SUPPLEMENTAL MATERIAL

Supplementary Tables:

Table S1 Association between CMI and stroke in male and female (Cox regression)

Characteristic	Case/Event	Hazard ratio (95% CI)			
		Crude	**Model 1**	**Model 2**	**Model 3**
CMI tertile (Male)	2413/162	—	—	—	—
T1	804/66	ref	ref	ref	ref
T2	803/58	0.88 (0.62, 1.25)	0.93 (0.65, 1.13)	0.96 (0.67, 1.38)	0.99 (0.69, 1.43)
T3	806/38	0.55 (0.37, 0.82) *	0.65 (0.43, 0.95) *	0.66 (0.43, 0.85) *	0.63 (0.41, 0.90) *
P for trend		0.012	0.041	0.037	0.031
CMI tertile (Female)	2709/166	—	—	—	—
T1	900/71	ref	ref	ref	ref
T2	906/52	0.72 (0.50, 1.03)	0.79 (0.55, 1.13)	0.85 (0.59, 1.22)	0.87 (0.60, 1.25)
T3	903/43	0.58 (0.39, 0.84) *	0.71 (0.48, 1.00)	0.71 (0.48, 0.95) *	0.64 (0.42, 0.96) *
P for trend		0.013	0.055	0.041	0.035

Crude: unadjusted;

Model 1: adjusted for age and BMI;

Model 2: adjusted for age, BMI, education level, marry status, rural hukou, smoking history, SBP, hypertension, diabetes, dyslipidemia, and kidney disease;

Model 3: adjusted for age, BMI, education level, marry status, rural hukou, smoking history, SBP, hypertension, diabetes, dyslipidemia, kidney disease, WBC, Hb, PLT, FBG, TC, TG, HDL, and CRP;

T1, the first tertile; T2, the second tertile; T3, the third tertile; CMI, creatinine muscle index; BMI, body mass index; SBP, systolic blood pressure; WBC, white blood cell; Hb, hemoglobin; PLT, platelet; FBG, fasting blood glucose; TC, total cholesterol; TG, triglyceride; HDL, high-density lipoprotein; CRP, C-reactive protein; CI, confidence interval; ref, reference;

* $P < 0.05$; ** $P < 0.01$; *** $P < 0.001$.

Table S2 Association between CMI and heart disease in male and female (Cox regression)

Characteristic	Case/Event	Hazard ratio (95% CI)			
		Crude	**Model 1**	**Model 2**	**Model 3**
CMI tertile (Male)	2413/331	—	—	—	—
T1	804/126	ref	ref	ref	ref
T2	803/113	0.89 (0.69, 1.15)	0.92 (0.71, 1.19)	0.92 (0.71, 1.20)	0.90 (0.69, 1.16)
T3	806/92	0.71 (0.54, 0.93) *	0.80 (0.60, 1.05)	0.78 (0.59, 1.03)	0.75 (0.56, 1.01)
P for trend		0.040	0.116	0.008	0.056
CMI tertile (Female)	2709/532	—	—	—	—
T1	900/199	ref	ref	ref	ref
T2	906/179	0.89 (0.73, 1.09)	0.93 (0.76, 1.14)	0.94 (0.77, 1.15)	0.93 (0.76, 1.15)
T3	903/154	0.74 (0.60, 0.91) *	0.83 (0.67, 1.03)	0.81 (0.65, 1.02)	0.79 (0.63, 0.99) *
P for trend		0.018	0.095	0.071	0.048

Crude: unadjusted;

Model 1: adjusted for age and BMI;

Model 2: adjusted for age, BMI, education level, marry status, rural hukou, smoking history, SBP, hypertension, diabetes, dyslipidemia, and kidney disease;

Model 3: adjusted for age, BMI, education level, marry status, rural hukou, smoking history, SBP, hypertension, diabetes, dyslipidemia, kidney disease, WBC, Hb, PLT, FBG, TC, TG, HDL, and CRP;

T1, the first tertile; T2, the second tertile; T3, the third tertile; CMI, creatinine muscle index; BMI, body mass index; SBP, systolic blood pressure; WBC, white blood cell; Hb, hemoglobin; PLT, platelet; FBG, fasting blood glucose; TC, total cholesterol; TG, triglyceride; HDL, high-density lipoprotein; CRP, C-reactive protein; CI, confidence interval; ref, reference;

$^{*}P < 0.05$; $^{**}P < 0.01$; $^{***}P < 0.001$.

Table S3 Subgrop analysis of CMI tertile and stroke in male and female

Subgroups	Male, *N*=2413						Female, *N*=2709					
	Case	Hazard ratio (95%CI) *P*-value			*P* trend	*P* for interaction	Case	Hazard ratio (95%CI) *P*-value			*P* trend	*P* for interaction
		T1	T2	T3				T1	T2	T3		
Age, years												
45-54	1059	ref	0.664(0.313-1.406) 0.284	0.596 (0.286-1.240) 0.166	0.352	0.280	1315	ref	0.882(0.475-1.640) 0.693	0.477 (0.251-0.907) 0.024	0.052	0.556
55-65	1354	ref	1.068 (0.710-1.606) 0.751	0.642 (0.384-1.073) 0.091	0.140		1394	ref	0.820 (0.498-1.350) 0.435	0.765 (0.485-1.206) 0.248	0.275	
Education level												
Primary school or lower	1299	ref	1.124 (0.699-1.806) 0.630	0.645 (0.357-1.166) 0.147	0.170	0.568	1992	ref	0.997 (0.664-1.496) 0.988	0.900 (0.570-1.421) 0.652	0.887	0.416
Advanced school or higher	1114	ref	0.813 (0.467-1.415) 0.463	0.650 (0.361-1.169) 0.150	0.352		717	ref	0.561 (0.240-1.311) 0.182	0.273 (0.118-0.631) 0.002	0.010	
Marry status												
Others	151	ref	1.044 (0.555-12.126) 0.226	0.714 (0.098-11.158) 0.971	0.430	0.641	222	ref	0. 660(0.175-2.489) 0.539	0.512 (0.129-2.038) 0.342	0.112	0.659
Married	2262	ref	0.940 (0.643-1.375) 0.751	0.639 (0.415-0.984) 0.042	0.101		2487	ref	0.926 (0.634-1.354) 0.692	0.730 (0.477-1.118) 0.148	0.341	
Rural hukou												
No	853	ref	0.983 (0.539-1.792) 0.954	0.548 (0.276-1.086) 0.085	0.161	0.842	1006	ref	1.065 (0.534-2.126) 0.857	0.784 (0.489-2.085) 0.987	0.981	0.385
Yes	1560	ref	1.015 (0.643-1.604) 0.947	0.718 (0.425-1.211) 0.214	0.371		1703	ref	0.773 (0.499-1.197) 0.248	0.560 (0.336-0.9933) 0.026	0.078	
BMI, kg/m^2												
<24	1671	ref	1.041 (0.641-1.689) 0.871	0.769 (0.438-1.351) 0.361	0.546	0.862	1558	ref	0.743 (0.441-1.254) 0.266	0.551 (0.317-0.957) 0.034	0.099	0.960
≥24	742	ref	0.897 (0.525-1.534) 0.691	0.504 (0.273-0.929) 0.028	0.074		1151	ref	0.923(0.555-1.534) 0.756	0.797 (0.449-1.413) 0.437	0.738	
Diabetes												
No	2286	ref	0.919 (0.634-1.331) 0.654	0.570 (0.367-0.888) 0.013	0.036	0.418	2541	ref	0.902 (0.616-1.322) 0.599	0.722 (0.468-1.112) 0.140	0.335	0.617
Yes	127	ref	1.409 (0.289-6.878) 0.672	0.896 (0.671-2.241) 0.672	0.529		168	ref	0.530(0.163-1.727) 0.292	0.500 (0.158-1.583) 0.239	0.432	
Hypertension												
No	1934	ref	0.974 (0.596-1.591) 0.916	0.717 (0.411-1.249) 0.240	0.446	0.873	2122	ref	0.744 (0.461-1.200) 0.226	0.718 (0.426-1.208) 0.212	0.340	0.544
Yes	479	ref	0.930 (0.541-1.598) 0.793	0.499 (0.260-0.956) 0.036	0.090		587	ref	0.964 (0.552-1.682) 0.896	0.616 (0.335-1.133) 0.119	0.251	
Dyslipidemia												
No	2216	ref	1.011 (0.678-1.506) 0.958	0.673 (0.422-1.073) 0.096	0.175	0.969	2463	ref	0.740 (0.494-1.108) 0.144	0.624 (0.395-0.987) 0.044	0.100	0.276
Yes	197	ref	1.258 (0.515-3.074) 0.614	0.600 (0.233-1.541) 0.289	0.298		246	ref	1.077 (0.424-2.735) 0.876	0.802 (0.598-3.702) 0.393	0.578	
Kidney disease												
No	2272	ref	1.035 (0.709-1.510) 0.859	0.652 (0.421-1.009) 0.055	0.081	0.677	2581	ref	0.858 (0.592-1.245) 0.421	0.641 (0.422-0.974) 0.037	0.114	0.618
Yes	141	ref	1.136 (0.213-6.070) 0.882	0.773 (0.180-3.313) 0.729	0.905		128	ref	0.552 (0.069-4.433) 0.576	0.457 (0.054-3.879) 0.476	0.211	

The cox regression analyses were adjusted for age, BMI, education level, marry status, rural hukou, smoking history, SBP, hypertension, diabetes, dyslipidemia, kidney disease, WBC, Hb, PLT, FBG, TC, TG, HDL, and CRP. T1, the first tertile; T2, the second tertile; T3, the third tertile; CMI, creatinine muscle index; CVD, cardiovascular disease; BMI, body mass index; SBP, systolic blood pressure; WBC, white blood cell; Hb, hemoglobin; PLT, platelet; FBG, fasting blood glucose; TC, total cholesterol; TG, triglyceride; HDL, high-density lipoprotein; CRP, C-reactive protein; CI, confidence interval; ref, reference.

Table S4 Subgrop analysis of CMI tertile and heart disease in male and female

	Male, *N*=2413						Female, *N*=2709					
Subgroups	**Case**	**Hazard ratio (95%CI) *P*-value**			***P* trend**	***P* for interaction**	**Case**	**Hazard ratio (95%CI) *P*-value**			***P* trend**	***P* for interaction**
		Q1	**Q2**	**Q3**				**Q1**	**Q2**	**Q3**		
Age, years												
45-54	1059	ref	0.759(0.468-1.232) 0.264	0.610 (0.379-0.980) 0.041	0.124	0.595	1315	ref	0.931(0.712-1.220) 0.934	0.828 (0.589-1.164) 0.278	0.466	0.748
55-65	1354	ref	0.901 (0.664-1.221) 0.501	0.740 (0.552-1.048) 0.090	0.237		1394	ref	0.926 (0.720-1.191) 0.551	0.771 (0.571-1.039) 0.088	0.233	
Education level												
Primary school or lower	1299	ref	0.863 (0.620-1.202) 0.384	0.732 (0.499-1.073) 0.110	0.271	0.681	1992	ref	0.965(0.763-1.219) 0.763	0.847 (0.651-1.102) 0.216	0.450	0.501
Advanced school or higher	1114	ref	0.981 (0.643-1.498) 0.931	0.820 (0.526-1.279) 0.381	0.612		717	ref	0.857 (0.559-1.315) 0.480	0.650 (0.428-0.987) 0.043	0.114	
Marry status												
Others	151	ref	1.287 (0.501-3.306) 0.600	0.625 (0.147-2.656) 0.525	0.605	0.481	222	ref	0.519 (0.239-1.126) 0.097	0.622 (0.307-1.267) 0.186	0.186	0.299
Married	2262	ref	0.890 (0.680-1.165) 0.395	0.771 (0.576-1.032) 0.080	0.217		2487	ref	0.983 (0.794-1.217) 0.874	0.786 (0.620-0.997) 0.047	0.093	
Rural hukou												
No	853	ref	1.091 (0.681-1.747) 0.717	0.742 (0.445-1.236) 0.252	0.252	0.786	1006	ref	0.807 (0.573-1.138) 0.222	0.698 (0.497-0.980) 0.038	0.111	0.750
Yes	1560	ref	0.795 (0.580-1.089) 0.154	0.760 (0.538-1.074) 0.119	0.208		1703	ref	1.017 (0.789-1.311) 0.897	0.855 (0.644-1.134) 0.276	0.429	
BMI, kg/m^2												
<24	1671	ref	0.832 (0.596-1.162) 0.281	0.791 (0.548-1.143) 0.212	0.379	0.126	1558	ref	1.156 (0.867-1.541) 0.322	0.884 (0.644-1.214) 0.446	0.226	0.026
≥24	742	ref	1.073 (0.702-1.641) 0.745	0.784 (0.499-1.234) 0.293	0.324		1151	ref	0.756(0.565-1.011) 0.059	0.756 (0.530-0.988) 0.041	0.016	
Diabetes												
No	2286	ref	0.817 (0.625-1.069) 0.141	0.722 (0.538-0.967) 0.029	0.079	0.015	2541	ref	0.952 (0.758-1.181) 0.656	0.780 (0.616-0.988) 0.040	0.102	0.659
Yes	127	ref	1.107 (0.349-3.512) 0.862	0.966 (0.790-1.170) 0.734	0.142		168	ref	0.911(0.433-1.919) 0.807	0.867 (0.397-1.895) 0.721	0.937	
Hypertension												
No	1934	ref	0.811 (0.593-1.108) 0.188	0.648 (0.458-0.916) 0.014	0.047	0.330	2122	ref	0.999 (0.781-1.279) 0.995	0.764 (0.579-1.008) 0.057	0.091	0.422
Yes	479	ref	1.101 (0.687-1.762) 0.690	0.977 (0.590-1.616) 0.926	0.139		587	ref	0.797 (0.548-1.158) 0.234	0.883 (0.601-1.297) 0.525	0.487	
Dyslipidemia												
No	2216	ref	0.896 (0.677-1.185) 0.440	0.770 (0.564-1.052) 0.101	0.260	0.560	2463	ref	0.978 (0.787-1.216) 0.844	0.821 (0.645-1.044) 0.107	0.224	0.613
Yes	197	ref	1.189 (0.590-2.396) 0.629	0.817 (0.398-1.678) 0.582	0.527		246	ref	0.755 (0.416-1.348) 0.335	0.749 (0.428-1.330) 0.330	0.523	
Kidney disease												
No	2272	ref	0.887 (0.678-1.160) 0.382	0.741 (0.551-0.997) 0.048	0.140	0.863	2581	ref	0.922 (0.745-1.141) 0.454	0.778 (0.616-0.982) 0.036	0.103	0.464
Yes	141	ref	0.997 (0.376-2.645) 0.996	0.711 (0.211-2.397) 0.583	0.827		128	ref	1.266 (0.582-2.795) 0.525	0.833 (0.341-2.035) 0.688	0.616	

The cox regression analyses were adjusted for age, BMI, education level, marry status, rural hukou, smoking history, SBP, hypertension, diabetes, dyslipidemia, kidney disease, WBC, Hb, PLT, FBG, TC, TG, HDL, and CRP. T1, the first tertile; T2, the second tertile; T3, the third tertile; CMI, creatinine muscle index; CVD, cardiovascular disease; BMI, body mass index; SBP, systolic blood pressure; WBC, white blood cell; Hb, hemoglobin; PLT, platelet; FBG, fasting blood glucose; TC, total cholesterol; TG, triglyceride; HDL, high-density lipoprotein; CRP, C-reactive protein; CI, confidence interval; ref, reference.

STROBE Statement—Checklist of items that should be included in reports of ***cohort studies***

	Item No	Recommendation	Page No
Title and abstract	1	(*a*) Indicate the study's design with a commonly used term in the title or the abstract	
		(*b*) Provide in the abstract an informative and balanced summary of what was done and what was found	1,2
Introduction			
Background/rationale	2	Explain the scientific background and rationale for the investigation being reported	4
Objectives	3	State specific objectives, including any prespecified hypotheses	4
Methods			
Study design	4	Present key elements of study design early in the paper	4, 5
Setting	5	Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection	5, 6
Participants	6	(*a*) Give the eligibility criteria, and the sources and methods of selection of participants. Describe methods of follow-up	5
		(*b*) For matched studies, give matching criteria and number of exposed and unexposed	
Variables	7	Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable	5, 6
Data sources/ measurement	8*	For each variable of interest, give sources of data and details of methods of assessment (measurement). Describe comparability of assessment methods if there is more than one group	5, 6
Bias	9	Describe any efforts to address potential sources of bias	5
Study size	10	Explain how the study size was arrived at	5
Quantitative variables	11	Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen and why	5
Statistical methods	12	(*a*) Describe all statistical methods, including those used to control for confounding	6, 7
		(*b*) Describe any methods used to examine subgroups and interactions	
		(*c*) Explain how missing data were addressed	
		(*d*) If applicable, explain how loss to follow-up was addressed	
		(*e*) Describe any sensitivity analyses	
Results			
Participants	13*	(a) Report numbers of individuals at each stage of study—eg numbers potentially eligible, examined for eligibility, confirmed eligible, included in the study, completing follow-up, and analysed	7

		(b) Give reasons for non-participation at each stage (c) Consider use of a flow diagram	
Descriptive data	14*	(a) Give characteristics of study participants (eg demographic, clinical, social) and information on exposures and potential confounders (b) Indicate number of participants with missing data for each variable of interest (c) Summarise follow-up time (eg, average and total amount)	5, 7
Outcome data	15*	Report numbers of outcome events or summary measures over time	7
Main results	16	(*a*) Give unadjusted estimates and, if applicable, confounder-adjusted estimates and their precision (eg, 95% confidence interval). Make clear which confounders were adjusted for and why they were included (*b*) Report category boundaries when continuous variables were categorized (*c*) If relevant, consider translating estimates of relative risk into absolute risk for a meaningful time period	8
Other analyses	17	Report other analyses done—eg analyses of subgroups and interactions, and sensitivity analyses	8, 9
Discussion			
Key results	18	Summarise key results with reference to study objectives	9
Limitations	19	Discuss limitations of the study, taking into account sources of potential bias or imprecision. Discuss both direction and magnitude of any potential bias	12
Interpretation	20	Give a cautious overall interpretation of results considering objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant evidence	9-12
Generalisability	21	Discuss the generalisability (external validity) of the study results	12
Other information			
Funding	22	Give the source of funding and the role of the funders for the present study and, if applicable, for the original study on which the present article is based	16

*Give information separately for exposed and unexposed groups.

Note: An Explanation and Elaboration article discusses each checklist item and gives methodological background and published examples of transparent reporting. The STROBE checklist is best used in conjunction with this article (freely available on the Web sites of PLoS Medicine at http://www.plosmedicine.org/, Annals of Internal Medicine at http://www.annals.org/, and Epidemiology at http://www.epidem.com/). Information on the STROBE Initiative is available at http://www.strobe-statement.org.