Supplementary Figure 1. Flow chart of participant selection.
BUN, blood urea nitrogen; KNHANES, Korea National Health and Nutrition Examination Survey; Neodin, Neodin Medical Institute Central Laboratory; SCL, Seoul Clinical Laboratories; USG, urine specific gravity.
<table>
<thead>
<tr>
<th>Subgroup</th>
<th>No. of patients</th>
<th>Adjusted OR (95% CI, P)</th>
<th>Per 1 unit increase of urine SGU</th>
<th>P for interaction</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sex</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Women (n = 13,359)</td>
<td>2.751 (2.332–3.246, P &lt; 0.001)</td>
<td></td>
<td></td>
<td>0.536</td>
</tr>
<tr>
<td>Men (n = 9,907)</td>
<td>2.498 (2.112–2.954, P &lt; 0.001)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Age (yr)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 65 (n = 18,087)</td>
<td>1.810 (1.628–2.012, P &lt; 0.001)</td>
<td></td>
<td></td>
<td>0.356</td>
</tr>
<tr>
<td>≥ 65 (n = 5,179)</td>
<td>3.581 (2.324–5.515, P &lt; 0.001)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Daily water intake</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 1.2 L (n = 16,372)</td>
<td>2.756 (2.387–3.183, P &lt; 0.001)</td>
<td></td>
<td></td>
<td>0.001</td>
</tr>
<tr>
<td>≥ 1.2 L (n = 6,894)</td>
<td>2.217 (1.825–2.692, P &lt; 0.001)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>DM</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No (n = 20,679)</td>
<td>2.829 (2.471–3.239, P &lt; 0.001)</td>
<td></td>
<td></td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>Yes (n = 2,587)</td>
<td>1.845 (1.451–2.347, P &lt; 0.001)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>HTN</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No (n = 15,531)</td>
<td>2.572 (2.235–2.961, P &lt; 0.001)</td>
<td></td>
<td></td>
<td>0.027</td>
</tr>
<tr>
<td>Yes (n = 7,756)</td>
<td>2.601 (2.125–3.183, P &lt; 0.001)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Supplementary Figure 2.** Subgroup analysis.
CI, confidence interval; DM, diabetes mellitus; HTN, hypertension; OR, odds ratio; SGU, specific gravity unit.
**Supplementary Table 1.** Factors associated with high urine specific gravity unit (SGU)

<table>
<thead>
<tr>
<th></th>
<th>Adjusted OR (95% CI)</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (per 1 yr increase)</td>
<td>1.021 (1.017–1.026)</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>Male sex (yes vs. no)</td>
<td>0.576 (0.516–0.642)</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>Current smoker (yes vs. no)</td>
<td>0.789 (0.702–0.888)</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>Frequent drinker (yes vs. no)</td>
<td>1.052 (0.944–1.174)</td>
<td>0.360</td>
</tr>
<tr>
<td>Regular walking (yes vs. no)</td>
<td>1.107 (1.006–1.217)</td>
<td>0.036</td>
</tr>
<tr>
<td>Cardiovascular disease (yes vs. no)</td>
<td>0.734 (0.581–0.929)</td>
<td>0.010</td>
</tr>
<tr>
<td>Waist circumference (per 1 cm increase)</td>
<td>1.009 (1.005–1.014)</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>Systolic BP (per 1 mmHg increase)</td>
<td>0.995 (0.991–1.000)</td>
<td>0.029</td>
</tr>
<tr>
<td>Diastolic BP (per 1 mmHg increase)</td>
<td>1.003 (0.997–1.009)</td>
<td>0.319</td>
</tr>
<tr>
<td>Pulse rate (per 1 count/min increase)</td>
<td>0.995 (0.991–1.000)</td>
<td>0.050</td>
</tr>
<tr>
<td>Diabetes (yes vs. no)</td>
<td>2.388 (2.063–2.764)</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>Dyslipidemia (yes vs. no)</td>
<td>1.050 (0.936–1.177)</td>
<td>0.407</td>
</tr>
<tr>
<td>eGFR (per 1 mL/min/1.73 m² increase)</td>
<td>1.032 (1.028–1.037)</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>Proteinuria (yes vs. no)</td>
<td>1.342 (0.893–2.017)</td>
<td>0.156</td>
</tr>
<tr>
<td>High water intake (yes vs. no)</td>
<td>0.839 (0.762–0.924)</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>Urine sodium (per 1 mmol/L increase)</td>
<td>1.015 (1.014–1.016)</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>Urine creatinine (per 1 mmol/L increase)</td>
<td>1.512 (1.494–1.530)</td>
<td>&lt; 0.001</td>
</tr>
</tbody>
</table>

High urine SGU was defined as the highest quartile of urine SGU (≥ 2.2).
BP, blood pressure; CI, confidence interval; eGFR, estimated glomerular filtration rate; OR, odds ratio.

Adjusted OR and 95% CI were analyzed using multivariate logistic regression analysis with all of the above covariates.