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#### eTable 1. ICD-10 codes for causes of death

Cause of death	ICD-10 codes
CVD	100-199
IHD	120-125
Stroke	160-161, 163-164
IS	163
ICH	I61
Non-CVD	
COPD	I26-I27, J41-J44
Cancer	C00-C97
Diabetic ketoacidosis or coma	E10.0, E11.0, E12.0, E13.0, E14.0, E10.1, E11.1, E12.1, E13.1, E14.1
Kidney disease	N02-N03, N07, N11 N18

COPD= chronic obstructive pulmonary disease, CVD=cardiovascular disease, ICH= intracerebral haemorrhage, IHD=ischaemic heart disease, IS=ischaemic stroke

#### eTable 2. Number of events by diabetes status at baseline

	No. of eve	No. of events (%)		
Cause of death or event	No diabetes	Diabetes		
	(n=422,871)	(n=23,842)		
Deaths from any cause	23,305 (5.5)	3509 (14.7)		
Non-CVD deaths	15,011 (3.5)	2078 (8.7)		
COPD	932 (0.2)	81 (0.3)		
Cancer	9032 (2.1)	823 (3.5)		
Diabetic ketoacidosis or coma	26 (0.01)	139 (0.6)		
Kidney disease	339 (0.08)	232 (1.0)		
CVD deaths	8294 (2.0)	1431 (6.0)		
IHD	2862 (0.7)	592 (2.5)		
Stroke	3983 (0.9)	594 (2.5)		
IS	828 (0.2)	188 (0.8)		
ICH	2920 (0.7)	381 (1.6)		
All CVD events	99,122 (23.4)	9943 (41.7)		
Survived to the end of follow-up	86,800 (20.5)	7664 (32.1)		
Immediate case fatality (died within 28 days)	4693 (1.1)	671 (3.0)		
All-cause mortality post non-fatal CVD event	6773 (1.6)	1474 (6.1)		
CVD mortality post non-fatal CVD event	3601 (0.9)	760 (3.2)		

COPD= chronic obstructive pulmonary disease, CVD=cardiovascular disease, ICH= intracerebral haemorrhage, IHD=ischaemic heart disease, IS=ischaemic stroke

### eFigure 1. Association of baseline BMI with cause-specific CVD mortality among individuals with and without diabetes

Hazard ratios (HRs) are stratified by age-at-risk, sex and study area, and adjusted for education, smoking, alcohol and physical activity. HRs are plotted on a floating absolute risk scale and separate y-axis scales were used for individuals with and without diabetes (black and grey labels, respectively). HRs are relative to 22.5-24.9 kg/m<sup>2</sup> group, separately in individuals with and without diabetes. Each closed square represents HR with the area inversely proportional to the variance of the log HR. Vertical lines indicate 95% Cls. The  $\bar{x}$  above the x-axis represents the mean value of BMI in the full CKB population and the ±1S and ±2S represent 1 and 2 SD from the mean, respectively.



#### eFigure 2. Association of baseline BMI with cause-specific non-CVD mortality among individuals with and without diabetes

Conventions as eFigure 1.



ii) Cancer mortality

20

20

25

BMI, kg/m<sup>2</sup>

30

35

25

BMI, kg/m<sup>2</sup>

mortality

30

35

# eFigure 3. Association of baseline BMI with immediate case fatality and all-cause mortality post non-fatal CVD, among individuals with and without diabetes A) in never-regular smokers and B) after excluding first 5 years of follow-up

Conventions as eFigure 1.









#### eFigure 4. Associations of baseline BMI (per 1 kg/m<sup>2</sup> higher) at BMI <25 kg/m<sup>2</sup> with mortality following CVD events among individuals with and without diabetes, applying various exclusions

	i)	i) Immediate case fatality (died within 28 days)			ii) All-cause mortality post non-fatal CVD		
Stepwise exclusions	No. of events		HR (95% CI)	No. of events	1	HR (95% CI)	
Diabetes							
Prior CVD, COPD, TB and cancer diseases	758	<b>e</b>	0.93 (0.90, 0.96)	1271	<b></b>	0.86 (0.83, 0.88)	
+ other prior diseases (hypertension, cirrhosis/chronic hepatitis, kidney)	528	<b>-</b> _	0.90 (0.87, 0.94)	965	_ <b>_</b>	0.85 (0.83, 0.88)	
+ poor self-rated health	383	<b>_</b>	0.93 (0.88, 0.97)	719	_ <b>-</b>	0.87 (0.84, 0.90)	
+ COPD during of follow-up	372	<b>-</b>	0.93 (0.88, 0.97)	695	_ <b>_</b>	0.87 (0.84, 0.90)	
or CKD during follow-up	373	<b>-</b>	0.93 (0.88, 0.97)	719	_ <b>_</b>	0.87 (0.84, 0.90)	
or chronic liver during follow-up	380	<b>_</b>	0.93 (0.88, 0.98)	680	_ <b></b>	0.87 (0.83, 0.90)	
or GI cancer during follow-up	379	<b>-</b>	0.93 (0.88, 0.98)	638	_ <b></b>	0.86 (0.82, 0.89)	
or other cancers during follow-up	371	<b>e</b>	0.92 (0.88, 0.97)	571	_ <b>-</b>	0.85 (0.81, 0.88)	
or CVD during follow-up	147		0.93 (0.86, 1.01)	492	_ <b>_</b>	0.85 (0.81, 0.88)	
or other disease during follow-up	383	<b>-</b>	0.93 (0.88, 0.97)	559	_ <b></b>	0.88 (0.85, 0.92)	
+ any of the above chronic disease during follow-up	93		0.92 (0.83, 1.02)	149 —		0.82 (0.76, 0.88)	
No diabetes							
Prior CVD, COPD, TB and cancer diseases	5820		0.98 (0.97, 0.99)	10953		0.92 (0.92, 0.93)	
+ other prior diseases (hypertension, cirrhosis/chronic hepatitis, kidney)	4494		0.97 (0.95, 0.98)	9446		0.92 (0.92, 0.93)	
+ poor self-rated health	3820		0.97 (0.96, 0.99)	8325		0.93 (0.92, 0.94)	
+ COPD during of follow-up	3673		0.98 (0.96, 0.99)	7929		0.94 (0.93, 0.95)	
or CKD during follow-up	3765		0.97 (0.96, 0.99)	8325		0.93 (0.92, 0.94)	
or chronic liver during follow-up	3765		0.97 (0.96, 0.99)	7942		0.93 (0.92, 0.94)	
or GI cancer during follow-up	3779		0.97 (0.96, 0.99)	6893		0.93 (0.92, 0.94)	
or other cancers during follow-up	3701		0.97 (0.95, 0.98)	5823	=	0.92 (0.91, 0.93)	
or CVD during follow-up	1933		0.94 (0.92, 0.96)	6835		0.92 (0.91, 0.94)	
or other disease during follow-up	3771		0.97 (0.96, 0.99)	7655		0.93 (0.92, 0.94)	
+ any of the above chronic disease during follow-up	1265		0.95 (0.92, 0.97)	2265		0.92 (0.90, 0.93)	
		0.8 0.9 1			0.8 0.9 1		
	HR (95% CI) per 1 kg/m <sup>2</sup> higher BMI HR (95% CI) per 1 kg/m <sup>2</sup> highe					11	

# eFigure 5. Association of baseline BMI with CVD incidence and immediate and long term mortality post non-fatal CVD event among individuals with self-reported and screen detected diabetes

Conventions as eFigure 1.



#### A. Self-reported diabetes

### eFigure 6. Association of baseline BMI with i) CVD and ii) non-CVD mortality among individuals with and without diabetes by sex

Conventions as eFigure 1.



## eFigure 7. Association of baseline BMI with i) CVD, ii) non-CVD, and iii) all-cause mortality among individuals with and without diabetes by age at baseline Conventions as eFigure 1.



## eFigure 8. Association of baseline BMI with i) CVD and ii) non-CVD mortality among individuals with and without diabetes in urban and rural areas

Conventions as eFigure 1.



#### eFigure 9. Association of sex-specific quintiles of baseline BMI with CVD incidence, immediate case fatality and all-cause mortality post non-fatal CVD event, among individuals with and without diabetes

Hazard ratios (HRs) are stratified by age-at-risk, sex and study area, and adjusted for education, smoking, alcohol and physical activity. HRs are plotted on a floating absolute risk scale and separate y-axis scales were used for individuals with and without diabetes (black and grey labels, respectively). HRs are relative to  $3^{rd}$  quintile group, separately in individuals with and without diabetes. Each closed square represents HR with the area inversely proportional to the variance of the log HR. Vertical lines indicate 95% CIs. The  $\bar{x}$  above the x-axis represents the mean value of each adiposity measure in the full CKB population and the ±1S and ±2S represent 1 and 2 SD from the mean, respectively.



# eFigure 10. Association of baseline body fat percentage, lean body mass and fat body mass with CVD incidence, immediate case fatality and all-cause mortality post non-fatal CVD event, among individuals with and without diabetes

Conventions as eFigure 9.

