

Supplementary material

Disease	ICD-10 code
Type 2 diabetes	E11
Type 1 diabetes	E10
Hypertension	I10
Dyslipidaemia	E78
Diseases of respiratory system	J00-J99
Ischaemic heart disease	I20-I25
Cancer	C00-D49
Pneumonia	J13-J18
Severe sepsis	R65

Supplementary Table 1 International classification of disease coding for disease definitions at baseline and outcomes.

	Sample size	Outcome (n)	5-year survival probability (%)	Hazard ratio (95% confidence interval)	Log-Rank test	P value	E-value
SGLT2i vs. other glucose lowering therapy							
vs. DPP-4i							
DPP-4i	352,687	9875	96.8	1.00 (1.00, 1.00)			
SGLT2i	352,687	7267	97.6	0.75 (0.73, 0.77)	346.2	<0.01	2.00
vs. metformin							
Metformin	130,137	5074	95.5	1.00 (1.00, 1.00)			
SGLT2i	130,137	4376	95.9	0.89 (0.86, 0.93)	31.5	<0.01	1.50
vs. sulphonylureas							
Sulphonylureas	393,665	11,309	96.7	1.00 (1.00, 1.00)			
SGLT2i	393,665	8499	97.5	0.76 (0.74, 0.78)	366.4	<0.01	1.96
vs. thiazolidinones							
Thiazolidinones	216,063	3999	97.9	1.00 (1.00, 1.00)			
SGLT2i	216,063	4063	97.9	1.06 (1.01, 1.10)	5.8	0.02	1.31
vs. GLP-1 receptor agonist							
GLP-1 RA	301,550	5399	98.0	1.00 (1.00, 1.00)			
SGLT2i	301,550	6562	97.4	1.27 (1.22, 1.31)	164.1	<0.01	1.86
GLP-1 receptor agonist vs. other glucose lowering therapy							

vs. DPP-4i							
DPP-4i	331,863	8169	97.2	1.00 (1.00, 1.00)			
GLP-1 RA	331,863	5023	98.3	0.61 (0.59, 0.63)	331,863	5023	98.3
vs. metformin							
Metformin	159,036	4628	96.7	1.00 (1.00, 1.00)			
GLP-1 RA	159,036	3353	97.6	0.71 (0.68, 0.74)	228.2	<0.01	2.17
vs. sulphonylureas							
Sulphonylureas	381,856	9680	97.1	1.00 (1.00, 1.00)			
GLP-1 RA	381,856	5795	98.3	0.59 (0.57, 0.60)	1066.8	<0.01	2.78
vs. thiazolidinediones							
Thiazolidinediones	203,357	3803	97.9	1.00 (1.00, 1.00)			
GLP-1 RA	203,357	3365	98.1	0.89 (0.85, 0.93)	26.2	<0.01	1.49
vs. SGLT2i							
SGLT2i	256,841	5469	97.5	1.00 (1.00, 1.00)			
GLP-1 RA	256,841	4422	98.0	0.78 (0.75, 0.81)	157.4	<0.01	1.88

Supplementary Table 2 Hazard ratios demonstrating incident severe sepsis risk in the various main and subgroup analyses

Stratification	Hazard ratio [95% confidence interval]	
	Pneumonia	Sepsis
SGLT2i vs. DPP4i		
Repeat coding	0.70 (0.66, 0.73)	0.75 (0.70, 0.80)
Treatment initiation within one year of diabetes diagnosis	0.75 (0.72, 0.78)	0.82 (0.79, 0.86)
One year lag period	0.84 (0.81, 0.87)	0.84 (0.81, 0.87)
GLP-1 RA vs. DPP4i		
Repeat coding	0.59 (0.56, 0.63)	0.70 (0.65, 0.75)
Treatment initiation within one year of diabetes diagnosis	0.60 (0.57, 0.63)	0.60 (0.57, 0.63)
One year lag period	0.79 (0.76, 0.82)	0.80 (0.77, 0.84)

Supplementary Table 3 Hazard ratios with 95% confidence intervals following sensitivity analyses