

SUPPLEMENTARY TABLE 1. Comparison of Baseline Characteristics Among United States Adults with and without Hyperuricemia and/or Gout.

	Non-hyperuricemia/gout(n = 6560)	Hyperuricemia/gout (n = 6560)	<i>p</i> value
Age, years	48.22 ± 0.35	49.69 ± 0.29	0.05
Sex (n, %)			0.17
Male	3838 (58.59)	3825 (60.02)	
Female	2722 (41.41)	2735 (39.98)	
Race (n, %)			0.10
Mexican American	843 (3.90)	841 (6.12)	
Non-Hispanic Black	1648 (12.66)	1658 (12.32)	
Non-Hispanic White	3011 (67.45)	3007 (70.33)	
Other Hispanic	449 (6.46)	440 (4.42)	
Other race	609 (9.53)	614 (6.81)	
Smoking (n, %)			< 0.001
Never	3293 (50.07)	3277 (50.63)	
Former	1729 (24.11)	2013 (30.25)	
Current	1538 (25.82)	1270 (19.12)	
Drinking (n, %)			< 0.001
Never	1017 (13.21)	901 (11.32)	
Former	1428 (17.63)	1282 (16.01)	
Mild	2200 (35.67)	2081 (33.66)	
Moderate	802 (14.39)	889 (14.94)	
Heavy	1113 (19.10)	1407 (24.01)	
Physical activity (n, %)			< 0.001
None	3147 (39.39)	3609 (48.74)	
Moderate	1665 (26.68)	1531 (26.41)	
Vigorous	1748 (33.93)	1420 (24.85)	
Body mass index, kg/m²	27.48 ± 0.10	32.42 ± 0.13	< 0.001
Hypertension (n, %)	2939 (36.09)	4027 (55.42)	< 0.001
Diabetes (n, %)	1067 (10.90)	1641 (19.23)	< 0.001
Cardiovascular disease (n, %)	739 (8.29)	1132 (13.03)	< 0.001
Hyperlipidemia (n, %)	4865 (72.47)	5410 (82.06)	< 0.001
Statin use (n, %)	1023 (12.59)	1527 (19.84)	< 0.001
eGFR, mL/min/1.73m²	93.15 ± 0.39	85.35 ± 0.40	< 0.001
Uric acid, μmol/L	304.60 ± 0.89	437.98 ± 0.91	< 0.001
SDOH	5.49 ± 0.05	5.41 ± 0.04	0.22

Data are presented as mean ± standard error for continuous variables and as count (percentage) for categorical variables.
eGFR, estimated glomerular filtration rate; SDOH, social determinants of health.

SUPPLEMENTARY TABLE 2. Comparisons of Baseline Characteristics Between Included and Excluded Participants.

	Included (n = 6560)	Excluded (n = 2564)	<i>p</i>
Age, years	49.69 ± 0.29	49.46 ± 0.46	0.50
Sex, n (%)			0.35
Men	3825 (60.02)	1525 (62.20)	
Women	2735 (39.98)	1039 (37.80)	
Race, n (%)			0.89
Non-Hispanic White	3007 (70.33)	1162 (70.00)	
Non-Hispanic Black	1658 (12.32)	634 (12.15)	
Mexican American	841 (6.12)	342 (6.36)	
Other Hispanic	440 (4.42)	180 (4.59)	
Other race	614 (6.81)	246 (6.90)	
Smoking, n (%)			0.005
Never	3277 (50.63)	1228 (47.72)	
Former	2013 (30.25)	811 (31.26)	
Current	1270 (19.12)	523 (21.02)	
Drinking, n (%)			0.006
Never	901 (11.32)	274 (9.38)	
Former	1282 (16.07)	428 (16.70)	
Mild	2081 (33.66)	641 (32.06)	
Moderate	889 (14.94)	295 (14.96)	
Heavy	1407 (24.01)	502 (26.90)	
Physical activity, n (%)			0.08
No	3609 (48.74)	1431 (47.67)	
Moderate	1531 (26.41)	557 (25.42)	
Vigorous	1420 (24.85)	576 (26.91)	
Body mass index, kg/m²	32.42 ± 0.13	32.36 ± 0.20	0.70
Hypertension, n (%)	4027 (55.42)	1571 (54.45)	0.37
Diabetes, n (%)	1641 (19.23)	634 (18.73)	0.48
CVD, n (%)	1132 (13.03)	462 (12.97)	0.92
Hyperlipidemia, n (%)	5410 (82.06)	2123 (82.54)	0.56
Statin use, n (%)	1527 (19.84)	609 (20.37)	0.50
eGFR, mL/min/1.73m²	85.35 ± 0.40	85.64 ± 0.58	0.51
Uric acid, μmol/L	437.98 ± 0.91	439.30 ± 1.77	0.36
All-cause mortality, n (%)	1335 (14.76)	515 (14.81)	0.93
CVD mortality, n (%)	496 (5.33)	197 (5.48)	0.72

Data are presented as mean ± standard error for continuous variables and as count (percentage) for categorical variables.
CVD, cardiovascular disease; eGFR, estimated glomerular filtration rate.

SUPPLEMENTARY TABLE 3. Comparison of Hazard Ratio Between United States Participants with and without Hyperuricemia/Gout.

	All-cause mortality		Cardiovascular mortality	
	HR (95% CI)	<i>p</i> value	HR (95% CI)	<i>p</i> value
Non-gout/hyperuricemia	1 (Reference)	/	1 (Reference)	/
Gout categorized by social determinants of health score				
7-8	0.86 (0.73-1.00)	0.05	1.00 (0.73-1.37)	0.99
5-6	1.16 (1.00-1.34)	0.05	1.58 (1.28-1.95)	< 0.001
3-4	1.36 (1.17-1.58)	< 0.001	1.56 (1.22-1.99)	< 0.001
≤ 2	1.75 (1.42-2.16)	< 0.001	2.05 (1.34-3.12)	< 0.001

The HRs were adjusted for for age, sex, race, smoking, drinking, body mass index, physical activity, hypertension, diabetes, hyperlipidemia, estimated glomerular filtration rate, use of statins and anti-gout agents, and cardiovascular disease.
CI, hazard ratio; HR, hazard ratio.

SUPPLEMENTARY TABLE 4. Associations Between Social Determinants of Health and Mortality Risk Stratified by the Gout/Hyperuricemia Status.

	HR (95% CI)	<i>p</i>	<i>p</i> for interaction
All-cause mortality			0.35
Gout/hyperuricemia	0.84 (0.81-0.88)	< 0.001	
With gout/hyperuricemia	0.84 (0.81-0.88)	< 0.001	
Cardiovascular mortality			0.09
Gout/hyperuricemia	0.86 (0.80-0.92)	< 0.001	
With gout/hyperuricemia	0.81 (0.75-0.86)	< 0.001	

CI, confidence interval; HR, hazard ratio.

SUPPLEMENTARY TABLE 5. Sensitivity Analysis for the Associations Between Social Determinant of Health Score with All-Cause and Cardiovascular Mortality in Adults with Hyperuricemia or Gout Followed-Up Longer than 24 Months.

	Crude model		Model 1		Model 2	
All-cause mortality						
SDOH score (continuous)	0.91 (0.89-0.94)	< 0.001	0.86 (0.82-0.90)	< 0.001	0.86 (0.82-0.90)	< 0.001
SDOH score category						
7-8	Ref.	/	Ref.	/	Ref.	/
5-6	1.80 (1.49-2.17)	< 0.001	1.49 (1.21-1.85)	< 0.001	1.46 (1.18-1.80)	< 0.001
3-4	1.76 (1.44-2.15)	< 0.001	1.72 (1.36-2.16)	< 0.001	1.68 (1.33-2.13)	< 0.001
≤ 2	1.43 (1.13-1.81)	0.003	2.29 (1.72-3.03)	< 0.001	2.26 (1.69-3.02)	< 0.001
Cardiovascular mortality						
SDOH score (continuous)	0.92 (0.88-0.97)	0.001	0.86 (0.79-0.93)	< 0.001	0.87 (0.80-0.94)	< 0.001
SDOH score category						
7-8	Ref.	/	Ref.	/	Ref.	/
5-6	2.12 (1.51-2.97)	< 0.001	1.75 (1.20-2.53)	0.003	1.64 (1.14-2.36)	0.007
3-4	1.62 (1.16-2.25)	0.004	1.62 (1.10-2.37)	0.01	1.50 (1.02-2.19)	0.04
≤ 2	1.32 (0.78-2.22)	0.30	2.26 (1.27-4.04)	0.006	2.15 (1.21-3.82)	0.009

The crude model was unadjusted. Model 1 was adjusted for age, sex, race, smoking, drinking, body mass index, and physical activity. Model 2 was further adjusted for hypertension, diabetes, hyperlipidemia, estimated glomerular filtration rate, use of statins and anti-gout agents, and cardiovascular disease, in addition to factors listed in Model 1.
SDOH, social determinants of health.

SUPPLEMENTARY TABLE 6. Sensitivity Analysis for the Associations Between Social Determinant of Health Score with All-Cause and Cardiovascular Mortality in Adults with Hyperuricemia or Gout without Cardiovascular Disease.

	Crude model		Model 1		Model 2	
All-cause mortality						
SDOH score (continuous)	0.91 (0.88-0.95)	< 0.001	0.85 (0.81-0.90)	< 0.001	0.85 (0.81-0.90)	< 0.001
SDOH score category						
7-8	Ref.	/	Ref.	/	Ref.	/
5-6	1.68 (1.34-2.11)	< 0.001	1.54 (1.20-1.99)	< 0.001	1.52 (1.18-1.97)	0.001
3-4	1.74 (1.39-2.19)	< 0.001	1.78 (1.37-2.33)	< 0.001	1.77 (1.35-2.32)	< 0.001
≤ 2	1.34 (0.99-1.83)	0.06	2.30 (1.64-3.23)	< 0.001	2.35 (1.68-3.31)	< 0.001
Cardiovascular mortality						
SDOH score (continuous)	0.92 (0.86-0.97)	0.005	0.83 (0.76-0.91)	< 0.001	0.84 (0.77-0.91)	< 0.001
SDOH score category						
7-8	Ref.	/	Ref.	/	Ref.	/
5-6	1.91 (1.24-2.94)	0.004	1.80 (1.10-2.93)	0.02	1.73 (1.07-2.82)	0.03
3-4	1.82 (1.24-2.69)	0.002	2.07 (1.30-3.30)	0.002	1.99 (1.26-3.14)	0.003
≤ 2	1.14 (0.58-2.22)	0.71	2.22 (1.05-4.69)	0.04	2.20 (1.06-4.59)	0.03

The crude model was unadjusted. Model 1 was adjusted for age, sex, race, smoking, drinking, body mass index, and physical activity. Model 2 was further adjusted for hypertension, diabetes, hyperlipidemia, estimated glomerular filtration rate, and use of statins and anti-gout agents, in addition to factors listed in Model 1.
SDOH, social determinants of health.