

Table S1. Cumulative percentage of people with and without diabetes mellitus (DM) at each year of the follow-up period

Year of the follow-up period (year)	DM (-)	DM (+)
~ 3	0	0.7
~ 4	19.6	22.6
~ 5	56.9	56.5
~ 6	75.2	71.3
~ 7	80.2	76.8
~ 8	88.6	86.9
~ 10	100	100

Cumulative percentage of dialysis (%) in participants with and without diabetes mellitus during each year of the follow-up period

Table S2. Number of study participants divided to two categories of systolic blood pressure according to presence or absence of diabetes and dialysis

SBP mmHg	Diabetes mellitus (-)		Diabetes mellitus (+)	
	Dialysis		Dialysis	
	(-) (n=241515)	(+) (n=113)	(-) (n=17170)	(+) (n=76)
≥110	174599	94	15679	73
≥115	144136	88	14446	71
≥120	113999	74	12929	66
≥125	81643	63	10818	61
≥130	54441	49	8458	50
≥140	19588	30	4317	30
≥150	7707	19	2049	19

Table S3. Number of study participants in five categories of systolic blood pressure according to presence or absence of diabetes and dialysis

SBP mmHg	Diabetes mellitus (-)		Diabetes mellitus (+)	
	Dialysis		Dialysis	
	(-) (n=241515)	(+) (n=113)	(-) (n=17170)	(+) (n=76)
≤119	127516	39	4241	10
120-129	59558	25	4471	16
130-139	34853	19	4141	20
140-149	11881	11	2268	11
≥150	7707	19	2049	19

Table S4. Characteristics of study participants according to presence or absence of diabetes and dialysis

	Total (n=256633)	Diabetes mellitus (-)		P-value	Diabetes mellitus (+)		P-value
		Dialysis			Dialysis		
		(-) (n=241501)	(+) (n=113)		(-) (n=14963)	(+) (n=56)	
Age (years)	45±9	44±9	47±8	< 0.001	50±8	51±7	0.344
Sex (Male, %)	159185 (62)	146590 (61)	91 (81)	< 0.001	12450 (83)	54 (96)	0.008
Body mass index (kg/m ²)	22.8±3.6	22.6±3.4	23.6±4.0	0.003	26.0±4.6	26.8±4.8	0.111
Smoking (%)	70901 (28)	65358 (27)	44 (39)	0.005	5477 (37)	22 (39)	0.678
Systolic blood pressure (mmHg)	120±16	119±15	129±21	< 0.001	130±17	141±22	0.001
Diastolic blood pressure (mmHg)	74±11	73±11	79±15	< 0.001	80±11	84±12	0.005
FPG (mmol/L)	5.2±1.0	5.1±0.5	5.2±0.6	0.005	7.9±2.4	8.3±2.9	0.267
HbA1c (%)	5.5±0.6	5.4±0.3	5.5±0.4	0.243	7.1±1.4	7.5±1.8	0.161
LDL cholesterol (mmol/L)	3.1±0.8	3.1±0.8	3.0±0.9	0.469	3.3±0.9	3.4±1.2	0.421
HDL cholesterol (mmol/L)	1.6±0.4	1.7±0.4	1.4±0.4	< 0.001	1.4±0.4	1.2±0.3	< 0.001
TG (mmol/L)	1.2±0.9	1.2±0.9	1.6±1.1	< 0.001	1.7±1.4	2.5±2.0	< 0.001
Medication for diabetes (%)	6930 (3)	-	-	-	6890 (46)	40 (71)	< 0.001
Medication for hypertension (%)	20389 (8)	15776 (7)	51 (45)	< 0.001	4517 (30)	45 (80)	< 0.001
Prevalence of coronary artery disease	12699 (5)	10601 (4)	37 (33)	< 0.001	2007 (13)	24 (43)	< 0.001

HbA1c: glycated hemoglobin A1c; LDL cholesterol: low-density lipoprotein cholesterol; HDL cholesterol: high-density lipoprotein cholesterol; TG: triglyceride; FPG: fasting plasma glucose

Data are presented as numbers, means ± standard deviations, or percentages.

Table S5. Results of sensitivity analysis**A. Sex**

SBP mmHg	DM (-)		DM (+)	
	men	women	men	women
	(n=146693) (dialysis=91)	(n=94935) (dialysis=22)	(n=14314) (dialysis=71)	(n=2932) (dialysis=5)
	HR (95% CI)			
<110/ ≥110	0.81 (0.45-1.48)	1.62 (0.55-4.80)	1.91 (0.46-7.89)	0.37 (0.03-4.43)
<115/ ≥115	1.12 (0.66-1.90)	2.25(0.80-6.34)	2.12 (0.76-5.86)	0.71(0.06-7.98)
<120/ ≥120	0.98 (0.62-1.56)	2.36 (0.87-6.35)	1.56 (0.77-3.18)	1.39 (0.13-14.3)
<125/ ≥125	1.19 (0.76-1.85)	2.62 (0.98-7.00)	1.70 (0.94-3.10)	2.68 (0.24-29.5)
<130/ ≥130	1.07 (0.68-1.68)	4.80 (1.78-13.0)	1.39 (0.84-2.30)	6.05 (0.50-73.6)
<140/ ≥140	1.55 (0.92-2.59)	7.91 (2.76-22.7)	1.48 (0.91-2.42)	1.83 (0.24-13.9)
<150/ ≥150	2.45 (1.35-4.45)	5.50 (1.71-17.7)	1.90 (1.10-3.28)	1.75 (0.18-17.6)

B. Age

SBP mmHg	DM (-)		DM (+)	
	< 45 years old	≥ 45 years old	< 45 years old	≥ 45 years old
	(n=127958) (dialysis=41)	(n=113670) (dialysis=72)	(n=4249) (dialysis=13)	(n=12997) (dialysis=63)
	HR (95% CI)			
<110/ ≥110	1.05 (0.45-2.47)	0.91 (0.46-1.79)	0.31 (0.06-1.54)	3.44 (0.47-25.1)
<115/ ≥115	1.47 (0.67-3.25)	1.17 (0.65-2.14)	0.66 (0.13-3.20)	2.55 (0.79-8.22)
<120/ ≥120	1.34 (0.65-2.75)	1.02 (0.60-1.71)	0.79 (0.20-3.07)	1.82 (0.82-4.03)
<125/ ≥125	1.58 (0.78-3.17)	1.19 (0.72-1.94)	1.02 (0.29-3.56)	1.94 (1.00-3.76)
<130/ ≥130	1.59 (0.78-3.25)	1.20 (0.73-1.95)	0.45 (0.14-1.51)	1.87 (1.07-3.26)
<140/ ≥140	2.78 (1.25-6.17)	1.66 (0.96-2.87)	0.68 (0.18-2.66)	1.67 (1.00-2.77)
<150/ ≥150	3.83 (1.52-9.64)	2.36 (1.25-4.47)	0.47 (0.06-3.75)	2.19 (1.26-3.82)

C. Body mass index

SBP mmHg	DM (-)		DM (+)	
	BMI <24	BMI ≥24	BMI <24	BMI ≥24
	(n=169273) (dialysis=65)	(n=72355) (dialysis=48)	(n=6072) (dialysis=20)	(n=11174) (dialysis=56)
HR (95% CI)				
<110/≥110	1.07 (0.57-2.04)	0.55 (0.23-1.33)	1.83 (0.24-14.1)	1.00 (0.23-4.00)
<115/≥115	1.53 (0.84-2.78)	0.73 (0.35-1.53)	1.06 (0.30-3.73)	2.57 (0.62-10.6)
<120/≥120	1.30 (0.76-2.22)	0.75 (0.39-1.42)	1.88 (0.53-6.60)	1.25 (0.57-2.79)
<125/≥125	1.35 (0.80-2.29)	1.09 (0.59-2.00)	1.78 (0.62-5.07)	1.56 (0.78-3.11)
<130/≥130	1.15 (0.66-2.01)	1.36 (0.75-2.46)	1.49 (0.59-3.81)	1.35 (0.76-2.39)
<140/≥140	1.73 (0.90-3.33)	1.98 (1.07-3.67)	1.60 (0.62-4.15)	1.32 (0.77-2.27)
<150/≥150	1.98 (0.87-4.51)	3.26 (1.65-6.43)	1.81 (0.59-5.59)	1.74 (0.95-3.17)

Baseline variables for predictors of dialysis adjusted by smoking, medication for hypertension, LDL-C, and HDL-C.

HR: hazard ratio; SBP: systolic blood pressure; BMI: body mass index; LDL-C: low-density lipoprotein cholesterol; HDL-C: high-density lipoprotein cholesterol

(A) Adjusted for age, smoking, medication for hypertension, BMI, LDL-C, HDL-C and SBP (≥110 or ≥115 or ≥120 or ≥125 or ≥130 or ≥140 or ≥150 mmHg). In the DM group, additional adjustments were made for + medication for diabetes. (B) Adjusted for sex, smoking, medication for hypertension, BMI, LDL-C, HDL-C and SBP (≥110 or ≥115 or ≥120 or ≥125 or ≥130 or ≥140 or ≥150 mmHg). In the DM group, additional adjustments were made for + medication for diabetes. (C) Adjusted for age, sex, smoking, medication for hypertension, LDL-C, HDL-C and SBP (≥110 or ≥115 or ≥120 or ≥125 or ≥130 or ≥140 or ≥150 mmHg). In the DM group, additional adjustments were made for + medication for diabetes.

Table S6-1. Cox regression analysis of variables for the incidence of dialysis in participants with and without diabetes mellitus (DM)

	Total	DM (-)	DM (+)
	HR (95% CI)		
Diabetes	3.41		
	(2.45-4.76)		
SBP mmHg			
<110/≥110		0.98 (0.57-1.66)	1.37 (0.43-4.42)
<115/≥115		1.30 (0.81-2.11)	1.82 (0.73-4.55)
<120/≥120		1.14 (0.75-1.75)	1.52 (0.77-2.99)
<125/≥125		1.34 (0.89-2.01)	1.72 (0.97-3.07)
<130/≥130		1.35 (0.90-2.02)	1.48 (0.91-2.41)
<140/≥140		2.01 (1.28-3.16)	1.48 (0.92-2.38)
<150/≥150		2.82 (1.67-4.77)	1.87 (1.10-3.18)

Baseline variables for predictors of dialysis adjusted by age, sex, smoking, medication for hypertension, BMI, LDL-C, and HDL-C.

HR: hazard ratio; SBP: systolic blood pressure; BMI: body mass index; LDL-C: low-density lipoprotein cholesterol; HDL-C: high-density lipoprotein cholesterol

(total) Adjusted for age, sex, smoking, medication for hypertension, BMI, LDL-C, HDL-C, and DM; (non-DM) Adjusted for age, sex, smoking, medication for hypertension, BMI, LDL-C, HDL-C, and SBP (≥110 or ≥115 or ≥120 or ≥125 or ≥130 or ≥140 or ≥150 mmHg); (DM) Adjusted for age, sex, smoking, medication for hypertension, medication for diabetes, BMI, LDL-C, HDL-C, and SBP (≥110 or ≥115 or ≥120 or ≥125 or ≥130 or ≥140 or ≥150 mmHg)

Table S6-2. Cox regression analysis of variables for the incidence of dialysis in participants with and without diabetes mellitus (DM)

	Total	DM (-)	DM (+)
	HR (95% CI)		
Diabetes	2.55 (1.63-3.99)		
SBP mmHg			
<110/≥110		0.97 (0.57-1.66)	0.87 (0.27-2.84)
<115/≥115		1.30 (0.80-2.11)	1.21 (0.48-3.09)
<120/≥120		1.14 (0.75-1.75)	1.33 (0.62-2.84)
<125/≥125		1.34 (0.89-2.02)	1.67 (0.85-3.27)
<130/≥130		1.35 (0.90-2.04)	1.32 (0.75-2.33)
<140/≥140		2.03 (1.29-3.20)	1.58 (0.91-2.75)
<150/≥150		2.85 (1.68-4.82)	2.05 (1.11-3.78)

Baseline variables for predictors of dialysis adjusted by age, sex, smoking, medication for hypertension, BMI, LDL-C, and HDL-C.

HR: hazard ratio; SBP: systolic blood pressure; BMI: body mass index; LDL-C: low-density lipoprotein cholesterol; HDL-C: high-density lipoprotein cholesterol; TG: triglycerides; FPG: fasting plasma glucose

(total) Adjusted for age, sex, smoking, medication for hypertension, BMI, LDL-C, HDL-C, TG, FPG, and DM; (non-DM) Adjusted for age, sex, smoking, medication for hypertension, BMI, LDL-C, HDL-C, TG, FPG, and SBP (≥110 or ≥115 or ≥120 or ≥125 or ≥130 or ≥140 or ≥150 mmHg); (DM) Adjusted for age, sex, smoking, medication for hypertension, medication for diabetes, BMI, LDL-C, HDL-C, TG, FPG, and SBP (≥110 or ≥115 or ≥120 or ≥125 or ≥130 or ≥140 or ≥150 mmHg)

Table S7-1. HRs for initiation of dialysis according to combinations of DM and SBP

SBP mmHg	DM (-)	DM (+)
	HR (95% CI)	
≤119	1.00 (Ref.)	1.00 (Ref.)
120-129	0.98 (0.58-1.64)	1.23 (0.56-2.72)
130-139	0.94 (0.52-1.67)	1.46 (0.68-3.16)
140-149	1.28 (0.63-2.61)	1.37 (0.57-3.28)
≥150	2.87 (1.55-5.32)	2.41 (1.09-5.33)
≤119	1.00 (Ref.)	3.01 (1.45-6.25)
120-129	0.97 (0.58-1.62)	3.70 (1.96-7.00)
130-139	0.95 (0.54-1.68)	4.26 (2.32-7.81)
140-149	1.31 (0.65-2.65)	3.94 (1.89-8.19)
≥150	3.00 (1.65-5.44)	6.88 (3.66-12.9)

HR for initiation of dialysis compared with the combination of DM (-) and SBP ≤119 mmHg /DM (+) and SBP ≤119 mmHg as the reference group. Baseline variables as predictors for dialysis adjusted by age, sex, smoking, medication for hypertension, BMI, LDL-C, and HDL-C. In the DM group, additional adjustments were made for + medication for diabetes.

HR: hazard ratio; DM: diabetes mellitus; SBP: systolic blood pressure; BMI: body mass index; LDL-C: low-density lipoprotein cholesterol; and HDL-C: high-density lipoprotein cholesterol

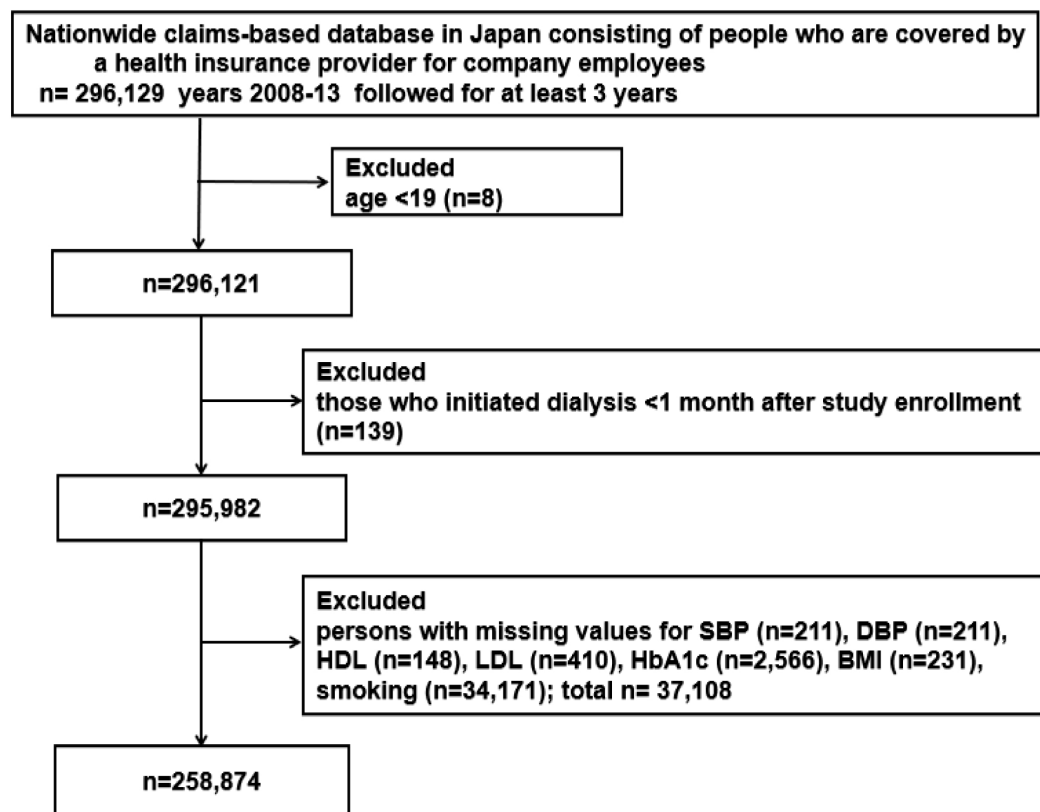
Table S7-2. HRs for initiation of dialysis according to combinations of DM and SBP

SBP mmHg	DM (-)	DM (+)
	HR (95% CI)	
≤119	1.00 (Ref.)	1.00 (Ref.)
120-129	0.98 (0.58-1.65)	1.14 (0.47-2.80)
130-139	0.94 (0.53-1.69)	1.13 (0.46-2.75)
140-149	1.30 (0.63-2.66)	1.21 (0.45-3.30)
≥150	2.91 (1.56-5.43)	2.30 (0.94-5.64)
≤119	1.00 (Ref.)	2.33 (1.01-5.34)
120-129	0.93 (0.56-1.55)	2.77(1.31-5.84)
130-139	0.88 (0.50-1.56)	2.71 (1.29-5.69)
140-149	1.19 (0.59-2.40)	2.94 (1.23-7.01)
≥150	2.69 (1.47-4.90)	5.67 (2.67-12.0)

HR for initiation of dialysis compared with the combination of DM (-) and SBP ≤119 mmHg /DM (+) and SBP ≤119 mmHg as the reference group. Baseline variables as predictors for dialysis adjusted by age, sex, smoking, medication for hypertension, BMI, LDL-C, HDL-C, TG, and FPG. In the DM group, additional adjustments were made for + medication for diabetes.

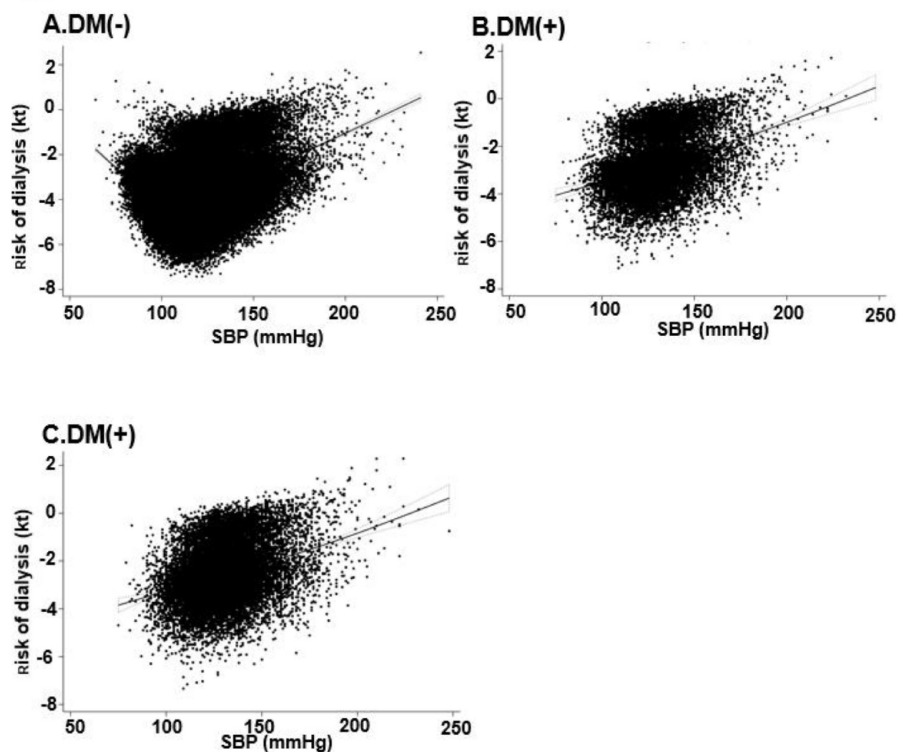
HR: hazard ratio; DM: diabetes mellitus; SBP: systolic blood pressure; BMI: body mass index; LDL-C: low-density lipoprotein cholesterol; HDL-C: high-density lipoprotein cholesterol; TG: triglycerides; and FPG: fasting plasma glucose

Figure S1



Inclusion-exclusion criteria and sample size

Figure S2



Cubic regression spline curves for the risk of dialysis according to SBP in participants with and without DM

Three knots were set at the 25, 50, and 75 percentiles of SBP.

(A) Knots existed at 108, 118, and 128 mmHg of SBP. Risk of dialysis according to SBP adjusted by age, sex, BMI, smoking, LDL cholesterol, HDL cholesterol, and medication for hypertension in participants without DM; (B) Knots existed at 120, 129, and 140 mmHg of SBP. Risk of dialysis according to SBP adjusted by age, sex, BMI, smoking, LDL cholesterol, HDL cholesterol, and medication for hypertension in participants with DM; and (C) Knots existed at 120, 129, and 140 mmHg of SBP. Risk of dialysis according to SBP adjusted by age, sex, BMI, smoking, LDL cholesterol, HDL cholesterol, medication for hypertension, and medication for diabetes in participants with DM. BMI: body mass index; SBP: systolic blood pressure; LDL cholesterol: low-density lipoprotein cholesterol; HDL cholesterol: high-density lipoprotein cholesterol