

## Supplementary table

**Supplementary Table 1 Factors used in classification and regression trees analysis**

1	A1C	Hemoglobin A1C, %
2	AGE	Age, years
3	albgp2	serum albumin ( $\geq 3.5$ vs $< 3.5$ )
4	Anemia	Yes/no
5	armgp	mid-arm circumference, cm
6	BMI	Body mass index, $\text{kg}/\text{m}^2$
7	BUP	Serum blood urea nitrogen (mg/dL)
8	C1P	Serum C-peptide (pmol/mL)
9	CHOLEHEI	Cholesterol, healthy eating index (HEI) score (0-10)
10	CRP	Serum C-reactive protein (mg/dL)
11	DAIRYHEI	Dairy, healthy eating index (HEI) score (0-10)
12	DBP	Diastolic blood pressure
13	DMGP2	history of diabetes
14	DRINK	Alcohol consumption
15	EDU	education, years
16	EXER1	Physical activity
17	FATHEI	Fats, HEI score (0-10)
18	FOP	Serum folate (ng/mL)
19	FRUITHEI	Fruits, HEI score (0-10)
20	GFR	Glomerular filtration rate
21	GLU_P	glucose
22	GRAINHEI	Grains, HEI score (0-10)
23	HDL	High-density lipoprotein cholesterol
24	I1P	Serum insulin ( $\mu\text{U}/\text{mL}$ )
25	MEATHEI	Meats, healthy eating index (HEI) score (0-10)
26	poverty	% of poverty
27	PSP	Serum phosphorus (mg/dL)
28	RACEGP	race/ethnicity
29	RBP	Red blood cell folate (ng/mL)
30	RCP	Red blood cell count
31	region	USA census region: west, Mideast, south, and northeast.
32	RWP	Red cell distribution width (%)
33	SBP	Systolic blood pressure, mmHg
34	Sex	1 = males, 2 = females
35	SMIgp2	skeletal muscle index
36	SODIUHEI	Sodium, HEI score (0-10)
37	syear	Follow-up, year
38	T4P	Serum thyroxine ( $\mu\text{g}/\text{dL}$ )
39	TBP	Serum total bilirubin (mg/dL)
40	TG	Triglyceride
41	UAP	Serum uric acid (mg/dL)
42	UBP	Urinary albumin ( $\mu\text{g}/\text{mL}$ )
43	VCP	Serum vitamin C (mg/dL)
44	VEGETHEI	Vegetables, HEI score (0-10)
45	VEP	Serum vitamin E ( $\mu\text{g}/\text{dL}$ )

46	WAIST	Waist circumference, CM
	vdp_c	serum 25(OH)D, ng/mL
	vdpgp2	serum 25(OH)D in 2 group
	vdpgp3	serum 25(OH)D in 3 group
	MetS	Yes/no