**Supplementary Table 1. Categories of microbleed count and incident lacunes.**

| | | Incident lacunes |
|---|---|---|
| | n/N | |
| No pre-existing microbleeds | 8/608 | Reference |
| Single pre-existing microbleeds (all) | 6/123 | 3.98 (1.33; 11.90) |
| Multiple pre-existing microbleeds (all) | 6/72 | 5.70 (1.79; 18.13) |
| Single pre-existing strictly lobar | 5/93 | 4.42 (1.39; 14.02) |
| Multiple pre-existing strictly lobar | 1/36 | 1.53 (0.17; 13.71) |
| Single pre-existing deep or infratentorial | 1/30 | 2.46 (0.29; 20.86) |
| Multiple pre-existing deep or infratentorial | 5/36 | 10.31 (3.06; 34.73) |
| No incident microbleeds | 10/725 | Reference |
| Single incident microbleed (all) | 3/43 | 4.65 (1.19; 18.09) |
| Multiple incident microbleed (all) | 7/35 | 16.18 (5.60; 46.78) |
| Single incident strictly lobar | 2/34 | 4.00 (0.82; 19.51) |
| Multiple incident strictly lobar | 2/15 | 9.72 (1.79; 52.72) |
| Single incident deep or infratentorial | 1/9 | 7.40 (0.80; 68.40) |
| Multiple incident deep or infratentorial | 5/20 | 23.67 (6.98; 80.25) |

Values are adjusted for age, sex, and scan interval.

Values represent odds ratios for incident lacunes in participants with pre-existing and incident microbleeds compared to no microbleeds.

Abbreviations: n= number of participants with incident lacunes; N= total number of participants.

**Supplementary Table 2. Categories of microbleed count and progression of WML volume.**

| | Difference in annual progression of WML volume |
|---|---|
| No pre-existing microbleeds | Reference |
| Single pre-existing microbleeds (all) | -0.09 (-0.22; 0.05) |
| Multiple pre-existing microbleeds (all) | 0.07 (-0.12; 0.26) |
| Single pre-existing strictly lobar | -0.15 (-0.30; 0.00) |
| Multiple pre-existing strictly lobar | 0.24 (-0.00; 0.49) |
| Single pre-existing deep or infratentorial | 0.10 (-0.16; 0.36) |
| Multiple pre-existing deep or infratentorial | -0.10 (-0.34; 0.15) |
| No incident microbleeds | Reference |
| Single incident microbleeds (all) | 0.20 (-0.02; 0.41) |
| Multiple incident microbleeds (all) | 0.26 (0.01; 0.51) |
| Single incident strictly lobar | 0.30 (0.06; 0.54) |
| Multiple incident strictly lobar | 0.65 (0.30; 1.01) |
| Single incident deep or infratentorial | -0.17 (-0.61; 0.27) |
| Multiple incident deep or infratentorial | -0.06 (-0.39; 0.27) |

Values are adjusted for age, sex, scan interval, and intracranial volume.

Values represent differences in annual white matter lesion volume progression in participants with pre-existing and incident microbleeds compared to no microbleeds.

Abbreviations: WML=white matter lesion.

**Supplementary Table 3. Microbleeds and progression of WML by *APOE* ε4 status.**

| | Differences in annual progression of WML volume | |
|---|---|---|
| | **Carriers (N=188)** | **Non-carriers (N=454)** |
| Pre-existing microbleeds (all) | 0.10 (-0.12; 0.32) | -0.12 (-0.25; 0. 0004) |
| Pre-existing strictly lobar | 0.10 (-0.14; 0.34) | -0.12 (-0.27; 0.02) |
| Pre-existing deep or infratentorial | 0.14 (-0.20; 0.47) | -0.14 (-0.34; 0.06) |
| Incident microbleeds (all) | 0.28 (-0.04; 0.61) | -0.03 (-0.22; 0.16) |
| Incident strictly lobar | 0.34 (-0.02; 0.71) | 0.05 (-0.19; 0.28) |
| Incident deep or infratentorial | 0.09 (-0.56; 0.73) | -0.15 (-0.43; 0.14) |

Adjusted for age, sex, scan interval, and intracranial volume.

Values represent differences in annual white matter lesion volume progression in *APOE* ε4 carriers and non-carriers with pre-existing and incident microbleeds compared to no microbleeds.

Abbreviations: WML= white matter lesion; *APOE= apolipoprotein E*.