

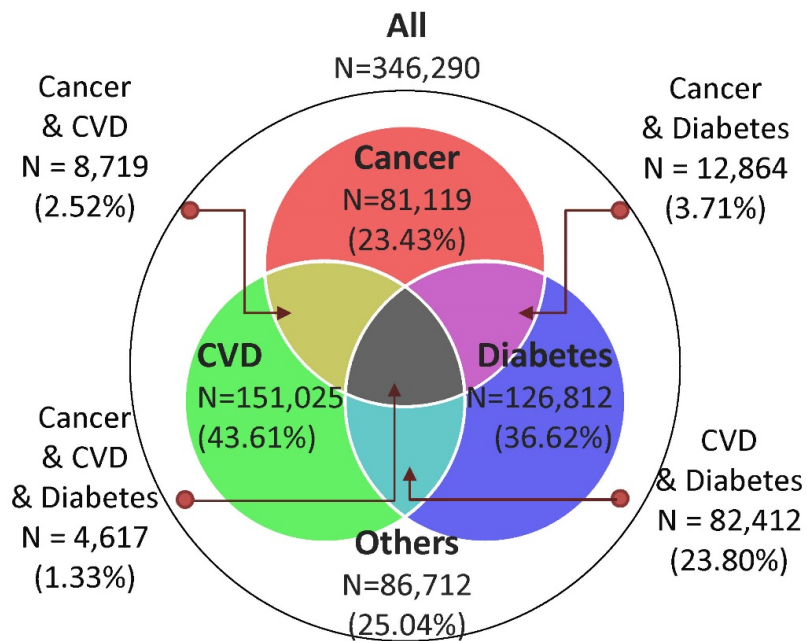
Supplementary Table 1. Comparison of the results (HRs) from survival analysis based on case-cohort and full cohort data

	Time-fixed scores		Time-varying scores	
	All_3 Case-Cohort	All_3 Full-Cohort	All_3 Case-Cohort	All_3 Full-Cohort
Sex	1.43 (1.41–1.45)	1.42 (1.41–1.43)	1.37 (1.35–1.39)	1.35 (1.34–1.36)
Age	1.07 (1.06–1.07)	1.07 (1.07–1.07)	1.05 (1.05–1.05)	1.05 (1.05–1.05)
aDCSI	1.14 (1.14–1.15)	1.14 (1.14–1.14)	1.12 (1.11–1.12)	1.12 (1.12–1.12)
CCI	1.10 (1.09–1.10)	1.10 (1.10–1.10)	1.27 (1.27–1.28)	1.28 (1.27–1.28)
C-index	0.765	0.765	0.825	0.825
AIC	7,984,549	9,101,513	7,793,865	8,910,367
Computing time (seconds)	75	180	208	1026

‘All_3’ denotes a model with all-cause mortality as endpoint using variable set 3 (sex, age and both aDCSI and CCI).

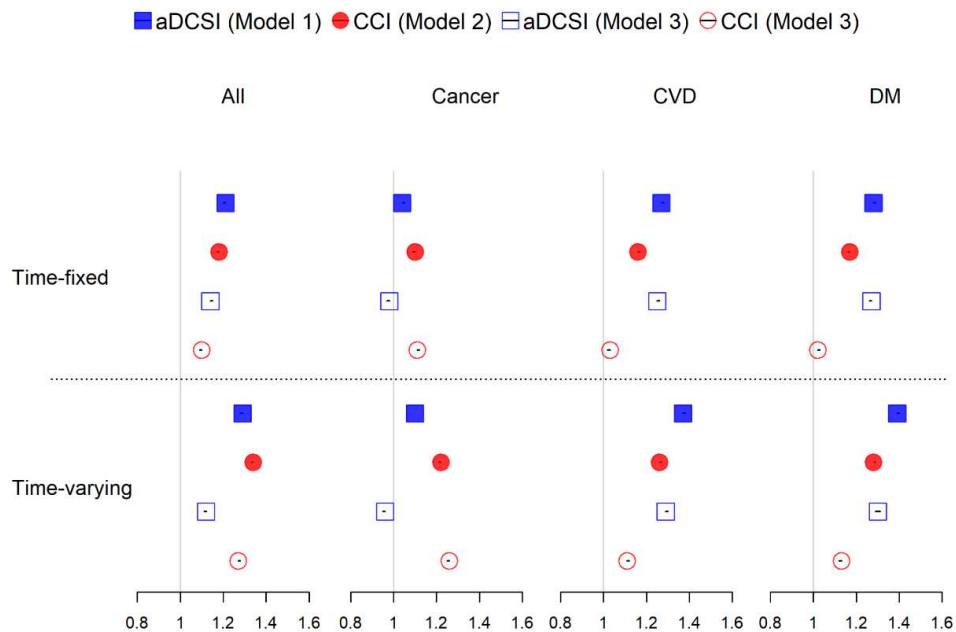
AIC is different for case-cohort and full cohort analysis because the number of subjects is different. The rank of AIC remained the same.

Abbreviations: aDCSI, adapted Diabetes Complications Severity Index; AIC, Akaike information criterion; CCI, Charlson Comorbidity Index; C-index, Harrell’s concordance index; CVD, cardiovascular disease; HR, hazard ratio.



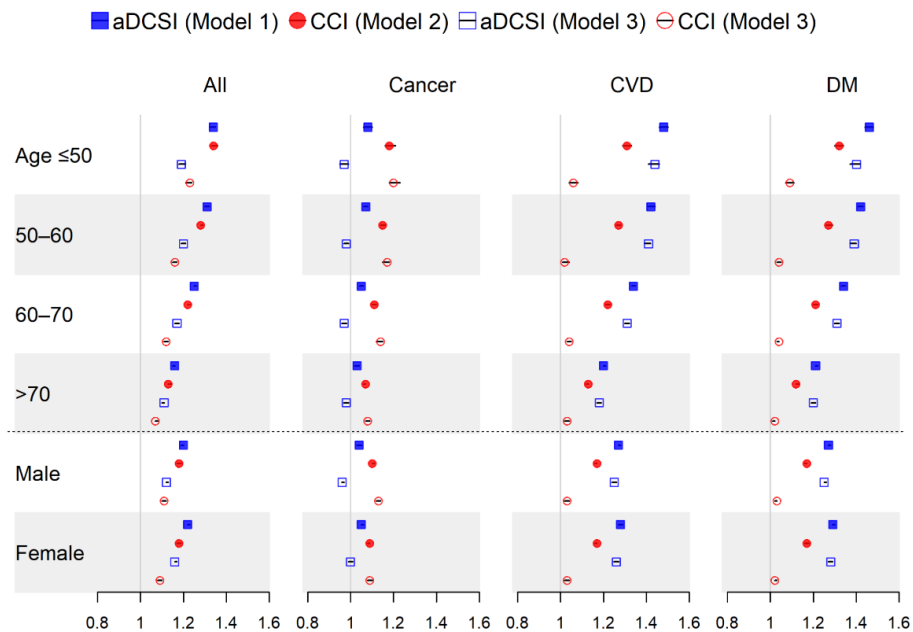
Supplementary figure 1. The Venn diagram for causes of death.

Abbreviations: CVD, cardiovascular disease.



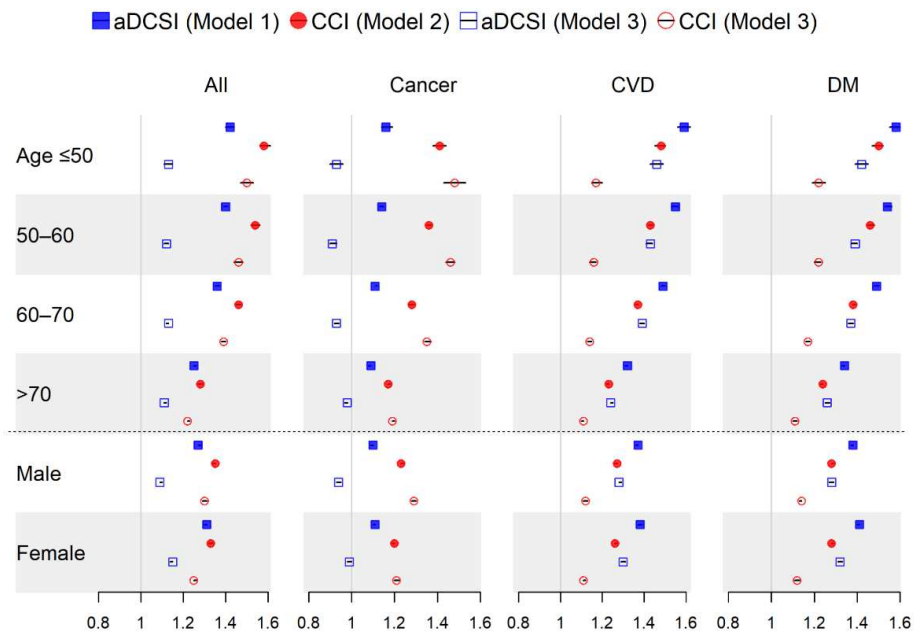
Supplementary figure 2. The forest plot of HRs and 95% confidence intervals of aDCSI and CCI for all-cause and cause-specific mortality. There are 4 endpoints (all-cause, cancer, CVD and diabetes mortality) and 3 variable sets (model 1: sex, age and aDCSI; model 2: sex, age and CCI; and model 3: sex, age and both aDCSI and CCI). The plot is corresponding to the HRs in Table 2.

Abbreviations: aDCSI, adapted Diabetes Complications Severity Index; CCI, Charlson Comorbidity Index; CVD, cardiovascular disease; DM, diabetes mellitus; HR, hazard ratio.



Supplementary figure 3. The forest plot of HRs and 95% confidence intervals of aDCSI and CCI in subgroup by age and sex. There are 4 endpoints (all-cause, cancer, CVD and diabetes mortality) and 3 variable sets (model 1: sex, age and aDCSI; model 2: sex, age and CCI; and model 3: sex, age and both aDCSI and CCI)

Abbreviations: aDCSI, adapted Diabetes Complications Severity Index; CCI, Charlson Comorbidity Index; CVD, cardiovascular disease; DM, diabetes mellitus; HR, hazard ratio.



Supplementary figure 4. The forest plot of HRs and 95% confidence intervals of time-varying aDCSI and CCI in subgroup by age and sex. There are 4 endpoints (all-cause, cancer, CVD and diabetes mortality) and 3 variable sets (model 1: sex, age and aDCSI; model 2: sex, age and CCI; and model 3: sex, age and both aDCSI and CCI)
Abbreviations: aDCSI, adapted Diabetes Complications Severity Index; CCI, Charlson Comorbidity Index; CVD, cardiovascular disease; DM, diabetes mellitus; HR, hazard ratio.