Supplementary Appendix

This appendix has been provided by the authors to give readers additional information about their work.

Supplement to:

Sustained Intensive treatment and Long-term Effects on HbA1c Reduction (SILVER Study) by CGM in persons with type 1 diabetes treated with MDI

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Table S1: Comparisons between baseline GOLD and end of SILVER for primary, secondary and exploratory variables (all exploratory analyses).

Continuous variables Categorical variables	Mean (SD) Median (Min; Max) (95% CI for mean for confirmatory tests) n= n (%)	**Baseline in GOLD study**	**End of SILVER study**	**Change from baseline to end of study**	**p-value within group**
Primary variable					
HbA1c (mmol/mol)		68.8 (8.7) 67 (50; 102) (67.1; 70.5) n=102	63.5 (8.6) 63 (46; 88) (61.7; 65.2) n=97	-4.88 (9.43) -5 (-27; 21) (-6.79; -2.96) n=96	<.0001
Hba1c (%)		8.45 (0.80) 8.28 (6.73; 11.49) (8.29; 8.60) n=102	7.96 (0.79) 7.92 (6.36; 10.21) (7.80; 8.12) n=97	-0.446 (0.863) -0.458 (-2.471; 1.922) (-0.621; -0.271) n=96	<.0001
Secondary variables					
Percent of time with glucose levels <3.0 mmol/l		2.12 (2.26) 1.66 (0; 12.33) (1.64; 2.59) n=89	0.597 (0.949) 0.246 (0; 4.936) (0.402; 0.792) n=93	-1.52 (2.33) -1.12 (-11.68; 3.59) (-2.04; -1.02) n=83	0.0002
Percent of time with glucose levels <4.0 mmol/l		5.53 (4.20) 4.78 (0; 19.97) (4.65; 6.41) n=89	2.86 (2.77) 1.92 (0; 14.15) (2.29; 3.44) n=93	-2.47 (4.33) -2.25 (-17.16; 6.36) (-3.41; -1.54) n=83	0.0002
Percent of time with glucose levels 4-10 mmol/l		40.3 (15.8) 39.7 (3.5; 134.6) (37.1; 43.5) n=89	51.0 (16.2) 53.1 (10.2; 86.7) (47.7; 54.3) n=93	11.3 (19.1) 12.4 (-62.3; 44) (7.1; 15.5) n=83	<.0001
Exploratory variables					
Mean of glucose levels from CGM (mmol/l)		10.8 (1.7) 10.5 (7.5; 17.4) n=96	10.1 (1.8) 9.8 (7.1; 16.2) n=92	-0.64 (2.17) -0.68 (-5.40; 5.60) n=90	0.0060
MAGE for glucose levels from CGM (mmol/l)		10.1 (1.7) 10.1 (6.3; 14.2) n=96	7.74 (1.56) 7.31 (5.06; 12.01) n=91	-2.33 (1.83) -2.38 (-7.53; 2.87) n=89	<.0001
SD for glucose levels from CGM (mmol/l)		4.37 (0.67) 4.4 (2.65; 5.88) n=96	3.59 (0.71) 3.6 (2.12; 5.26) n=92	-0.76 (0.72) -0.83 (-2.53; 1.47) n=90	<.0001
Percent of time with glucose levels >10.0 mmol/l		48.3 (13.1) 48.4 (18.3; 79.2) n=96	45.7 (17.5) 43.5 (8.7; 89.5) n=90	-2.82 (19.60) -3.22 (-41.53; 52.1) n=90	0.18
Percent of time with glucose levels >13.9 mmol/l		22.7 (11.0) 21.5 (2; 63.7) n=96	17.4 (15.4) 11.9 (0; 68.7) n=90	-5.31 (16.24) -7.16 (-33.97; 48.07) n=90	0.0026
Percent of time with glucose levels 5.5-10.0 mmol/l		31.0 (12.4) 29.5 (3.1; 110.3) n=96	42.6 (13.3) 45.2 (9.3; 65.3) n=90	11.4 (14.8) 12.9 (-46.4; 36.6) n=90	<.0001
Treatment Satisfaction scale total (DTSQs)		25.5 (5.8) 26 (4; 36) n=98	31.2 (3.8) 32 (21; 36) n=91	5.58 (5.57) 5 (-8; 23) n=90	<.0001
WHO-5 Well-Being Index		59.7 (17.9) 64 (12; 92) n=98	66.2 (16.1) 68 (16; 100) n=91	6.89 (17.95) 4 (-40; 56) n=90	0.0005
Swe-HFS Behaviour/Avoidance		1.91 (0.60) 1.9 (0.6; 3.7) n=98	1.84 (0.60) 1.9 (0.3; 3.5) n=91	-0.09 (0.48) 0 (-1.4; 1.2) n=90	0.071
Swe-HFS Worry		0.90 (0.71) 0.77 (0; 3.61) n=97	0.78 (0.65) 0.61 (0; 3.38) n=91	-0.13 (0.45) -0.08 (-2.08; 1) n=89	0.0092
Problem Areas in Diabetes (SWE-PAID-20) scale		26.0 (17.1) 23.1 (0; 83.8) n=98	22.4 (16.0) 19.7 (0; 71.1) n=91	-3.69 (12.38) -1.84 (-32.5; 34.87) n=90	0.0058
Ipaq Categorical score					

Continuous variables Categorical variables	Mean (SD) Median (Min; Max) (95% CI for mean for confirmatory tests) n= n (%)	**Baseline in GOLD study**	**End of SILVER study**	**Change from baseline to end of study**	**p-value within group**
Inactive		62 (63.3%)	63 (69.2%)	Decrease: 17 (18.9%)	0.18
Minimally Active		6 (6.1%)	3 (3.3%)	Equal: 63 (70.0%)	
HEPA active		30 (30.6%)	25 (27.5%)	Increase: 10 (11.1%)	
HCQ total score		3.20 (0.50) 3.22 (2.11; 4) n=94	3.45 (0.43) 3.56 (2.22; 4) n=89	0.25 (0.47) 0.12 (-0.78; 1.56) n=85	<.0001

For not normally distributed variables the 95% CI for the mean was estimated by using the inversion of Fisher´s non-parametric permutation test.
For comparison within groups paired Student´s t-test was used for normally distributed variables and Fisher´s Non-Parametric Permutation test for matched pairs for not normally distributed variables.

Table S2 Adverse events

SOC PT	CGM (DexCom G4) (n=107)	
	Events	Subjects with Events n (%)
Any Event	**104**	**60 (56.1%)**
Blood and lymphatic system disorders	**1**	**1 (0.9%)**
Iron deficiency anaemia	1	1 (0.9%)
Eye disorders	**3**	**3 (2.8%)**
Eye oedema	1	1 (0.9%)
Glaucoma	1	1 (0.9%)
Panophthalmitis	1	1 (0.9%)
Gastrointestinal disorders	**3**	**3 (2.8%)**
Abdominal pain upper	1	1 (0.9%)
Diarrhoea	2	2 (1.9%)
General disorders and administration site conditions	**6**	**6 (5.6%)**
Application site eczema	1	1 (0.9%)
Fatigue	1	1 (0.9%)
Oedema	1	1 (0.9%)
Pain	1	1 (0.9%)
Pyrexia	2	2 (1.9%)
Infections and infestations	**41**	**30 (28.0%)**
Bronchitis	2	2 (1.9%)
Erysipelas	1	1 (0.9%)
Gastroenteritis	3	3 (2.8%)
Genital candidiasis	1	1 (0.9%)
Infection	1	1 (0.9%)
Lyme disease	1	1 (0.9%)
Nasopharyngitis	23	18 (16.8%)
Otitis media chronic	1	1 (0.9%)
Pneumonia	1	1 (0.9%)
Pyelonephritis	2	2 (1.9%)
Respiratory tract infection	1	1 (0.9%)
Sinusitis	1	1 (0.9%)
Tooth infection	1	1 (0.9%)
Urinary tract infection	1	1 (0.9%)
Wound infection	1	1 (0.9%)
Injury, poisoning and procedural complications	**4**	**4 (3.7%)**
Fall	2	2 (1.9%)
Foot fracture	1	1 (0.9%)
Subdural haematoma	1	1 (0.9%)
Metabolism and nutrition disorders	**10**	**9 (8.4%)**
Hyperglycaemia	1	1 (0.9%)
Any hypoglycaemia	9	8 (7.5%)
Severe hypoglycaemia	5	4 (3.7%)
Musculoskeletal and connective tissue disorders	**7**	**7 (6.5%)**
Arthritis	1	1 (0.9%)
Back pain	1	1 (0.9%)

SOC PT	CGM (DexCom G4) (n=107)	
	Events	Subjects with Events n (%)
Exostosis	1	1 (0.9%)
Osteoarthritis	1	1 (0.9%)
Pain in extremity	1	1 (0.9%)
Rheumatoid arthritis	1	1 (0.9%)
Synovitis	1	1 (0.9%)
Neoplasms benign, malignant and unspecified (incl cysts and polyps)	**2**	**2 (1.9%)**
Melanocytic naevus	1	1 (0.9%)
Papilloma	1	1 (0.9%)
Nervous system disorders	**4**	**4 (3.7%)**
Carpal tunnel syndrome	2	2 (1.9%)
Hypoaesthesia	1	1 (0.9%)
Syncope	1	1 (0.9%)
Psychiatric disorders	**2**	**2 (1.9%)**
Depression	2	2 (1.9%)
Reproductive system and breast disorders	**1**	**1 (0.9%)**
Epididymitis	1	1 (0.9%)
Respiratory, thoracic and mediastinal disorders	**1**	**1 (0.9%)**
Pleurisy	1	1 (0.9%)
Skin and subcutaneous tissue disorders	**12**	**7 (6.5%)**
Eczema	2	2 (1.9%)
Lipohypertrophy	1	1 (0.9%)
Pruritus	1	1 (0.9%)
Rash generalised	1	1 (0.9%)
Skin ulcer	7	3 (2.8%)
Surgical and medical procedures	**6**	**5 (4.7%)**
Cataract operation	3	2 (1.9%)
Eye operation	1	1 (0.9%)
Gastrectomy	1	1 (0.9%)
Vitrectomy	1	1 (0.9%)
Vascular disorders	**1**	**1 (0.9%)**
Hypotension	1	1 (0.9%)
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Table S3 Serious adverse events

SOC PT	CGM (DexCom G4) (n=107)	
	Events	Subjects with Events n (%)
Any Event	**9**	**6 (5.6%)**
Infections and infestations	**1**	**1 (0.9%)**
Gastroenteritis	1	1 (0.9%)
Injury, poisoning and procedural complications	**2**	**2 (1.9%)**
Fall	1	1 (0.9%)
Subdural haematoma	1	1 (0.9%)
Nervous system disorders	**1**	**1 (0.9%)**
Syncope	1	1 (0.9%)
Skin and subcutaneous tissue disorders	**3**	**1 (0.9%)**
Skin ulcer	3	1 (0.9%)
Surgical and medical procedures	**1**	**1 (0.9%)**
Gastrectomy	1	1 (0.9%)
Vascular disorders	**1**	**1 (0.9%)**
Hypotension	1	1 (0.9%)
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