Supplementary Appendix

Table S1: Annual per patient management costs

Patient management	Annual cost (CZK)
Aspirin	192
Statins	2,444
ACE inhibitors	226
Microalbuminuria screening	481
Gross proteinuria screening	481
Stopping ACE inhibitors due to adverse events	482
Screening for eye disease	1,698
Screening for diabetic foot complications	1,190

Abbreviations: ACE, angiotensin-converting enzyme; CZK, Czech Koruna

Table S2: Cost of treating diabetes related complications

Complication	Cost (CZK)
Myocardial infarction, year of event	99,154
Myocardial infarction, years 2+	10,300
Angina, year of onset	26,299
Angina, years 2+	9,946
Congestive heart failure, year of onset	59,869
Congestive heart failure, years 2+	30,677
Stroke, year of event	61,163
Stroke, years 2+	14,174
Stroke, death within 30 days	48,537
Peripheral vascular disease, onset	61,446
Peripheral vascular disease, years 2+	985
Haemodialysis, onset	1,167,769
Haemodialysis, years 2+	1,127,322
Peritoneal dialysis, onset	674,405
Peritoneal dialysis, years 2+	636,421
Kidney transplant, first year	566,301
Kidney transplant, years 2+	351,932
Non-severe hypoglycaemia	0*
Severe hypoglycaemia	17,676
Laser treatment	813
Cataract operation	9,765
Blindness, first year	5,908
Blindness, years 2+	5,908
Neuropathy, year of onset	13,426
Neuropathy, years 2+	13,426
Amputation, procedure	172,177
Amputation, prosthesis	25,800
Gangrene treatment	50,861
Infected foot ulcer	10,438
Uninfected foot ulcer	4,319

*assumed; CZK, Czech Koruna

Table S3 IDegLira versus basal-bolus therapy: Sensitivity analysis results

	Δ Cost (CZK)	Δ QALYs	ICER (CZK per QALY gained)
Base case	**107,829**	+0.31	**345,052**
20 year time horizon [*base case 50 years*]	103,377	+0.31	337,503
10 year time horizon [*base case 50 years*]	102,645	+0.25	413,391
Discount rate 0% [*base case 3% years*]	119,545	+0.40	296,784
Discount rate 5% [*base case 3% years*]	101,445	+0.27	371,184
HbA_{1c} difference abolished	110,937	+0.26	419,898
Systolic blood pressure difference abolished	108,618	+0.29	374,416
Lipid difference abolished	104,833	+0.30	354,214
BMI difference abolished	105,410	+0.22	479,571
Hypoglycaemia difference abolished	111,605	+0.20	563,662
Statistically significant differences only	111,270	+0.32	348,373
HbA_{1c} benefit maintained	103,639	+0.40	259,552
UKPDS HbA_{1c} creep	106,351	+0.33	324,141
Upper 95% CI of HbA_{1c} change in IDegLira arm	110,017	+0.34	328,310
Lower 95% CI of HbA_{1c} change in IDegLira arm	109,733	+0.30	366,999
BMI benefit maintained after treatment switch [*base case BMI benefit abolished on switch*]	107,749	+0.37	288,408
Treatment switch at 3 years in IDegLira arm [*base case 5 years*]	68,773	+0.24	287,274
Treatment switch at 7 years in IDegLira arm [*base case 5 years*]	141,089	+0.40	352,018
No treatment switch [*base case 5 years*]	339,137	+0.83	410,876
NPH cost applied [*base case IGlar U100 cost*]	144,293	+0.31	461,738
Defined daily doses in IGlar + 3x IAsp arm	164,423	+0.31	526,154
Observed doses in both arms	152,823	+0.31	489,034
Two SMBG tests per day in the IGlar plus 3x IAsp arm	116,176	+0.31	371,763
Cost of complications +10%	107,077	+0.31	342,646
Cost of complications −10%	110,631	+0.31	354,019
Alternative hypoglycaemia disutilities	107,829	+0.28	381,290
UKPDS 82 equations used	110,129	+0.32	343,831

Abbreviations: BMI, body mass index; CZK, Czech Koruna; ICER, incremental cost-effectiveness ratio; NPH, Neutral protamine Hagedorn; QALY, quality adjusted life year; SMBG, self measured blood glucose; UKPDS, UK Prospective Diabetes Study

Table S4: Sensitivity analysis results – scenario analysis (IDegLira vs liraglutide added to basal insulin)

	Δ Cost (CZK)	Δ QALYs	ICER (CZK per QALY gained)
Base case	**33,231**	**+0.05**	**693,763**
20 year time horizon [*base case 50 years*]	33,930	+0.04	909,643
10 year time horizon [*base case 50 years*]	30,513	+0.01	2,773,873
Discount rate 0% [*base case 3% years*]	36,236	+0.08	431,385
Discount rate 5% [*base case 3% years*]	31,484	+0.03	931,492
HbA_{1c} difference abolished	35,758	+0.003	11,174,291
Systolic blood pressure difference abolished	34,337	+0.04	843,656
Lipid difference abolished	32,807	+0.05	705,530
BMI difference abolished	35,008	+0.06	566,480
Hypoglycaemia difference abolished	30,252	+0.06	503,362
Statistically significant differences only	29,107	+0.07	415,817
HbA_{1c} benefit maintained	29,703	+0.14	211,262
UKPDS HbA_{1c} creep	31,695	+0.04	744,017
Upper 95% CI of HbA_{1c} change in IDegLira arm	37,184	+0.07	559,157
Lower 95% CI of HbA_{1c} change in IDegLira arm	34,786	+0.04	871,818
BMI benefit maintained after treatment switch [*base case BMI benefit abolished on switch*]	32,823	+0.03	1,083,262
Treatment switch at 3 years in IDegLira arm [*base case 5 years*]	20,900	+0.06	360,962
Treatment switch at 7 years in IDegLira arm [*base case 5 years*]	42,133	+0.05	936,291
No treatment switch [*base case 5 years*]	106,038	+0.10	1,102,265
NPH cost applied [*base case IGlar U100 cost*]	52,029	+0.05	1,086,208
Defined daily doses in IGlar + 3x IAsp arm	89,412	+0.05	1,866,633
Observed doses in both arms	77,858	+0.05	1,625,427
Cost of complications +20%	33,207	+0.05	693,254
Cost of complications −20%	33,256	+0.05	694,272
Alternative hypoglycaemia disutilities	33,231	+0.05	618,832
UKPDS 82 equations used	30,879	+0.04	882,248

Abbreviations: BMI, body mass index; CZK, Czech Koruna; ICER, incremental cost-effectiveness ratio; NPH, Neutral protamine Hagedorn; QALY, quality adjusted life year; SMBG, self measured blood glucose; UKPDS, UK Prospective Diabetes Study