

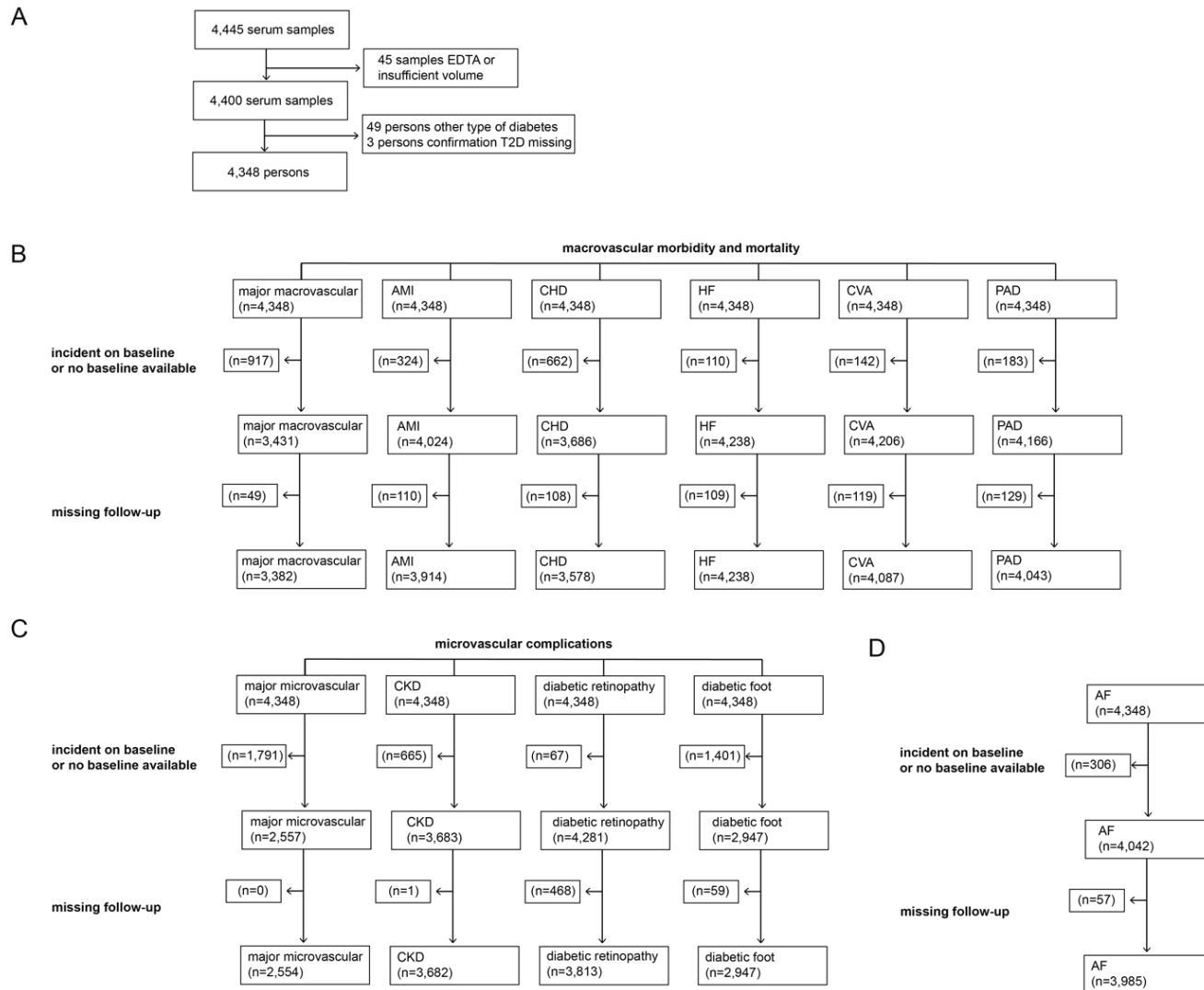
## SUPPLEMENTARY FIGURES AND TABLES

Supplementary table 1. Macro- and microvascular incidents during follow-up per Mg<sup>2+</sup> quartile.

		Quartile 1	Quartile 2	Quartile 3	Quartile 4
		Mg <sup>2+</sup> <0.75	Mg <sup>2+</sup> 0.75-0.80	Mg <sup>2+</sup> 0.80-0.85	Mg <sup>2+</sup> ≥ 0.80
Major macrovascular (AMI, CHD, HF, CVA, PAD)	Yes	110 (12.3)	79 (9.3)	72 (8.3)	67 (8.1)
	No	787 (87.7)	766 (90.7)	794 (91.7)	756 (91.5)
	Not registered	0 (0)	0 (0)	0 (0)	0 (0)
AMI	Yes	31 (2.9)	17 (1.7)	26 (2.5)	17 (1.8)
	No	1,017 (96.0)	952 (97.0)	994 (95.5)	921 (96.5)
	Not registered	11 (1.0)	12 (1.2)	10 (1.0)	16 (1.7)
CHD	Yes	57 (5.9)	35 (3.9)	41 (4.4)	36 (4.1)
	No	904 (93.0)	854 (94.8)	884 (94.5)	826 (94.1)
	Not registered	11 (1.1)	12 (1.3)	10 (1.1)	16 (1.8)
HF	Yes	58 (5.2)	37 (3.6)	30 (2.7)	30 (3.0)
	No	1,055 (93.9)	973 (95.2)	1,061 (96.4)	945 (95.4)
	Not registered	11 (1.0)	12 (1.2)	10 (0.9)	16 (1.6)
CVA	Yes	43 (3.9)	25 (2.5)	26 (2.4)	24 (2.4)
	No	1,060 (95.2)	978 (96.4)	1,043 (96.7)	958 (96.0)
	Not registered	11 (1.0)	12 (1.2)	10 (0.9)	16 (1.6)
PAD	Yes	33 (3.0)	28 (2.8)	29 (2.7)	23 (2.3)
	No	1,050 (96.0)	966 (96.0)	1,047 (96.4)	940 (96.0)
	Not registered	11 (1.0)	12 (1.2)	10 (0.9)	16 (1.6)
AF	Yes	69 (6.5)	38 (3.9)	30 (2.8)	20 (2.1)
	No	990 (93.5)	936 (96.1)	1030 (97.2)	929 (97.9)
	Not registered	0 (0)	0 (0)	0 (0)	0 (0)
Major microvascular	Yes	368 (58.7)	316 (49.4)	323 (47.5)	278 (45.6)
	No	259 (41.3)	324 (50.6)	357 (52.5)	332 (54.4)
	Not registered	0 (0)	0 (0)	0 (0)	0 (0)
CKD	Yes	361 (37.5)	267 (28.9)	263 (27.2)	202 (24.3)
	No	600 (62.4)	667 (71.1)	703 (72.8)	629 (75.7)
	Not registered	1 (0.1)	0 (0)	0 (0)	0 (0)

Diabetic retinopathy	Yes	45 (4.0)	36 (3.5)	18 (1.6)	15 (1.5)
	No	959 (85.0)	898 (87.1)	989 (88.7)	864 (85.8)
	Not registered	124 (11.0)	97 (9.4)	108 (9.7)	128 (12.7)
Diabetic foot	Yes	336 (45.3)	268 (38.1)	287 (37.0)	256 (35.3)
	No	405 (54.7)	436 (61.9)	489 (63.0)	470 (64.7)
	Not registered	0 (0)	0 (0)	0 (0)	0 (0)

*Incidents registered in n (%). Morbidity and mortality or complications that are registered after the inclusion date. AF= atrial fibrillation. AMI= acute myocardial infarction, CHD= coronary heart disease, CKD= chronic kidney disease, CVA= cerebrovascular accident, HF= heart failure, Mg<sup>2+</sup>= magnesium, PAD= peripheral arterial disease.*



Supplementary figure 1. Flowchart of (A) sample exclusion and flowcharts of the persons excluded for (B) macrovascular disease and mortality, (C) microvascular complications and (D) AF Cox regression analysis. AF=atrial fibrillation, AMI= acute myocardial infarction, CHD= coronary heart disease, CKD= chronic kidney disease, CVA= cerebrovascular accident, HF= heart failure, PAD= peripheral arterial disease.

Supplementary table 2. Sensitivity Cox regression analyses in the linear association of Mg<sup>2+</sup> with macrovascular disease and mortality, AF, and microvascular complications.

	Main model 2 <sup>1</sup>		Adjusting for AF at baseline		Adjusting for migration background, BMI, serum creatinine		Separating medication <sup>2</sup>		Exclusion of Mg <sup>2+</sup> supplement use <sup>3</sup>	
	HR (95% CI)	P-value	HR (95% CI)	P-value	HR (95% CI)	P-value	HR (95% CI)	P-value	HR (95% CI)	P-value
Major macrovascular (AMI, CHD, HF, CVA, PAD)	0.87 (0.76-1.00)	0.054	0.88 (0.76-1.01)	0.077	0.87 (0.75-1.00)	0.052	0.87 (0.75-1.00)	0.049	0.87 (0.76-1.01)	0.060
AMI	0.89 (0.68-1.17)	0.402	0.90 (0.69-1.18)	0.448	0.90 (0.68-1.17)	0.442	0.91 (0.70-1.19)	0.489	0.89 (0.68-1.17)	0.406
CHD	0.97 (0.79-1.18)	0.733	0.97 (0.80-1.19)	0.797	0.95 (0.77-1.16)	0.588	0.97 (0.79-1.18)	0.761	0.96 (0.79-1.18)	0.704
HF	0.76 (0.62-0.93)	0.008	0.78 (0.64-0.95)	0.015	0.77 (0.63-0.95)	0.012	0.74 (0.60-0.90)	0.003	0.76 (0.62-0.93)	0.008
CVA	0.83 (0.66-1.04)	0.105	0.83 (0.66-1.05)	0.113	0.83 (0.66-1.05)	0.115	0.85 (0.67-1.07)	0.165	0.82 (0.65-1.04)	0.104
PAD	1.02 (0.80-1.30)	0.880	1.03 (0.80-1.31)	0.837	0.97 (0.76-1.23)	0.774	1.01 (0.79-1.29)	0.926	1.02 (0.80-1.31)	0.870
AF	0.59 (0.49-0.72)	<0.001	-	-	0.60 (0.50-0.73)	<0.001	0.59 (0.48-0.71)	<0.001	0.59 (0.49-0.72)	<0.001

Major microvascular (CKD, diabetic retinopathy, diabetic foot) <sup>4</sup>	0.85 (0.78-0.91)	<0.001	0.85 (0.78-0.91)	<0.001	0.84 (0.78-0.90)	<0.001	0.86 (0.80-0.93)	<0.001	0.84 (0.78-0.91)	<0.001
CKD <sup>4</sup>	0.89 (0.82-0.96)	0.003	0.89 (0.82-0.96)	0.005	0.88 (0.81-0.95)	0.001	0.89 (0.82-0.97)	0.008	0.89 (0.82-0.96)	0.003
Diabetic retinopathy <sup>4</sup>	0.77 (0.61-0.98)	0.031	0.77 (0.62-0.98)	0.035	0.79 (0.63-1.00)	0.057	0.78 (0.61-0.99)	0.038	0.78 (0.61-0.98)	0.035
Diabetic foot <sup>4</sup>	0.85 (0.78-0.92)	<0.001	0.85 (0.78-0.92)	<0.001	0.84 (0.78-0.91)	<0.001	0.86 (0.80-0.93)	<0.001	0.84 (0.78-0.91)	<0.001

<sup>1</sup>Main model 2= age, sex, duration of diabetes (years), SBP (mmHg), TG (mmol/L), LDL cholesterol (mmol/L), albumin/creatinine ratio (mg/mmol), education (low, medium, high), smoking (current, former, never), glucose-lowering drugs (yes/no) and CVD medication (yes/no), <sup>2</sup>Separating medication= insulin use (A10A), glucose-lowering drugs excluding insulins (A10B), antihypertensives (C02), diuretics (C03), and rest CVD medication (C01, C04, C05, C08, C09), <sup>3</sup>Exclusion of Mg<sup>2+</sup> supplement use= 25 people using a type of Mg<sup>2+</sup> excluded from the analysis. Major macrovascular (n=3,361); AMI (n=3,889); CHD (n=3,554); HF (n=4,105); CVA (n=4,062); PAD (n=4,020); AF (n=3,961); major microvascular (n=2,547); CKD (n=3,662); diabetic retinopathy (n=3,792); diabetic foot (n=2,874). <sup>4</sup>CKD is defined as an eGFR<60 mL/min/1.73m<sup>2</sup>, diabetic retinopathy is grade ≥2 and diabetic foot complications grade ≥1. Major macrovascular (n=3,382); AMI (n=3,914); CHD (n=3,578); HF (n=4,129); CVA (n=4,087); PAD (n=4,043); AF (n=3,985); major microvascular (n=2,557); CKD (n=3,682); diabetic retinopathy (n=3,813); diabetic foot (n=2,888). <sup>4</sup>AF= atrial fibrillation, AMI= acute myocardial infarction, CHD= coronary heart disease, CI= confidence interval, CKD= chronic kidney disease, CVA= cerebrovascular accident, CVD= cardiovascular, HF= heart failure, HR= hazard ratio, Mg<sup>2+</sup>= magnesium, PAD= peripheral arterial disease.