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| **Supplementary Table 1.** Characteristics of those with qualified and unqualified urine samples |
|  | Unqualified (N=177) | Qualified (N=561) | *t, Z, X2/P* |
| Categorical variables | n | % | n | % |  |
| Agegroups |  |  |  |  | 11.466/0.003 |
| 35-44  | 51 | 28.8 | 102 | 18.2 |  |
| 45-59  | 102 | 57.6 | 341 | 60.8 |  |
| ≥60 | 24 | 13.6 | 118 | 21.0 |  |
| Gender (men) | 91 | 51.4 | 239 | 42.6 | 4.224/0.040 |
| Education  |  |  |  |  | 0.877/0.645 |
| Primary and lower | 66 | 37.5 | 213 | 38.0 |  |
| Junior | 52 | 29.5 | 147 | 26.2 |  |
| Senior and higher | 58 | 33.0 | 201 | 35.8 |  |
| Cigarette consumption  | 46 | 26.1 | 101 | 18.2 | 5.241/0.022 |
| Alcohol intake | 39 | 22.2 | 137 | 24.6 | 0.451/0.502 |
| Body mass index category  |  |  |  |  | 12.848/0.002 |
|  ＜25kg/m² | 52 | 29.4 | 186 | 33.2 |  |
| 25-30kg/m² | 62 | 35.0 | 250 | 44.6 |  |
| ≥30kg/m² | 63 | 35.6 | 125 | 22.3 |  |
| Abdominal obesity  | 72 | 40.7 | 218 | 38.9 | 0.172/0.678 |
| Prevalence of hypertension  | 87 | 49.2 | 278 | 49.6 | 0.009/0.926 |
| Prevalence of dyslipidemia  | 52 | 30.4 | 204 | 36.8 | 2.353/0.125 |
| Prevalence of diabetes | 15 | 8.6 | 64 | 11.5 | 1.164/0.281 |
| Prevalence of stroke | 16 | 9.6 | 48 | 8.9 | 0.074/0.785 |
| Anti-hypertensive agents | 59 | 67.8 | 144 | 51.8 | 6.887/0.009 |
| Prevalence of MCI | 36 | 20.7 | 107 | 19.1 | 0.221/0.638 |
| Salt intake <6g | 101 | 64.7 | 137 | 24.4 | 89.495/<0.001 |
| Potassium intake ≥3.5g  | / | / | 2 | 0.4 | 1.000 |
| Sodium to potassium ratio  |  |  |  |  | 0.651/1.00 |
| <1.0 | / | / | 1 | 0.2 |  |
|  =1.0 | / | / | 2 | 0.4 |  |
| >1.0 | 156 | 100.0 | 558 | 99.5 |  |
| Continuous variables | Mean/P50 | SD/P25-P75 | Mean/P50 | SD/P25-P75 |  |
| Age (years) | 49.1 | 9.5 | 52.7 | 9.3 | 4.428/<0.001 |
| Body mass index (kg/m²) | 27.8 | 24.2-31.1 | 26.7 | 24.1-29.6 | 2.997/0.003 |
| Systolic Blood Pressure(mmHg) | 129.3 | 119.3-145.5 | 129.7 | 118.3-143.7 | 0.539/0.590 |
| Diastolic Blood Pressure(mmHg) | 83.7 | 75.3-91.3 | 82.3 | 74.7-90.0 | 1.055/0.292 |
| Total MMSE score | 26 | 22-28 | 26 | 22-29 | 0.967/0.333 |
| Serum creatinine (umol/L) | 65.6 | 52.7-82.6 | 71.1 | 57.0-90.0 | 2.120/0.034 |
| Estimated salt intake (g) | 4.8 | 3.1-7.2 | 8.6 | 6.1-11.6 | 10.227/<0.001 |
| Estimated sodium intake (g) | 1.9 | 1.2-2.8 | 3.4 | 2.4-4.6 | 10.227/<0.001 |
| Estimated potassium intake (g) | 0.6 | 0.4-0.8 | 1.2 | 0.9-1.5 | 14.002/<0.001 |
| MCI, mild cognitive impairment. Individuals unqualified are those with unqualified urine sample (n=175) and incompleteness on MMSE (n=2). |

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| **Supplementary Table 2.** Characteristics of subjects after propensity score matching (N=352) |
|  | 24-h UNa/K ≤4.80 | 24-h UNa/K >4.80 | *Z, X2/P* |
|  | n /P50 | % /P25-P75 | n /P50 | % /P25-P75 |  |
| Gender (men) | 65 | 36.9 | 72 | 40.9 | 0.586/0.444 |
| Education |  |  |  |  | 0.922/0.631 |
| Primary and lower | 65 | 36.9 | 67 | 38.1 |  |
| Junior | 43 | 24.4 | 49 | 27.8 |  |
| Senior and higher | 68 | 38.6 | 60 | 34.1 |  |
| Occupation |  |  |  |  | 0.534/0.766 |
| Mental labour | 51 | 29.0 | 45 | 25.6 |  |
| Physical labour | 110 | 62.5 | 116 | 65.9 |  |
| Unemployed/unclassified | 15 | 8.5 | 15 | 8.5 |  |
| Cigarette consumption  | 28 | 15.9 | 34 | 19.3 | 0.705/0.401 |
| Alcohol intake | 40 | 22.7 | 43 | 24.4 | 0.142/0.706 |
| Hypertension | 84 | 47.7 | 88 | 50.0 | 0.182/0.670 |
| Dyslipidemia | 65 | 36.9 | 68 | 38.6 | 0.109/0.742 |
| Diabetes  | 18 | 10.2 | 23 | 13.1 | 0.690/0.406 |
| Stroke | 14 | 8.0 | 11 | 6.3 | 0.388/0.534 |
| Age (years) | 52.4 | 46.7-58.3 | 53.3 | 46.0-59.4 | 0.190/0.849 |
| Body mass index (kg/m2) | 26.3 | 23.8-29.6 | 26.7 | 24.5-29.6 | 0.957/0.339 |
| Estimated glomerular filtration rate (mL/min\*1.73m2) | 94.2 | 68.0-104.6 | 88.6 | 71.6-103.8 | 0.072/0.942 |
| 24-h UNa/K, 24-hour urinary sodium to potassium ratio. Matched for age, gender, education status, occupation, smoking status, alcohol assumption, body mass index, estimated glomerular filtration rate, hypertension, stroke, dyslipidemia, and diabetes mellitus. |

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| **Supplementary Table 3.** MMSE score and prevalence of MCI in subjects by themedian of 24-hour urine sodium to potassium ratio afterpropensity score matching (N=352). |
|  | 24-h UNa/K ≤4.80 | 24-h UNa/K >4.80 | *Z, X2/P* |
|  | P50/n | P25-P75/% | P50/n | P25-P75/% |  |
| Total MMSE score | 27.0  | 23.0-29.0 | 25.0 | 21.0-28.0 | 2.594/0.009 |
| Orientation  | 10.0  | 9.0-10.0 | 10.0 | 8.0-10.0 | 1.889/0.059 |
| Registration  | 3.0  | 3.0-3.0 | 3.0  | 3.0-3.0 | 1.674/0.094 |
| Attention and Calculation  | 4.0  | 2.0-5.0 | 4.0 | 1.0-5.0 | 2.158/0.031 |
| Recall  | 3.0  | 1.0-3.0 | 2.0  | 1.0-3.0 | 2.349/0.019 |
| Language and Praxis  | 9.0  | 7.0-9.0 | 9.0  | 7.0-9.0 | 1.890/0.059 |
| Prevalence of MCI | 22 | 12.5 | 45 | 25.6 | 9.752/0.002 |
| 24-h UNa/K, 24-hour urinary sodium to potassium ratio; MCI, mild cognitive impairment. Matched for age, gender, education status, occupation, smoking status, alcohol assumption, body mass index, estimated glomerular filtration rate, hypertension, stroke, dyslipidemia, and diabetes mellitus. |