**Supplemental material**

**Table S1. Associations of urinary albumin to creatinine ratio and estimated glomerular filtration rate with different imaging markers (A to D) of cerebral small vessel disease.**

**A. Lacunar infarcts**

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| **Kidney function parameters** | **Model 1**  **OR (95% CI)** | **Model 2**  **OR (95% CI)** | **Model 3**  **OR (95% CI)** |
| Ln UACR | 1.18 (0.96-1.44), p=0.12 | 1.093 (0.86-1.40),p=0.47 | 1.20 (0.92-1.56), p=0.18 |
| Microalbuminuria | **2.54 (1.42-4.55), p=0.009** | 1.90 (0.93-3.89), p=0.08 | **2.57 (1.18-5.58), p=0.02** |
| eGFR (mL/min/1.73 m2) | 0.99 (0.97-1.01), p=0.48 | 0.99 (0.97-1.02), p=0.60 | 0.99 (0.98-1.02), p=0.92 |
| eGFR (≤60 versus >60 mL/min/1.73 m2) | 1.33 (0.49-3.59), p=0.58 | 1.94 (0.68-5.53), p=0.21 | 1.41 (0.45-4.44), p=0.56 |

**B. Moderate to extensive white matter hyperintensities**

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| **Kidney function parameters** | **Model 1**  **OR (95% CI)** | **Model 2**  **OR (95% CI)** | **Model 3**  **OR (95% CI)** |
| Ln UACR | **1.39 (1.11-1.73), p=0.004** | **1.43 (1.11-1.85), p=0.006** | **1.46 (1.11-1.93), p=0.007** |
| Microalbuminuria | **2.86 (1.44-5.71), p=0.003** | **3.54 (1.60-7.83), p=0.002** | **4.05 (1.71-9.60), p=0.002** |
| eGFR (mL/min/1.73 m2) | 0.99 (0.97-1.01), p=0.37 | 0.99 (0.97-1.02), p=0.44 | 0.99 (0.97-1.02), p=0.67 |
| eGFR (≤60 versus >60 mL/min/1.73 m2) | 2.09 (0.77-5.70), p=0.15 | 1.82 (0.58-5.70), p=0.30 | 1.42 (0.43-4.67), p=0.57 |

**C. Deep brain microbleeds**

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| **Kidney function parameters** | **Model 1**  **OR (95% CI)** | **Model 2**  **OR (95% CI)** | **Model 3**  **OR (95% CI)** |
| Ln UACR | 1.15 (0.87-1.51), p=0.32 | 1.06 (0.76-1.47), p=0.73 | 0.94(0.62-1.41), p=0.75 |
| Microalbuminuria | 1.25 (0.49-3.16), p=0.64 | 1.09 (0.38-3.11), p=0.88 | 0.80 (0.21-2.98), p=0.74 |
| eGFR (mL/min/1.73 m2) | 0.98 (0.96-1.02), p=0.40 | 0.99 (0.97-1.03), p=0.99 | 0.99 (0.96-1.03), p=0.80 |
| eGFR (≤60 versus >60 mL/min/1.73 m2) | 2.05 (0.58-7.20), p=0.26 | 0.53 (0.07-4.27), p=0.55 | 0.58 (0.07-4.81), p=0.62 |

**D. Moderate to extensive basal ganglia enlarged perivascular spaces**

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| **Kidney function parameters** | **Model 1**  **OR (95% CI)** | **Model 2**  **OR (95% CI)** | **Model 3**  **OR (95% CI)** |
| Ln UACR | **1.23 (1.08-1.40), p=0.002** | **1.21 (1.04-1.40), p=0.014** | **1.27 (1.07-1.50), p=0.006** |
| Microalbuminuria | **1.97 (1.29-3.01), p=0.002** | **2.09 (1.29-3.38), p=0.003** | **2.28 (1.32-3.92), p=0.003** |
| eGFR (mL/min/1.73 m2) | 0.99 (0.99-1.01), p=0.88 | 0.99 (0.98-1.01), p=0.55 | 1.00 (0.99-1.02), p=0.88 |
| eGFR (≤60 versus >60 mL/min/1.73 m2) | 1.23 (0.64-2.40), p=0.54 | 1.20 (0.58-2.48), 0.63 | 0.94 (0.43-2.02), p=0.87 |

Ln UACR: Natural log urine albumin-to-creatinine ratio; eGFR: creatinine-based estimated glomerular filtration rate; OR: Odds ratio; CI: confidence interval. Model 1 is adjusted by age and gender; Model 2 is additionally adjusted by: CV risk (REGICOR) score, hypertension duration, number of blood pressure lowering drugs and diastolic BP control; Model 3 is additionally adjusted by eGFR or Ln UACR, as appropriate.REGICOR score variable was used in the logistic regression model taking the first category (low risk) as reference.