**Supplemental Digital Content**

Parks RM, Nunez Y, Balalian A, Gibson EA, Hansen J, Raaschou-Nielsen O, Ketzel M, Khan J, Brandt J, Vermeulen R, Peters S, Goldsmith J, Re DB, Weisskopf MG, Kioumourtzoglou MA, Long-term traffic-related air pollutant exposure and amyotrophic lateral sclerosis diagnosis in Denmark: A Bayesian hierarchical analysis.

**eTable 1.** Summary of 5-year average pollutant concentrations by socioeconomic status (all in μg/m3).

**eTable 2.** Summary of 5-year average pollutant concentrations by civil status (all in μg/m3).

**eTable 3.** Summary of 5-year average pollutant concentrations by residence (all in μg/m3).

**eTable 4.** Summary of 5-year average pollutant concentrations by place of birth (all in μg/m3).

**eFigure 1.** Sensitivity of percentage change in odds of ALS diagnosis to (B) inclusion of O3; (C) inclusion of parish-level SES; (D-F) single-pollution models; (G-N) various hyperpriors; and (O-P) more iterations per chain.

**eFigure 2**. Average concentration of included pollutants (NOx, EC, PM2.5, CO, O3) in 1 km x 1 km resolution for year 2000 (middle of study period 1989-2013).

This supplementary material has been provided by the authors to give readers additional information about their work.

**eTable 1.** Summary of 5-year average pollutant concentrations by socioeconomic status (all in μg/m3).

| Pollutant | Overall, N = 19,2981 | Group 1 (Highest), N = 1,8861 | Group 2, N = 2,3401 | Group 3, N = 3,5751 | Group 4, N = 5,5221 | Group 5 (Lowest), N = 3,7021 | Group 9 (Unknown), N = 2,2731 |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **NOX** | 27 (20) | 29 (20) | 27 (20) | 25 (17) | 27 (20) | 27 (19) | 30 (23) |
| **CO** | 237 (105) | 244 (103) | 233 (104) | 225 (89) | 237 (104) | 237 (102) | 258 (130) |
| **EC** | 0.85 (0.42) | 0.89 (0.42) | 0.84 (0.42) | 0.79 (0.37) | 0.85 (0.42) | 0.84 (0.41) | 0.92 (0.48) |
| **non-EC PM2.5** | 11.76 (2.37) | 11.75 (2.21) | 11.54 (2.24) | 11.58 (2.30) | 11.69 (2.34) | 11.93 (2.43) | 12.13 (2.62) |
| **O3** | 52.0 (6.0) | 51.1 (5.9) | 52.0 (5.9) | 53.0 (5.6) | 51.9 (5.9) | 52.2 (5.9) | 50.7 (6.4) |
| 1Mean (SD) | | | | | | | |

**eTable 2.** Summary of 5-year average pollutant concentrations by civil status (all in μg/m3).

**eTable 3.** Summary of 5-year average pollutant concentrations by residence (all in μg/m3).

**eTable 4.** Summary of 5-year average pollutant concentrations by place of birth (all in μg/m3).

**eFigure 1**. Sensitivity of percentage change in odds of ALS diagnosis to (B) inclusion of O3; (C) inclusion of parish-level SES; (D-F) single-pollution models; (G-N) various hyperpriors; and (O-P) more iterations per chain.

****

**eFigure 2**. Average concentration of included pollutants (NOx, EC, PM2.5, CO, O3) in 1 km x 1 km resolution for year 2000 (middle of study period 1989-2013).









