Supplementary Techniques

Table S1. Baseline characteristics of patients for those included for each analysis of outcomes.

Figure S1. The definition of HbA1c variability score (HVS)

Figure S2. The subgroup analysis based on the age

A. the subgroup of patients younger than 65; B. the subgroup of patients aged 65 or older

Figure S3. The subgroup analysis based on sex

A. the subgroup of female patients; B. the subgroup of male patients

Figure S4. The subgroup analysis based on the baseline body mass

A. the subgroup of non-obese patients at baseline; B. the subgroup of obese patients at baseline

Figure S5. The subgroup analysis based on the time-weighted average HbA1c

A. the subgroup of the time-weighted average HbA1c \leq 7% (53 mmol/mol); B. the subgroup of the time-weighted average HbA1c >7% (53 mmol/mol)

Figure S6. The subgroup analysis based on the treatment of diabetes at baseline

A. the subgroup of patients receiving lifestyle intervention only at baseline; B. the subgroup of patients receiving anti-diabetic medication or insulin at baseline

Figure S7. The sensitivity analysis using the binned HbA1c variability score (b-HVS)

Figure S8. The sensitivity analysis using the HbA1c variability score (HVS) based on the HbA1c measurement in the first three years since diagnosis

Figure S9. The sensitivity analysis using the standard deviation (SD) of the HbA1c levels in accordance with the HVS category

Figure S10. The sensitivity analysis using the coefficients of variance (CV) of the HbA1c levels in accordance with the HVS category

Supplementary Techniques

Study exclusion criteria

They were excluded if they had: 1) unavailable data of sex, date of birth, Scottish Index of Multiple Deprivation (SIMD) or smoking records throughout the study period; 2) unavailable data of body mass index (BMI), serum creatinine or high-density lipoprotein (HDL) cholesterol within a year since diagnosis of diabetes; 3) free of the record of Scottish diabetes routine check when analyzing the outcomes of diabetic retinopathy (DR), diabetic peripheral neuropathy (DPN), diabetic foot ulcer (DFU); 5) with the estimated glomerular filtrate rate (eGFR) lower than 60 mL/min per 1.73m² at baseline when analyzing the outcome of new onset of chronic kidney diseases (CKD).

Defining the baseline characteristics

The patients were recognized to be ever smoking if there were any records of current or previous smoking in their the record in the electronic medical record (EMR) database. All baseline characteristics were using the data within a year since diagnosis of diabetes. BMI was extracted from the EMR database. The laboratory tests were extracted for the laboratory information systems. The eGFR was calculated using the CKD-EPI (Chronic Kidney Disease Epidemiology Collaboration) equation. Hypertension at baseline was identified if there were at least two episodes of elevated blood pressures in different days (systolic blood pressure >140mmHg or diatolic blood pressure >90mmHg), or receiving at least two prescriptions of the anti-hypertensive drug (angiotensin-converting-enzyme inhibitors, angiotensin receptor blockers, renin inhibitors, beta-blockers or non-dihydroxypyridine calcium channel blockers). The baseline oral anti-diabetic agents (metformin, sulphonylureas, gliptins, acarbose, thiazolidinediones, dipeptidyl peptidase-4 inhibitors and sodium-glucose cotransporter-2 inhibitors), insulin, antiplatelet therapy and statins at baseline were identified if there were at least two prescriptions of the drug class within the first year of diagnosis. If the patients used insulin combined with oral agents, we considered insulin as a priority.

Defining the outcomes

All-cause mortality was identified as any death record in the General Registry Office or the Community Health Index (CHI) registry. Cardiovascular death was identified as the death due to ischemic stroke (defined as ICD-9: 433, 434, 435 or 436; ICD-10: I63, I64, I65 or I66) or coronary artery disease (defined as ICD-9: 410, 411, 412, 413 or 414; ICD-10: I20, I21, I22, I23, I24 or I25). The cardiovascular outcomes were identified if the patients were hospitalized or died due to the coronary artery disease, ischemic stroke or heart failure (defined as ICD-9: 428 or ICD10: I50), respectively. Major adverse cardiovascular events (MACE) was defined as a composite outcome of cardiovascular death, ischemic stroke and coronary artery diseases. DR was identified as the first episode of observable background or more advanced retinopathy according to the annual retinal photograph taken as part of the routine care or receiving a laser treatment based on the records in the Scottish Care Information-Diabetes Collaboration (SCI-DC). DPN and DFU were identified as the first episode of impaired monofilament test and the first record of active foot ulcer according to the record of the SCI-DC system as part of the routine care in Scotland, respectively. CKD was identified for the first episode of persistently reduced eGFR (all eGFR values in and between two nonadjacent months were below 60 mL/min per 1.73m²).

Supplementary Table S1. Baseline characteristics of patients for those included for each analysis of outcomes.

	(n = 1	All-cause mortality (n	Cardiovascu lar death (n = 19,746)	Coronary artery disease (n = 16,413)	Ischemic stroke (n = 18,609)	Heart failure (n = 19,059)	Diabetic retinopathy (n = 15,067)	Diabetic peripheral neuropathy (n =	Diabetic foot ulcer (n = 15,913)	Chronic kidney disease (n =
		= 19.883)								
	17,300)	- 19.883)	- 19,740)	(11 – 10,413)	- 10,009)	- 19,039)	(II – 13,007)	13,111)	(11 – 13,913)	13,812)
Age of diabetes diagnosis, yrs	62.7 ±	63.2 ± 11.0	63.1 ± 11.0	62.5 ± 11.0	62.9 ± 10.9	62.9 ±	62.8 ± 10.7	62.3 ± 10.6	63.0 ± 10.8	59.5 ± 9.8
Age of diabetes diagnosis, yis	11.0	03.2 ± 11.0	03.1 ± 11.0	02.3 ± 11.0	02.9 ± 10.9	10.9	02.8 ± 10.7	02.3 ± 10.0	03.0 ± 10.8	39.3 ± 9.6
Q (0/)		10.074	10.555 (5.4.6)	0.504 (50.4)	10.000		0.006 (54.5)	7 .061 (72 .0)	0.555 (50.0)	0.410.(60.0)
Sex (male), n (%)	9,202	10,854	10,777 (54.6)	8,594 (52.4)	10,080	10,329	8,206 (54.5)	7,061 (53.9)	8,577 (53.9)	8,418 (60.9)
	(53.0)	(54.6)			(54.2)	(54.2)				
SIMD quintile, n (%)										
Q1	3,246	3,818 (19.2)	3,784 (19.2)	3,073 (18.7)	3,534	3,636	2,863 (19.0)	2,459 (18.8)	3,028 (19.0)	2,724 (19.7)
	(18.7)				(19.0)	(19.1)				
Q2	3,265	3,755 (18.9)	3,738 (18.9)	3,015 (18.4)	3,526	3,597	2,812 (18.7)	2,424 (18.5)	2,960 (18.6)	2,590 (18.8)
	(18.8)				(18.9)	(18.9)				
Q3	3,282	3,789 (19.1)	3,756 (19.0)	3,130 (19.1)	3,518	3,620	2,863 (19.0)	2,440 (18.6)	3,005 (18.9)	2,597 (18.8)
	(18.9)				(18.9)	(19.0)				
Q4	4,710	5,315 (26.7)	5,275 (26.7)	4,467 (27.2)	5,003	5,114	4,061 (27.0)	3,627 (27.7)	4,343 (27.3)	3,667 (26.5)
	(27.1)				(26.9)	(26.8)				
Q5	2,863	3,206 (16.1)	3,193 (16.2)	2,728 (16.6)	3,028	3,092	2,468 (16.4)	2,161 (16.5)	2,577 (16.2)	2,234 (16.2)
	(16.5)	, , ,			(16.3)	(16.2)	, , ,			
Year of diabetes diagnosis*	2009	2009 [2003,	2009 [2003,	2009 [2003,	2009	2009	2008 [2003,	2006 [2002,	2006 [2002,	2009 [2004,
, and the second	[2003,	2011]	2011]	2011]	[2003,	[2003,	2010]	2010]	2010]	2011]
	2011]	,	,	,	2011]	2011]	-	•	,	,
BMI, kg/m ²	32.2 ±	32.1 ± 6.4	32.1 ± 6.4	32.2 ± 6.5	32.2 ± 6.4	32.1 ± 6.4	32.2 ± 6.3	32.0 ± 6.3	32.0 ± 6.3	32.6 ± 6.5
, &	6.4									

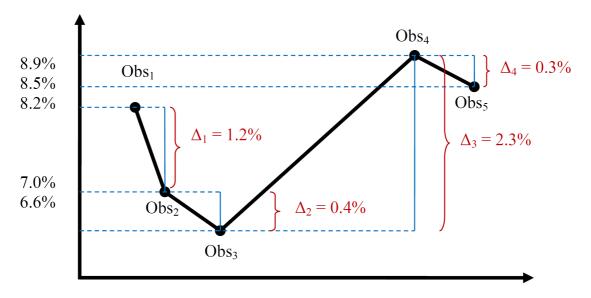
Ever smoking, n (%)	12,065	14,122	14,019 (71.0)	11,310 (68.9)	13,125	13,452	10,774	9,402 (71.7)	11,421	9,790 (70.9)
	(69.5)	(71.0)			(70.5)	(70.6)	(71.5)		(71.8)	
Ever regular alcohol, n (%)	9,420	10,823	10,771 (58.8)	8,840 (58.3)	10,177	10,410	8,378 (59.0)	7,389 (59.6)	8,733 (58.3)	8,043 (63.0)
	(58.5)	(58.7)			(58.9)	(58.9)				
Systolic blood pressure,	141.1 ±	140.6 ± 19.5	140.6 ± 19.4	141.4 ± 19.3	140.7 ±	140.8 ±	140.8 ± 19.2	141.4 ± 19.5	141.2 ± 19.6	139.9 ± 18.9
mmHg	19.3				19.3	19.3				
Diastolic blood pressure,	81.4 ±	80.9 ± 11.1	80.9 ± 11.0	81.7 ± 10.9	81.1 ± 11.0	81.1 ±	81.1 ± 10.9	81.5 ± 11.0	81.2 ± 11.0	82.0 ± 10.9
mmHg	10.9					11.0				
Carlson Comorbidity Index	2,599	3,369 (16.9)	3,328 (16.9)	2,326 (14.2)	2,952	3,064	2,364 (15.7)	1,829 (14.0)	2,424 (15.2)	1,867 (13.5)
≥1, n (%)	(15.0)				(15.9)	(16.1)				
Hypertension, n (%)	12,166	14,323	14,214 (72.0)	11,311 (68.9)	13,282	13,600	10,916	9,425 (71.9)	11,522	9,282 (67.2)
	(70.1)	(72.0)			(71.4)	(71.4)	(72.4)		(72.4)	
Treatment of diabetes within										
the first year from the										
diagnosis of diabetes, n (%)										
Lifestyle intervention only	9,259	10,685	10,618 (53.8)	8,662 (52.8)	9,951	10,255	8,175 (54.3)	7,116 (54.3)	8,601 (54.1)	7,034 (50.9)
	(53.3)	(53.7)			(53.5)	(53.8)				
Anti-diabetic agents without	7,789	8,791 (44.2)	8,727 (44.2)	7,443 (45.3)	8,279	8,430	6,585 (43.7)	5,724 (43.7)	6,990 (43.9)	6,522 (47.2)
insulin	(44.9)				(44.5)	(44.2)				
Treated with insulin	318	407 (2.0)	401 (2.0)	308 (1.9)	379 (2.0)	374 (2.0)	307 (2.0)	271 (2.1)	322 (2.0)	256 (1.9)
	(1.8)									
Receiving anti-platelet	4,510	6,232 (31.3)	6,170 (31.2)	3,832 (23.3)	5,459	5,769	4,790 (31.8)	4,049 (30.9)	5,052 (31.7)	3,555 (25.7)
therapy, n (%)	(26.0)				(29.3)	(30.3)				
Receiving statins, n (%)	10,385	12,333	12,252 (62.0)	9,592 (58.4)	11,391	11,743	9,238 (61.3)	7,680 (58.6)	9,513 (59.8)	8,472 (61.3)
	(59.8)	(62.0)			(61.2)	(61.6)				

HbA1c, %	7.7 ±	7.7 ± 2.0	7.7 ± 2.0	7.8 ± 2.0	7.7 ± 2.0	7.7 ± 2.0	7.7 ± 2.0	7.8 ± 2.0	7.8 ± 2.0	7.8 ± 2.0
	2.0									
HbA1c, mmol/mol	61 ±	61 ± 21.6	61 ± 21.5	61 ± 22.0	61 ± 21.6	61 ± 21.5	61 ± 21.5	61 ± 22.1	61 ± 21.9	62 ± 22.0
	21.8									
HDL cholesterol, mmol/L	1.2 ±	1.2 ± 0.3	1.2 ± 0.3	1.2 ± 0.3	1.2 ± 0.3	1.2 ± 0.3	1.2 ± 0.3	1.2 ± 0.3	1.2 ± 0.3	1.2 ± 0.3
	0.3									
Non-HDL cholesterol,	3.9 ±	3.8 ± 1.3	3.8 ± 1.3	3.9 ± 1.2	3.8 ± 1.2	3.8 ± 1.3	3.8 ± 1.2	3.9 ± 1.3	3.9 ± 1.3	3.9 ± 1.3
mmol/L	1.2									
ALT, IU/L*	28 [20,	28 [20, 40]	28 [20, 40]	28 [20, 41]	28 [20, 41]	28 [20,	28 [20, 41]	28 [20, 41]	28 [20, 41]	30 [22, 44]
	41]					40]				
eGFR, mL/min/1.73m ²	75.5 ±	74.7 ± 19.0	74.8 ± 18.9	75.8 ± 18.8	75.1 ± 18.8	75.1 ±	73.3 ± 18.1	73.4 ± 17.8	73.1 ± 18.1	83.0 ± 14.5
	18.7					18.7				

^{*} Presented as median [the interquartile range]

Abbreviations: ALT: alanine aminotransferase; BMI: body mass index; eGFR: estimated glomerular filtration rate; HDL: high-density lipoprotein; SIMD: Scottish Index of Multiple Deprivation

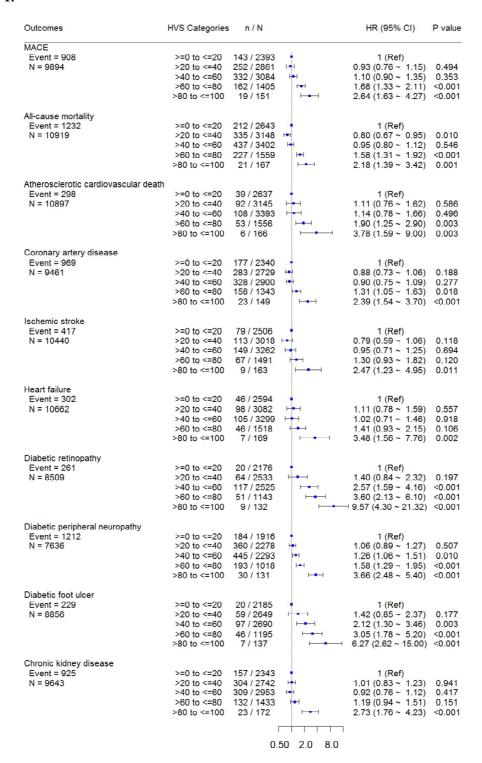
Supplementary Figure S1. The definition of HbA1c Variability Score (HVS)



HbA1c Variability Score (HVS) = Number of HbA1c fluctuation events $(\Delta > 0.5\%)$ / (Total number of HbA1c measurements -1) × 100 In this case, there are 2 fluctuation events $(\Delta_1 \& \Delta_3)$ in 5 HbA1c measurements $(4 \Delta s)$. \therefore HVS = 2 / $(5 - 1) \times 100 = 50$

Supplementary Figure S2. The subgroup analysis based on the age

A.



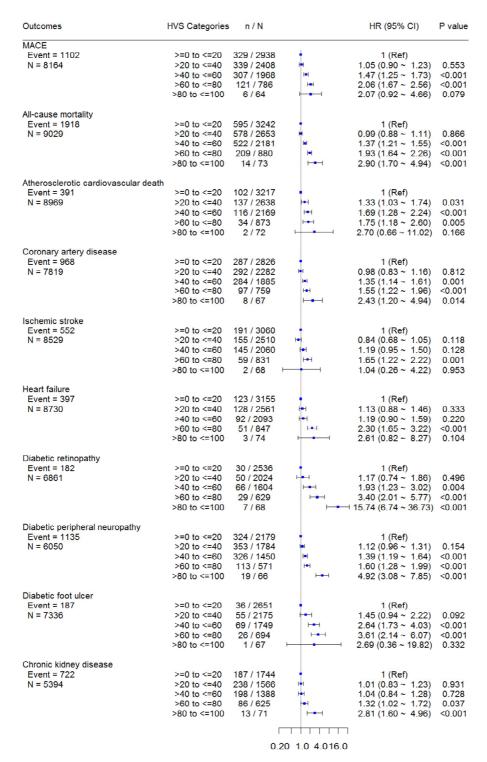
В.

Outcomes	HVS Categories	n / N		HR (95% CI)	P value
MACE Event = 1481 N = 7472	>=0 to <=20 >20 to <=40 >40 to <=60 >60 to <=80 >80 to <=100	519 / 3300 462 / 2189 355 / 1426 138 / 516 7 / 41	# T T	1 (Ref) 0.95 (0.84 ~ 1.08) 1.21 (1.06 ~ 1.39) 1.63 (1.35 ~ 1.97) 1.59 (0.75 ~ 3.36)	0.427 0.006 <0.001 0.222
All-cause mortality Event = 2858 N = 8964	>=0 to <=20 >20 to <=40 >40 to <=60 >60 to <=80 >80 to <=100	993 / 3890 873 / 2631 706 / 1758 270 / 642 16 / 43	H	1 (Ref) 0.93 (0.85 ~ 1.02) 1.17 (1.06 ~ 1.29) 1.55 (1.35 ~ 1.78) 2.07 (1.26 ~ 3.40)	0.129 0.002 <0.001 0.004
Atherosclerotic cardiovascular death Event = 594 N = 8849	>=0 to <=20 >20 to <=40 >40 to <=60 >60 to <=80 >80 to <=100	187 / 3831 197 / 2607 161 / 1740 48 / 627 1 / 44		1 (Ref) 1.05 (0.86 ~ 1.28) 1.32 (1.07 ~ 1.64) 1.40 (1.02 ~ 1.92) 0.71 (0.10 ~ 5.07)	0.645 0.011 0.040 0.732
Coronary artery disease Event = 1259 N = 6952	>=0 to <=20 >20 to <=40 >40 to <=60 >60 to <=80 >80 to <=100	426 / 3045 415 / 2052 294 / 1328 118 / 487 6 / 40	in i	1 (Ref) 1.05 (0.92 ~ 1.21) 1.21 (1.04 ~ 1.41) 1.62 (1.32 ~ 1.99) 1.77 (0.79 ~ 3.97)	0.473 0.014 <0.001 0.165
Ischemic stroke Event = 719 N = 8169	>=0 to <=20 >20 to <=40 >40 to <=60 >60 to <=80 >80 to <=100	286 / 3579 208 / 2380 157 / 1589 66 / 579 2 / 42		1 (Ref) 0.81 (0.68 ~ 0.97) 1.00 (0.82 ~ 1.21) 1.38 (1.05 ~ 1.80) 0.81 (0.20 ~ 3.27)	0.022 0.967 0.020 0.769
Heart failure Event = 551 N = 8397	>=0 to <=20 >20 to <=40 >40 to <=60 >60 to <=80 >80 to <=100	197 / 3692 159 / 2456 134 / 1633 57 / 575 4 / 41		1 (Ref) 0.90 (0.73 ~ 1.12) 1.20 (0.96 ~ 1.51) 1.82 (1.36 ~ 2.46) 2.66 (0.99 ~ 7.19)	0.342 0.104 <0.001 0.054
Diabetic retinopathy Event = 153 N = 6558	>=0 to <=20 >20 to <=40 >40 to <=60 >60 to <=80 >80 to <=100	41 / 2903 44 / 1929 47 / 1227 19 / 462 2 / 37	 	1 (Ref) 0.99 (0.65 ~ 1.53) 1.53 (1.00 ~ 2.34) 2.44 (1.40 ~ 4.22) 6.23 (1.50 ~ 25.93)	0.976 0.053 0.002 0.012
Diabetic peripheral neuropathy Event = 1314 N = 5475	>=0 to <=20 >20 to <=40 >40 to <=60 >60 to <=80 >80 to <=100	466 / 2435 439 / 1607 302 / 1019 96 / 376 11 / 38	# # 	1 (Ref) 1.17 (1.02 ~ 1.33) 1.30 (1.12 ~ 1.50) 1.28 (1.03 ~ 1.60) 2.04 (1.12 ~ 3.71)	0.021 0.001 0.028 0.020
Diabetic foot ulcer Event = 239 N = 7057	>=0 to <=20 >20 to <=40 >40 to <=60 >60 to <=80 >80 to <=100	67 / 3068 69 / 2082 74 / 1365 27 / 499 2 / 43	+ + + +	1 (Ref) 1.12 (0.80 ~ 1.58) 1.96 (1.40 ~ 2.74) 2.46 (1.56 ~ 3.86) 3.34 (0.81 ~ 13.69)	0.502 <0.001 <0.001 0.094
Chronic kidney disease Event = 797 N = 4169	>=0 to <=20 >20 to <=40 >40 to <=60 >60 to <=80 >80 to <=100	254 / 1817 250 / 1162 209 / 856 72 / 301 12 / 33		1 (Ref) 1.07 (0.90 ~ 1.28) 1.21 (1.00 ~ 1.45) 1.49 (1.14 ~ 1.94) 3.41 (1.91 ~ 6.10)	0.459 0.050 0.003 <0.001
		0.	10 1.0 4.0		

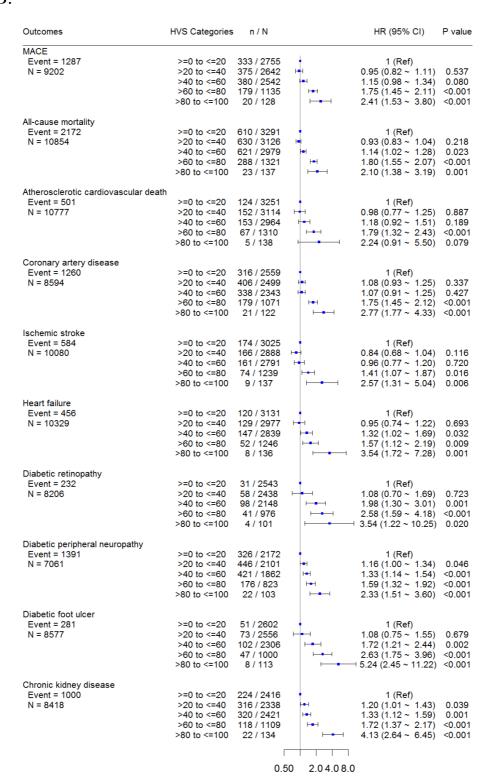
A. the subgroup of patients younger than 65; B. the subgroup of patients aged 65 or older Abbreviations: CI: confidence interval; HR: hazard ratio; HVS: HbA1c variability score.

Supplementary Figure S3. The subgroup analysis based on sex

Α.



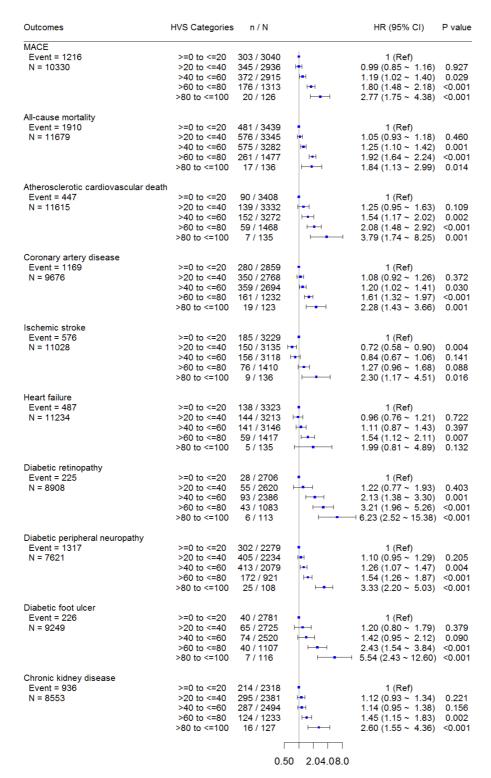
В.



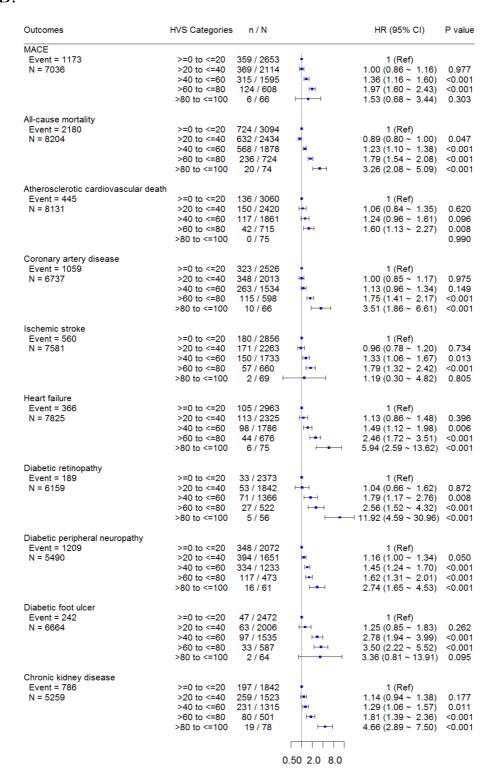
A. the subgroup of female patients; B. the subgroup of male patients Abbreviations: CI: confidence interval; HR: hazard ratio.

Supplementary Figure S4. The subgroup analysis based on the baseline body mass

A.



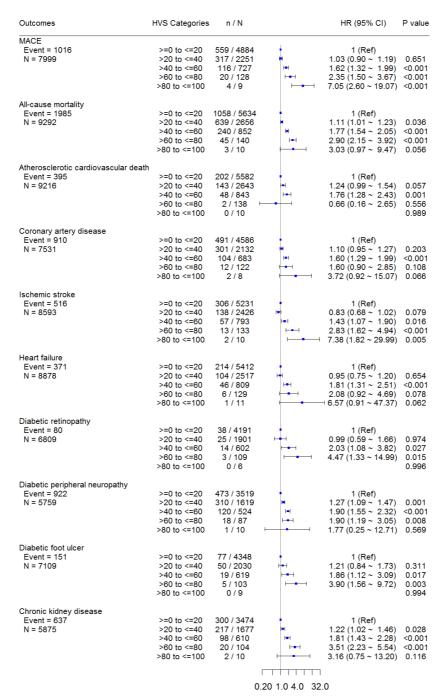
В.



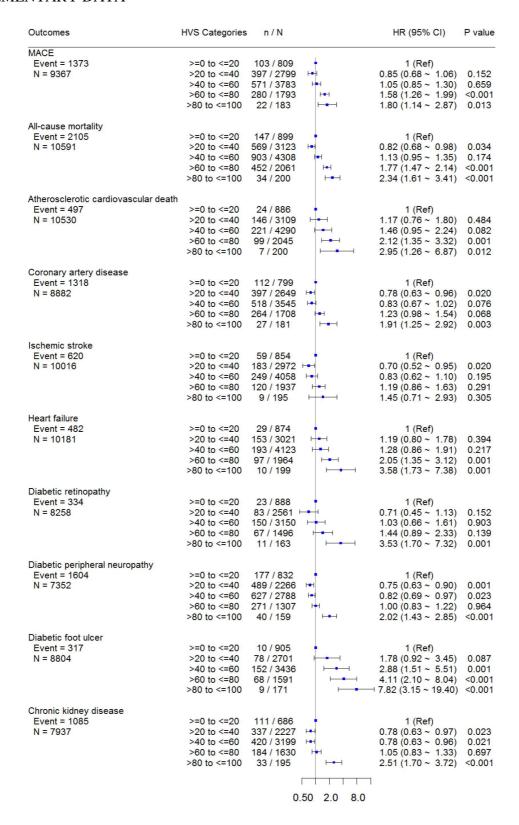
A. the subgroup of non-obese patients at baseline; B. the subgroup of obese patients at baseline Abbreviations: CI: confidence interval; HR: hazard ratio; HVS: HbA1c variability score.

Supplementary Figure S5. The subgroup analysis based on the time-weighted average HbA1c

A.



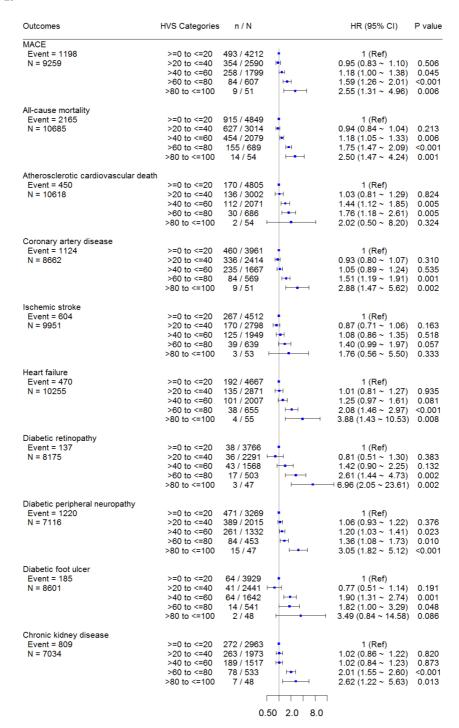
В.



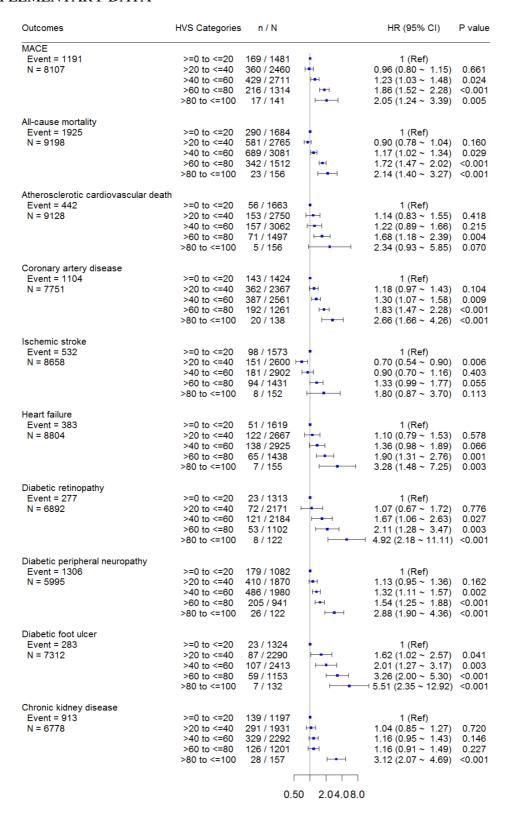
A. the subgroup of the time-weighted average HbA1c \leq 7% (53 mmol/mol); B. the subgroup of the time-weighted average HbA1c >7% (53 mmol/mol)

Supplementary Figure S6. The subgroup analysis based on the treatment of diabetes at baseline

A.

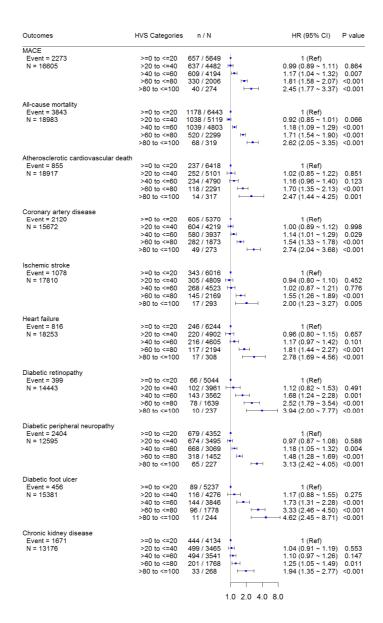


В.



A. the subgroup of patients receiving lifestyle intervention only at baseline; B. the subgroup of patients receiving anti-diabetic medication or insulin at baseline

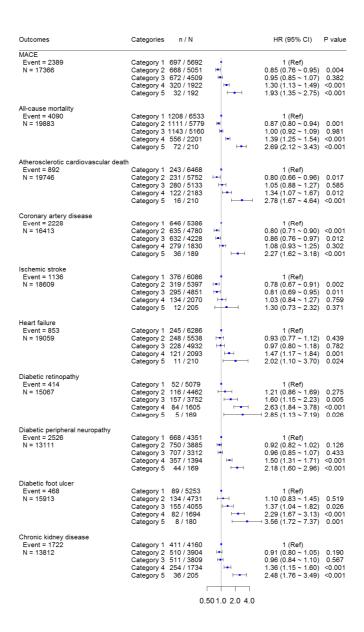
Supplementary Figure S7. The sensitivity analysis using the binned HbA1c variability score (b-HVS)



Supplementary Figure S8. The sensitivity analysis using the HbA1c variability score (HVS) based on the HbA1c measurement in the first three years since diagnosis

Outcomes	HVS Categories	n / N		HR (95% CI)	P value
MACE					
Event = 1862	>=0 to <=20	585 / 4930	.	1 (Ref)	
N = 13102	>20 to <=40	516 / 3342	H=1	1.20 (1.06 ~ 1.35)	0.003
	>40 to <=60 >60 to <=80	506 / 3075 225 / 1459	H=H	1.40 (1.23 ~ 1.58)	<0.001
	>80 to <=80	30 / 296		1.47 (1.25 ~ 1.72) 1.19 (0.82 ~ 1.71)	
	>60 to <=100	30 / 296		1.19 (0.62 ~ 1.71)	0.300
All-cause mortality					
Event = 3202	>=0 to <=20	1037 / 5713	Ī	1 (Ref)	0.001
N = 14970	>20 to <=40 >40 to <=60	868 / 3781 847 / 3467	i i	1.17 (1.06 ~ 1.28) 1.42 (1.29 ~ 1.56)	0.001 <0.001
	>60 to <=80	390 / 1665	H=H	1.55 (1.37 ~ 1.74)	
	>80 to <=100	60 / 344	H	1.48 (1.14 ~ 1.93)	
Atherosclerotic cardiovascular death					
Event = 699	>=0 to <=20	194 / 5648	<u>.</u>	1 (Ref)	
N = 14833	>20 to <=40	218 / 3754	H I	1.48 (1.22 ~ 1.80)	< 0.001
	>40 to <=60	197 / 3440	⊢• ⊣	1.64 (1.34 ~ 2.01)	
	>60 to <=80	79 / 1647	H	1.52 (1.16 ~ 1.98)	0.002
	>80 to <=100	11 / 344	-	1.42 (0.77 ~ 2.62)	0.256
Coronary artery disease					
Event = 1755	>=0 to <=20	545 / 4646	<u>†</u> .	1 (Ref)	
N = 12386	>20 to <=40	483 / 3144	H-1	1.12 (0.99 ~ 1.27)	0.079
	>40 to <=60	472 / 2915	HH HH	1.28 (1.13 ~ 1.46)	
	>60 to <=80 >80 to <=100	221 / 1391 34 / 290	-	1.42 (1.21 ~ 1.67) 1.21 (0.85 ~ 1.71)	
				,	
Ischemic stroke Event = 870	>=0 to <=20	329 / 5291	1	1 (Ref)	
N = 14011	>20 to <=40	207 / 3555	H-1	0.89 (0.75 ~ 1.06)	0.198
14 - 14011	>40 to <=60	215 / 3274	-	1.13 (0.94 ~ 1.35)	0.189
	>60 to <=80	104 / 1569	├	1.27 (1.01 ~ 1.59)	
	>80 to <=100	15 / 322		1.07 (0.64 ~ 1.81)	
Heart failure					
Event = 679	>=0 to <=20	230 / 5461	•	1 (Ref)	
N = 14342	>20 to <=40	190 / 3648	H 1	1.11 (0.91 ~ 1.35)	0.302
	>40 to <=60	162 / 3316	H	1.15 (0.93 ~ 1.41)	0.191
	>60 to <=80 >80 to <=100	80 / 1584 17 / 333		1.32 (1.01 ~ 1.71) 1.67 (1.01 ~ 2.73)	0.039 0.044
	>80 to <=100	177333	- '	1.07 (1.01 ~ 2.73)	0.044
Diabetic retinopathy	>-0.4- <-00	67 / 4000		4 (D-6)	
Event = 354 N = 11404	>=0 to <=20 >20 to <=40	67 / 4360 94 / 2923	L.	1 (Ref) 1.34 (0.97 ~ 1.84)	0.072
N = 11404	>40 to <=60	115 / 2618		1.79 (1.31 ~ 2.44)	
	>60 to <=80	69 / 1252		2.57 (1.82 ~ 3.62)	
	>80 to <=100	9 / 251		1 2.55 (1.26 ~ 5.13)	
Diabetic peripheral neuropathy					
Event = 2093	>=0 to <=20	621 / 3665	+	1 (Ref)	
N = 9888	>20 to <=40	604 / 2560	H=H	1.22 (1.09 ~ 1.37)	0.001
	>40 to <=60	557 / 2323	H=H	1.27 (1.13 ~ 1.43)	
	>60 to <=80	260 / 1105	H=H	1.43 (1.23 ~ 1.66)	
	>80 to <=100	51 / 235		1.75 (1.31 ~ 2.33)	<0.001
Diabetic foot ulcer	0 (00 / * * * *		4 /5 5	
Event = 393	>=0 to <=20	92 / 4443	L	1 (Ref)	0.000
N = 11934	>20 to <=40	108 / 3086		1.38 (1.04 ~ 1.83)	0.026
	>40 to <=60 >60 to <=80	117 / 2788 65 / 1345		1.72 (1.30 ~ 2.28) 2.22 (1.60 ~ 3.07)	
	>80 to <=100	11 / 272	H	2.39 (1.27 ~ 4.49)	
Chronic kidney disease					
Event = 1384	>=0 to <=20	356 / 3736	<u>.</u>	1 (Ref)	
N = 10437	>20 to <=40	425 / 2597	H=H	1.49 (1.29 ~ 1.72)	< 0.001
	>40 to <=60	398 / 2544	H = H	1.60 (1.38 ~ 1.85)	
	>60 to <=80	169 / 1277	H	1.47 (1.22 ~ 1.78)	
	>80 to <=100	36 / 283	⊢	1.77 (1.25 ~ 2.49)	
		Λ	50 1.0 2.0 4.0		
		U.	.00 1.0 2.0 4.0		

Supplementary Figure S9. The sensitivity analysis using the standard deviation (SD) of the HbA1c levels in accordance with the HVS category



Supplementary Figure S10. The sensitivity analysis using the coefficients of variance (CV) of the HbA1c levels in accordance with the HVS category

