

Supplementary Table 1. Baseline characteristics of the selected participants.

SUA/SCr ratio	Q1(0.320-3.607)	Q2(3.608-4.231)	Q3(4.232-4.958)	Q4(4.959-13.127)	P value
N	2392	2389	2394	2394	
Demographic variables					
Gender(%)					<0.0001
Male	42.879	51.924	53.734	48.413	
Female	57.121	48.076	46.266	51.587	
Age,mean±SD(years)	43.042 ± 15.366	42.094 ± 15.025	42.298 ± 15.026	41.185 ± 14.991	0.00051
Race/ethnicity(%)					<0.0001
Mexican American	5.125	7.21	8.735	14.112	
Other Hispanic	4.691	5.68	4.68	6.827	
Non-Hispanic White	72.052	71.441	72.476	64.228	
Non-Hispanic Black	13.623	10.057	7.489	6.604	
Other Race	4.509	5.613	6.62	8.229	
Poverty to income ratio, mean±SD	3.168 ± 1.633	3.127 ± 1.603	3.085 ± 1.609	2.856 ± 1.619	<0.0001
Education(%)					<0.0001
Less than high school	12.825	14.052	16.041	19.846	
High school	21.008	20.38	21.408	23.322	
More than high school	66.167	65.568	62.552	56.831	
Marital status (%)					0.00264
Married	58.711	54.312	57.083	54.01	
Single	34.107	36.643	34.744	36.151	
Living with a partner	7.182	9.046	8.173	9.839	
Medical examination and personal life history					
BMI,mean±SD	25.799 ± 4.826	27.349 ± 5.712	28.904 ± 6.373	31.051 ± 7.236	<0.0001
Physical activity(%)					<0.0001
Low	36.058	40.052	41.056	47.132	
Moderate	27.537	27.299	30.103	28.782	
High	36.405	32.649	28.84	24.086	
Had at least 12 alcohol drinks/1 year(%)					0.00585
Yes	80.02	82.383	81.832	78.853	
No	19.98	17.617	18.168	21.147	

Smoked at least 100 cigarettes in life(%)					0.05675
Yes	42.686	44.339	45.725	46.237	
No	57.314	55.661	54.275	53.763	
Foods of affecting SUA eaten during past 30 days					0.47583
Yes	72.639	72.325	71.15	70.941	
No	27.361	27.675	28.85	29.059	
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Comorbidities (%)					
Hypertension history					<0.00001
Yes	15.559	16.331	20.304	24.779	
No	84.441	83.669	79.696	75.221	
Diabetes history					<0.00001
Yes	4.55	3.606	4.679	7.168	
No	95.45	96.394	95.321	92.832	
Respiratory diseases history					0.00075
Yes	14.809	16.458	17.213	19.263	
No	85.191	83.542	82.787	80.737	
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Variables of laboratory data					
Serum phosphorus,mean±SD(mmol/L)	1.224 ± 0.184	1.204 ± 0.179	1.217 ± 0.177	1.218 ± 0.179	0.00106
Serum calcium,mean±SD(mmol/L)	2.355 ± 0.087	2.354 ± 0.087	2.353 ± 0.086	2.352 ± 0.088	0.76306
Total bilirubin,mean±SD(umol/L)	12.497 ± 5.147	13.151 ± 4.880	13.500 ± 5.537	12.939 ± 4.980	<0.00001
Total protein,mean±SD(g/L)	70.481 ± 4.322	71.169 ± 4.398	71.252 ± 4.387	71.949 ± 4.583	<0.00001
Aspartate aminotransferase,mean±SD(U/L)	24.146 ± 10.924	25.098 ± 13.032	25.829 ± 17.068	27.588 ± 15.583	<0.00001
Alkaline phosphatase,mean±SD(U/L)	61.488 ± 18.996	64.894 ± 25.117	67.035 ± 19.746	69.662 ± 21.447	<0.00001
Glycohemoglobin,mean±SD(%)	5.481 ± 0.817	5.447 ± 0.754	5.491 ± 0.692	5.579 ± 0.874	<0.00001
Total cholesterol,mean±SD(mm	4.964 ± 1.010	5.006 ± 1.034	5.090 ± 1.057	5.210 ± 1.060	<0.00001

ol/L)

Lung function parameters					
FVC, mean±SD(ml)	4227.360 ± 1016.580	4305.980 ± 1028.962	4298.983 ± 1092.570	4143.118 ± 1114.054	<0.000 01
FEV1, mean±SD(ml)	3309.628 ± 843.076	3374.720 ± 860.310	3365.087 ± 901.047	3274.566 ± 920.114	0.0001 5
FEV1/FVC, mean±SD	0.783 ± 0.077	0.784 ± 0.080	0.784 ± 0.080	0.791 ± 0.076	0.0023 3

Note: Q1–Q4: Grouped by quartile according to SUA/SCr ratios. Our data included demographic data, medical examination–personal life history, dietary, comorbidities data, and laboratory data for the second analysis.

Supplementary Table 2. The stratified analysis of the association between SUA/SCr and lung function parameters.

	FVC	FEV1	FEV1/FVC
	β (95% CI) P value	β (95% CI) P value	β (95% CI) P value
Gender			
Male	-45.312 (-70.414, -20.210) 0.0022	-35.355 (-59.381, -11.328) 0.0095	-0.001 (-0.003, 0.001) 0.3039
Female	-49.486 (-68.777, -30.195) 0.0001	-38.239 (-55.416, -21.062) 0.0003	0.001 (-0.002, 0.003) 0.4871
P for interaction	0.791	0.8353	0.1681
Age			
<40	-15.144 (-35.635, 5.347) 0.1657	-9.921 (-26.141, 6.298) 0.2470	0.000 (-0.002, 0.003) 0.7175
40–60	-63.820 (-93.218, -34.421) 0.0005	-46.045 (-75.448, -16.643) 0.0069	0.001 (-0.002, 0.005) 0.4725
>=60	-45.672 (-84.043, -7.302) 0.0322	-24.049 (-58.495, 10.398) 0.1890	0.002 (-0.003, 0.007) 0.4898
P for interaction	0.0141	0.0761	0.8435
Race/ethnicity			
Mexican American	-36.524 (-68.101, -4.947) 0.0376	-21.486 (-46.161, 3.189) 0.1072	0.002 (-0.001, 0.004) 0.1653
Other Hispanic	-22.628 (-60.452, 15.197) 0.2581	-15.736 (-48.012, 16.540) 0.3535	0.001 (-0.002, 0.004) 0.5922
Non-Hispanic White	-55.380 (-79.812, -30.948) 0.0004	-45.495 (-69.229, -21.760) 0.0017	-0.001 (-0.004, 0.002) 0.4875

Non-Hispanic Black	-25.300 (-56.338, 5.739) 0.1297	-18.889 (-43.623, 5.845) 0.1539	0.001 (-0.002, 0.004) 0.5838
Other Race	-46.466 (-114.791, 21.860) 0.2012	-26.438 (-80.327, 27.451) 0.3506	0.003 (-0.001, 0.007) 0.2072
P for interaction	0.5184	0.4616	0.411
Poverty to income ratio			
Low	-34.271 (-60.686, -7.856) 0.0210	-27.014 (-50.210, -3.819) 0.0356	0.000 (-0.002, 0.003) 0.7870
Middle	-48.710 (-75.697, -21.724) 0.0025	-34.516 (-60.390, -8.642) 0.0181	0.001 (-0.002, 0.003) 0.5994
High	-54.993 (-80.341, -29.645) 0.0005	-45.157 (-67.337, -22.977) 0.0009	-0.001 (-0.004, 0.002) 0.5327
P for interaction	0.5098	0.5314	0.6318
Education			
Less than high school	-47.846 (-79.581, -16.112) 0.0085	-38.519 (-63.341, -13.697) 0.0070	-0.001 (-0.004, 0.002) 0.5948
High school	-59.084 (-102.370, -15.797) 0.0154	-39.868 (-75.550, -4.185) 0.0419	0.001 (-0.002, 0.004) 0.5016
More than high school	-43.150 (-65.556, -20.744) 0.0014	-35.369 (-55.242, -15.496) 0.0026	-0.000 (-0.003, 0.002) 0.8110
P for interaction	0.8383	0.966	0.532
Marital status			
Married	-61.886 (-81.615, -42.158) <0.0001	-45.675 (-66.876, -24.474) 0.0005	0.000 (-0.003, 0.003) 0.9649
Single	-27.289 (-54.732, 0.153) 0.0670	-23.508 (-44.799, -2.217) 0.0441	-0.000 (-0.002, 0.002) 0.8715
Living with a partner	-44.417 (-101.071, 12.238) 0.1418	-39.595 (-80.389, 1.199) 0.0732	-0.000 (-0.006, 0.005) 0.8982
P for interaction	0.1185	0.2816	0.9857
BMI			
<24	-67.693 (-106.013, -29.374) 0.0030	-56.659 (-97.460, -15.858) 0.0145	-0.001 (-0.005, 0.004) 0.8299
24-28	-43.779 (-80.818, -6.740) 0.0333	-40.181 (-70.351, -10.011) 0.0183	-0.001 (-0.005, 0.002) 0.4905
>=28	-49.169 (-67.223, -31.114) 0.0001	-33.329 (-49.385, -17.272) 0.0008	0.001 (-0.001, 0.003) 0.4058
P for interaction	0.6486	0.4484	0.5656
Physical activity			

Low	-58.944 (-77.183, -40.706)	-42.699 (-61.114, -24.285)	0.001 (-0.002, 0.003)
	<0.0001	0.0003	0.6881
Moderate	-47.312 (-68.558, -26.066)	-37.290 (-57.471, -17.110)	0.000 (-0.003, 0.003)
	0.0004	0.0020	0.9104
High	-30.151 (-61.073, 0.770)	-27.546 (-54.238, -0.853)	-0.001 (-0.004, 0.002)
	0.0720	0.0582	0.4341
P for interaction	0.1605	0.5066	0.6423
Foods of affecting SUA eaten during past 30 days			
Yes	-49.933 (-69.503, -30.362)	-37.399 (-55.697, -19.100)	0.000 (-0.002, 0.002)
	0.0001	0.0008	0.7676
No	-42.106 (-67.458, -16.755)	-35.895 (-58.899, -12.891)	-0.001 (-0.004, 0.002)
	0.0042	0.0065	0.5348
P for interaction	0.627	0.9138	0.4445
Had at least 12 alcohol drinks/1 year			
Yes	-50.300 (-67.638, -32.963)	-38.148 (-55.449, -20.846)	-0.000 (-0.002, 0.002)
	<0.0001	0.0004	0.9478
No	-37.749 (-63.121, -12.378)	-32.549 (-52.836, -12.262)	-0.000 (-0.003, 0.003)
	0.0089	0.0053	0.9752
P for interaction	0.3626	0.6284	0.9953
Smoked at least 100 cigarettes in life			
Yes	-48.298 (-71.894, -24.703)	-39.029 (-61.529, -16.530)	-0.001 (-0.003, 0.002)
	0.0007	0.0030	0.6641
No	-47.072 (-64.976, -29.169)	-35.228 (-50.739, -19.718)	0.000 (-0.002, 0.002)
	0.0001	0.0003	0.7054
P for interaction	0.9282	0.7394	0.5088
Hypertension history			
Yes	-26.397 (-54.816, 2.021)	-25.920 (-53.299, 1.459)	-0.001 (-0.005, 0.003)
	0.0845	0.0791	0.7059
No	-53.375 (-70.485, -36.265)	-39.942 (-55.362, -24.523)	0.000 (-0.002, 0.002)
	<0.0001	0.0001	0.8961
P for interaction	0.0651	0.2693	0.6525
Diabetes history			
Yes	-70.999 (-122.748, -19.251)	-46.636 (-84.581, -8.691)	0.002 (-0.004, 0.009)
	0.0145	0.0263	0.4751
No	-45.819 (-61.471, -30.167)	-36.206 (-51.621, -20.792)	-0.000 (-0.002, 0.002)
	<0.0001	0.0002	0.7894

P for interaction	0.3344	0.5759	0.4088
Respiratory diseases history			
Yes	-63.072 (-101.827, -24.317) 0.0048	-55.249 (-88.176, -22.321) 0.0039	-0.001 (-0.004, 0.002) 0.4959
No	-44.122 (-59.773, -28.471) <0.0001	-32.801 (-47.532, -18.069) 0.0003	0.000 (-0.002, 0.002) 0.8571
P for interaction	0.3404	0.1544	0.4511

Note 1: Above adjusts for gender, age, race/ethnicity, education level, poverty income ratio, marital status, physical activity, BMI, hypertension history, diabetes history, respiratory disease history, had at least 12 alcohol drinks/1 year, smoked at least 100 cigarettes in life, foods of affecting SUA eaten during past 30 days, serum calcium, phosphorus, total bilirubin, total protein, aspartate aminotransferase, alkaline phosphatase, total cholesterol, and glycohemoglobin. Note 2: In each case, the model was not adjusted for the stratification variable itself.

Supplementary Table 3. Multivariate weighted regression model analysis reveals the associations between SUA/SCr and lung function parameters.

	Fully Adjusted Model (With complete data)	Fully Adjusted Model (With missing data)	Fully Adjusted Model (multiple imputation)
	β (95% CI) P value	β (95% CI) P value	β (95% CI) P value
FVC			
SUA/SCr	-47.630 (-63.499, -31.761) <0.0001	-48.003 (-63.362, -32.643) <0.0001	-47.974 (-63.161, -32.787) <0.0001
SUA/SCr quartile categories			
Q1	reference	reference	reference
Q2	-66.127 (-113.530, -18.724) 0.0136	-66.017 (-110.436, -21.598) 0.0121	-65.987 (-110.373, -21.602) 0.0093
Q3	-87.273 (-138.182, -36.365) 0.0035	-89.823 (-138.560, -41.086) 0.0032	-89.320 (-137.966, -40.674) 0.0021
Q4	-123.615 (-172.507, -74.723) 0.0001	-128.144 (-175.740, -80.548) 0.0001	-128.505 (-175.674, -81.337) <0.0001
P for trend	<0.0001	-40.892 (-55.024, -26.760) <0.0001	<0.0001
FEV1			
SUA/SCr	-36.956 (-52.375, -21.537) 0.0001	-37.337 (-52.086, -22.589) 0.0002	-37.346 (-52.023, -22.670) 0.0001
SUA/SCr quartile categories			
Q1	reference	reference	reference
Q2	-54.074 (-93.022, -15.125) 0.0140	-53.905 (-92.170, -15.640) 0.0162	-53.540 (-91.772, -15.308) 0.0133

Q3	-75.024 (-117.771, -32.278) 0.0029	-74.483 (-115.350, -33.616) 0.0034	-74.096 (-115.003, -33.190) 0.0023
Q4	-99.934 (-145.484, -54.384) 0.0004	-104.882 (-149.163, -60.602) 0.0005	-104.937 (-149.224, -60.650) 0.0002
P for trend	0.0002	-33.597 (-47.076, -20.117) 0.0002	0.0001
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FEV1/FVC			
SUA/SCr	-0.000 (-0.002, 0.002) 0.9469	-0.000 (-0.002, 0.002) 0.9708	-0.000 (-0.002, 0.002) 0.9738
SUA/SCr quartile categories			
Q1	reference -0.001 (-0.005, 0.004) 0.7059	reference -0.001 (-0.005, 0.004) 0.7443	reference -0.001 (-0.005, 0.004) 0.7721
Q2	-0.001 (-0.006, 0.004) 0.7037	-0.001 (-0.005, 0.004) 0.8249	-0.001 (-0.005, 0.004) 0.8241
Q3	-0.001 (-0.006, 0.005) 0.7503	-0.001 (-0.006, 0.004) 0.7000	-0.001 (-0.006, 0.004) 0.7224
Q4		-0.000 (-0.002, 0.001) 0.7387	0.7517
P for trend	0.7492		

Note 1: Non-adjusted model adjusted for none. Note 2: Minimally adjusted model adjusts for gender, age, and race/ethnicity. Note 3: Fully adjusted model adjusts for gender, age, race/ethnicity, education level, poverty income ratio, marital status, physical activity, BMI, hypertension history, diabetes history, respiratory disease history, had at least 12 alcohol drinks/1 year, smoked at least 100 cigarettes in life, foods of affecting SUA eaten during past 30 days, serum calcium, phosphorus, total bilirubin, total protein, aspartate aminotransferase, alkaline phosphatase, total cholesterol and glycohemoglobin.