ± 0.34	0.57 ± 0.28	0.54 ± 0.25	0.53 ± 0.25	
LSM ± SE change from baseline	0.02 ± 0.01	-0.02 ± 0.01	0.02 ± 0.01	0.01 ± 0.01	0.02 ± 0.01	0.004 ± 0.01	0.02 ± 0.01	-0.004 ± 0.01	
LSM difference (95% CI)	-0.04 (-0.07, -0.01)		-0.02 (-0.04, 0.01)		-0.01 (-0.05, 0.02)		-0.02 (-0.04, -0.01)		
P-value	0.014		0.176		0.353		0.002		

CI, confidence interval; LIXI, lixisenatide; LSM, least squares mean; PBO, placebo; SD, standard deviation; SE, standard error; U, units.

**Supplementary Figure 1.** Proportion of participants receiving (A) lixisenatide and (B) placebo achieving the composite endpoints by baseline body mass index subgroup. BG, blood glucose; BMI, body mass index; HbA1c, glycated haemoglobin.



