Appendix 4: Single steps comparison summaries for HbA_{1C}, body weight and hypoglycaemic events

Indirect comparison results for change from baseline in HbA_{1c} (%)

		mean	SD	N	se	95% CI	
Meta analysis 1	Pbo - Exe	0.82			0.24	0.348	1.290
Meta analysis 2	Glargine - Exe	0.00			0.07	−0.133	0.128
Indirect comparison 1	Glargine vs Pbo	−0.82			0.25	−1.310	−0.333
Direct Evidence	Glargine (R.Jones)	−1.09	1.37	232	0.09		
	vs Pbo (R.Jones)	−0.24	1.17	114	0.11		
	Glargine vs Pbo	−0.85			0.15	−1.144	0.556
Meta analysis 3	Glargine vs Pbo	0.84			0.13	−1.094	−0.591
Direct evidence	NPH (Riddle)	−1.65	0.77	389	0.04		
	Glargine (Riddle)	−1.67	0.77	367	0.04		
	Glargine vs NPH	−0.02			0.06	−0.130	0.090
Indirect comparison 2	NPH vs Pbo	−0.82			0.14	−1.097	−0.548
Direct evidence	Lixi (Ratner)	−0.85	1.40	544	0.06		
	vs Pbo (Ratner)	−0.10	1.16	274	0.07		
	Lixi vs Pbo	−0.75			0.10	−0.942	−0.558
Indirect comparison 3	Lixi vs NPH	0.07			0.17	−0.263	0.407

From R

From R

Sum wi	sum wi * est.i	Sum wi*wi	est	se(est)
60.65	−51.09	2245.13	−0.84241698	0.128403996
sum wi * Est.i.*est.i	**Qt**	**Chi (df=1, p=0.05)**	**p-value**	**nu**
43.05	0.009666194	3.841458821	0.92168074	0
Sum wi r	**sum wi r * est.i**		**est r**	**se(est) r**
60.65	−51.09		−0.84241698	0.128403996

[est] *for estimation using fixed effects /* ***[est r]*** *for estimation using random effects*

If ***Qt < Chi*** *we fail to reject the null hypothesis of homogeneity (i.e. No* ***heterogeneity****)*

Attachment 4 to: Fournier M, Germe M, Theobald K, Scholz GH, Lehmacher W. Indirect comparison of lixisenatide versus neutral protamine Hagedorn insulin as add-on to metformin and sulphonylurea in patients with type 2 diabetes mellitus. GMS Ger Med Sci. 2014;12:Doc14. DOI: 10.3205/000199

Indirect comparison results for change from baseline in body weight (Kg)

		mean	SD	N	se	95% CI	
Meta analysis 1	Pbo - Exe	0.71			0.28	0.168	1.260
Meta analysis 2	Glargine - Exe	4.87			0.80	3.292	6.444
Indirect comparison	Glargine vs Pbo	4.15			0.85	2.487	5.822
Direct Evidence	Glargine (R.Jones)	1.60	5.03	232	0.33		
	vs Pbo (R.Jones)	−0.42	4.16	114	0.39		
	Glargine vs Pbo	2.02			0.54	0.953	3.087
Meta analysis 3	Glargine vs Pbo	2.99			1.06	0.904	5.070
Direct evidence	NPH (Riddle)	2.80	3.94	389	0.20		
	Glargine (Riddle)	3.00	3.83	367	0.20		
	Glargine vs NPH	0.20			0.28	−0.355	0.755
Indirect comparison	NPH vs Pbo	2.79			1.10	0.632	4.942
Direct evidence	Lixi (Ratner)	−1.76	4.71	554	0.20		
	vs Pbo (Ratner)	−0.93	3.33	278	0.20		
	Lixi vs Pbo	−0.83			0.32	−1.449	−0.211
Indirect comparison	Lixi vs NPH	**−3.62**			1.14	**−5.859**	**−1.375**

From R

From R

Sum wi	sum wi * est.i	Sum wi*wi	est	se(est)
4.75	12.55	13.28	2.639987105	0.45864154
sum wi * Est.i.*est.i	**Qt**	**Chi (df=1, p=0.05)**	**p-value**	**nu**
37.60	4.46384237	3.8414158821	0.034619541	1.76771234
Sum wi r	**sum wi r * est.i**		**est r**	**se(est) r**
0.89	2.65		2.987053161	1.06253619

[est] *for estimation using fixed effects /* ***[est r]*** *for estimation using random effects*

If ***Qt < Chi*** *we fail to reject the null hypothesis of homogeneity (i.e. No* ***heterogeneity****)*

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Indirect comparison results for number of patients with confirmed hypoglycaemia

A vs B : (A / B)		A		B						95%CI (ln(OR))		95%CI (OR)	
		n	N	n	N	OR	ln (OR)	var(ln(OR))	se(ln(OR))	LL	UL	LL	UL
Direct evidence (Kendall)	Pbo / Exe	31	247	67	241	0.37	−0.99	0.06	0.24	−1.457	−0.517	0.233	0.596
Direct evidence (Davis)	Glargine / Exe	42	116	37	118	1.24	0.22	0.08	0.28	−0.326	0.760	0.722	2.138
Indirect comparison 1	Glargine vs Pbo					**3.33**	1.20		0.37	0.486	1.922	**1.626**	**6.836**
Direct evidence (Russel-Jones)	Glargine vs Pbo	67	232	19	114	2.03	0.71	0.08	0.29	0.140	1.277	1.150	3.585
Meta-ananlysis	Glargine vs Pbo					**2.47**	0.91		0.24	0.430	1.381	**1.537**	**3.980**
Direct evidence (Riddle)	Glargine vs NPH	168	367	206	389	0.75	−0.29	0.02	0.15	−0.574	−0.002	0.563	0.998
Indirect comparison 2	NPH vs Pbo					**3.30**	1.19		0.28	0.638	1.748	**1.893**	**5.746**
Direct evidence (Ratner)	Lixi vs Pbo	70	574	24	285	1.51	0.41	0.06	0.25	−0.075	0.900	0.928	2.458
Indirect comparison 3	Lixi vs NPH					**0.46**	−0.78		0.38	−1.519	−0.042	**0.219**	**0.958**

Sum wi	sum wi * est.i	Sum wi*wi	est	se(est)
19.33	17.38	196.72	0.899234672	0.227432158
sum wi * Est.i.*est.i	**Qt**	**Chi (df=1, p=0.05)**	**p-value**	**nu**
16.67	1.125899387	3.841458821	0.2886517	0.013748201
Sum wi r	**sum wi r * est.i**		**est r**	**se(est) r**
16.97	15.37		0.0905596179	0.242736327

[est] *for estimation using fixed effects /* ***[est r]*** *for estimation using random effects*

If ***Qt < Chi*** *we fail to reject the null hypothesis of homogeneity (i.e. No* ***heterogeneity****)*

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