

SUPPLEMENTARY MATERIALS

Cardiometabolic effects of semaglutide in individuals with type 2 diabetes in the United Arab Emirates: real-world 12-month outcomes and predictors of response

Muhammad Hamid Siddique Mian¹, Kholood Abdulla Hasan Abdulla Janahi², Afnan Tayeb², Fathima Musfira Mohamad Musaffar², Nur Al Sheykh Khalil², Sarah Hisham Al Toubah², Abdul Moen Abdul Karim², Ahlam Almarzooqi², Fardeen Mohammad Sayfoo², Ahmed Hamadeh², Mohannad Abdulla Hasan Abdulla Janahi³, Sobia Siddiq^{2,4*}

¹Rashid Hospital, Dubai Health, Dubai, UAE

²Al Qassimi Hospital, Emirates Health Services, Sharjah, UAE

³University of Sharjah, Sharjah, UAE

⁴Princess Royal Hospital, Haywards Heath, West Sussex, UK

***Corresponding author:** Dr Sobia Siddiq, Consultant in Endocrine & Diabetes, Princess Royal Hospital, Haywards Heath, West Sussex, UK. Email: drshees@hotmail.com

Supplementary Table 1. Fixed effects from linear mixed model for HbA1c over time

Characteristic	Mean difference in HbA1c (%)	95% CI	p-value
Time (vs baseline)			
<i>Baseline</i>	—	—	
<i>6 months</i>	-0.89	-1.1, -0.70	<0.001
<i>12 months</i>	-0.71	-0.91, -0.50	<0.001
Age (years)	0.01	0.00, 0.02	0.179
Sex			
<i>F</i>	—	—	
<i>M</i>	0.06	-0.13, 0.25	0.513
Baseline BMI (kg/m²)	0.00	-0.01, 0.01	0.959
Baseline HbA1c (%)	0.78	0.73, 0.83	<0.001
Insulin at baseline			
<i>No</i>	—	—	
<i>Yes</i>	0.17	-0.06, 0.40	0.151

Supplementary Table 2. Fixed effects from linear mixed model for weight over time

Characteristic	Mean difference in body weight (kg)	95% CI	p-value
Time (vs baseline)			
<i>Baseline</i>	—	—	
<i>6 months</i>	-3.1	-4.2, -2.0	<0.001
<i>12 months</i>	-4.8	-6.0, -3.5	<0.001
Age (years)	-0.21	-0.33, -0.09	<0.001
Sex			
<i>F</i>	—	—	
<i>M</i>	15	12, 17	<0.001
Baseline BMI (kg/m²)	2.3	2.1, 2.5	<0.001
Baseline HbA1c (%)	-0.34	-1.0, 0.35	0.332
Insulin at baseline			
<i>No</i>	—	—	
<i>Yes</i>	-2.1	-5.2, 0.98	0.178

Supplementary Table 3. Fixed effects from linear mixed model for systolic blood pressure over time

Characteristic	Mean difference in systolic BP (mmHg)	95% CI	p-value
Time (vs baseline)			
<i>Baseline</i>	—	—	
<i>6 months</i>	-3.6	-6.2, -0.96	0.007
<i>12 months</i>	-2.1	-5.0, 0.84	0.163
Age (years)	0.28	0.11, 0.46	0.001
Sex			
<i>F</i>	—	—	
<i>M</i>	4.5	0.86, 8.2	0.016
Baseline BMI (kg/m²)	0.27	0.02, 0.53	0.037
Baseline HbA1c (%)	0.61	-0.37, 1.6	0.223
Insulin at baseline			
<i>No</i>	—	—	
<i>Yes</i>	1.6	-2.9, 6.1	0.482

Supplementary Table 4. Fixed effects from linear mixed models for lipid outcomes over time

	Mean difference (95% CI)	p-value
HDL cholesterol (mmol/L)		
Age (years)	0.00 (-0.00, 0.01)	0.094
Baseline BMI (kg/m²)	-0.00 (-0.01, 0.00)	0.367
Baseline HbA1c (%)	-0.02 (-0.05, -0.00)	0.033
Insulin at baseline: yes vs no	-0.05 (-0.15, 0.05)	0.331
Sex: male vs female	-0.14 (-0.23, -0.06)	<0.001
Time: 12 months vs baseline	0.04 (-0.00, 0.09)	0.070
Time: 6 months vs baseline	0.02 (-0.02, 0.07)	0.242
LDL cholesterol (mmol/L)		
Age (years)	-0.02 (-0.03, -0.01)	<0.001
Baseline BMI (kg/m²)	0.02 (0.01, 0.04)	0.009
Baseline HbA1c (%)	0.10 (0.04, 0.16)	<0.001
Insulin at baseline: yes vs no	-0.28 (-0.54, -0.01)	0.041
Sex: male vs female	-0.22 (-0.43, -0.00)	0.048
Time: 12 months vs baseline	-0.17 (-0.34, -0.00)	0.050
Time: 6 months vs baseline	-0.27 (-0.42, -0.12)	<0.001
Triglycerides (mmol/L)		
Age (years)	-0.01 (-0.02, 0.00)	0.190
Baseline BMI (kg/m²)	-0.02 (-0.04, 0.00)	0.057
Baseline HbA1c (%)	0.13 (0.05, 0.21)	0.002
Insulin at baseline: yes vs no	-0.03 (-0.41, 0.35)	0.871
Sex: male vs female	0.07 (-0.23, 0.38)	0.641
Time: 12 months vs baseline	0.18 (-0.03, 0.39)	0.086
Time: 6 months vs baseline	-0.04 (-0.23, 0.15)	0.668

Supplementary Table 5. Adjusted linear models of HbA1c change at 12 months by baseline BMI, HbA1c category, and insulin use

Characteristic	Model 1: BMI category			Model 2: Baseline HbA1c category			Model 3: Insulin use		
	Beta	95% CI	p-value	Beta	95% CI	p-value	Beta	95% CI	p-value
BMI category									
<35	—	—							
>=35	-0.01	-0.73, 0.71	0.978						
Age (years)	0.01	-0.01, 0.04	0.342	0.01	-0.02, 0.04	0.462	0.01	-0.01, 0.04	0.338
Sex									
Female	—	—		—	—		—	—	
Male	0.35	-0.13, 0.84	0.152	0.43	-0.05, 0.90	0.080	0.35	-0.13, 0.83	0.150
Baseline HbA1c (%)	-0.36	-0.49, -0.22	<0.001	-0.61	-0.90, -0.32	<0.001	-0.36	-0.49, -0.22	<0.001
Baseline BMI (kg/m²)	0.01	-0.04, 0.06	0.726	0.01	-0.03, 0.04	0.628	0.01	-0.03, 0.04	0.625
Insulin at baseline									
No	—	—		—	—		—	—	
Yes	0.29	-0.30, 0.88	0.336	0.21	-0.38, 0.79	0.490	0.29	-0.30, 0.88	0.334
HbA1c category									
<8				—	—				
>=9				1.2	-0.02, 2.4	0.055			
8-8.9				1.1	0.26, 2.0	0.011			

Abbreviation: CI = Confidence Interval