# Supplemental Material

# Quantile Regression Analysis of the Distributional Effects of Air Pollution on Blood Pressure, Heart Rate Variability, Blood Lipids, and Biomarkers of Inflammation in Elderly American Men: The Normative Aging Study

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outcome of interest measured at baseline. The units of the y-axes correspond the units of the outcome. Estimates are limited to participants with more than one study visit.

**Figure S2.** Individual effects of traffic-related air pollutants on heart rate, SDNN, log(LF/HF), and corrected QT interval versus baseline heart rate, baseline SDNN, baseline log(LF/HF), and baseline corrected QT interval, respectively. We fit linear mixed-effects models with random intercepts and slopes for individual air pollutant effects to check for heterogeneous associations with the same outcomes of interest. We adjusted for temperature, relative humidity, sine and cosine terms of the days of the season, age, physician-diagnosed diabetes, body mass index, smoking status, cumulative cigarette pack-years, current use of statin, and current use of antihypertensive medications. For SDNN, we also controlled for heart rate because standard deviation is likely to be larger as heart rate increases. Conditional on algorithm convergence, we obtained the subject-specific random slopes and calculated the individual effects (by adding the fixed and random effects) for participants with more than one visit. Subsequently, we plotted these individual effects (that correspond to individual increases in the outcome for an interquar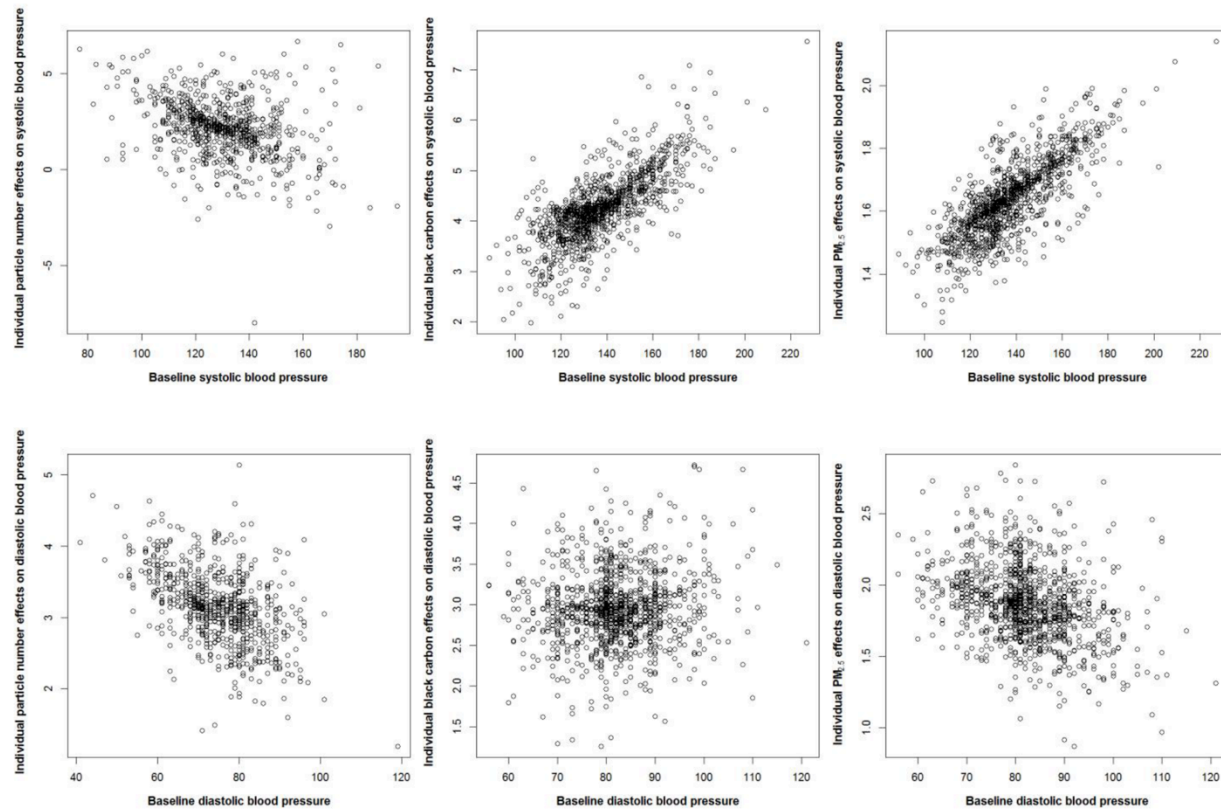tile range increase in exposure) versus the outcome of interest measured at baseline. The units of the y-axes correspond the units of the outcome. Estimates are limited to participants with more than one study visit.

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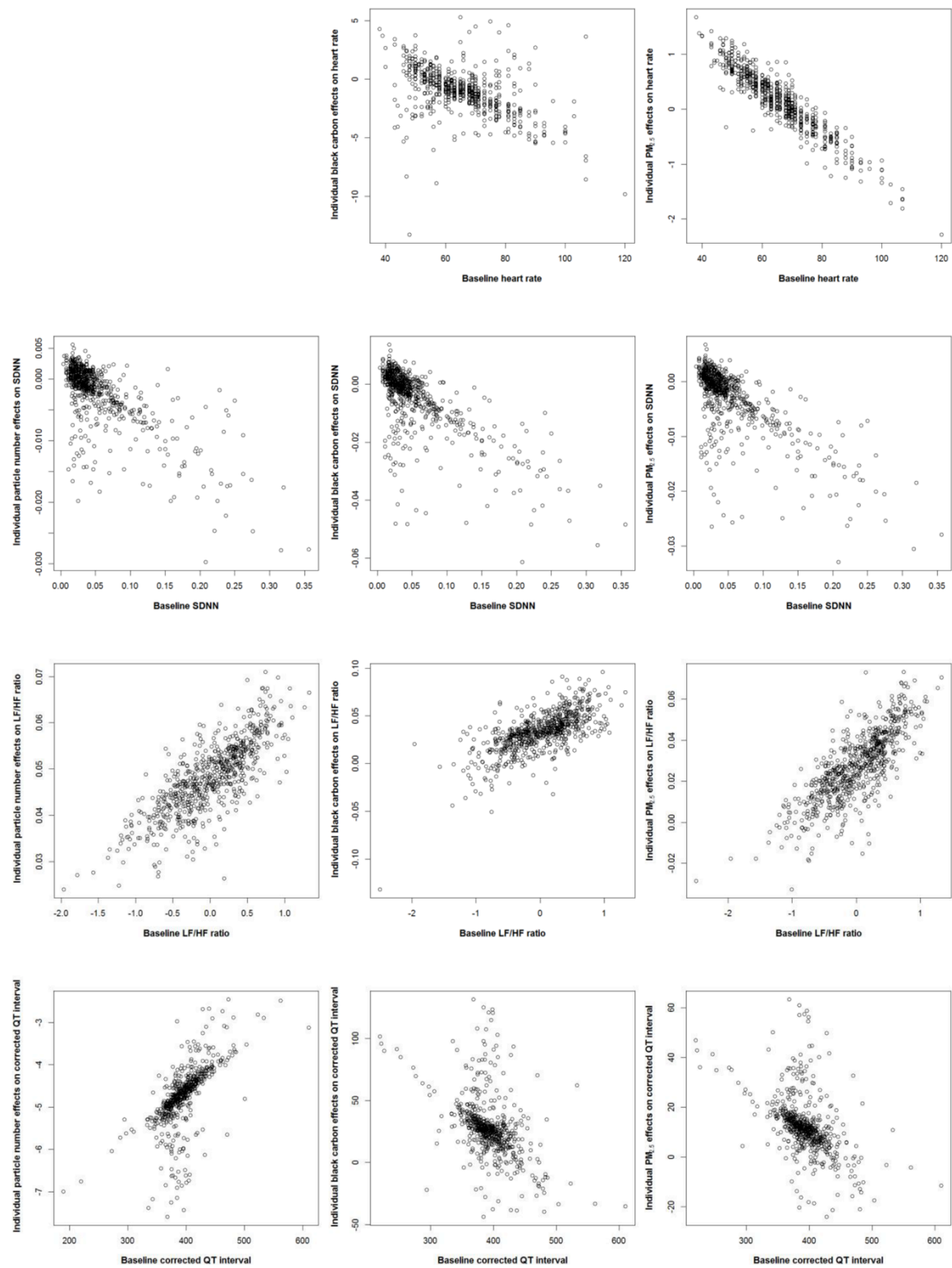
**Figure S4.** Individual effects of traffic-related air pollutants on fibrinogen, C-reactive protein, ICAM-1, and VCAM-1 versus baseline fibrinogen, baseline C-reactive protein, baseline ICAM-1, and baseline VCAM-1, respectively. We fit linear mixed-effects models with random intercepts and slopes for individual air pollutant effects to check for heterogeneous associations with the same outcomes of interest. We adjusted for temperature, relative humidity, sine and cosine terms of the days of the season, age, physician-diagnosed diabetes, body mass index, smoking status, cumulative cigarette pack-years, and current use of statin. Conditional on algorithm convergence, we obtained the subject-specific random slopes and calculated the individual effects (by adding the fixed and random effects) for participants with more than one visit. Subsequently, we plotted these individual effects (that correspond to individual increases in the outcome for an interquartile range increase in exposure) versus the outcome of interest measured at baseline. The units of the y-axes correspond the units of the outcome. Estimates are limited to participants with more than one study visit.
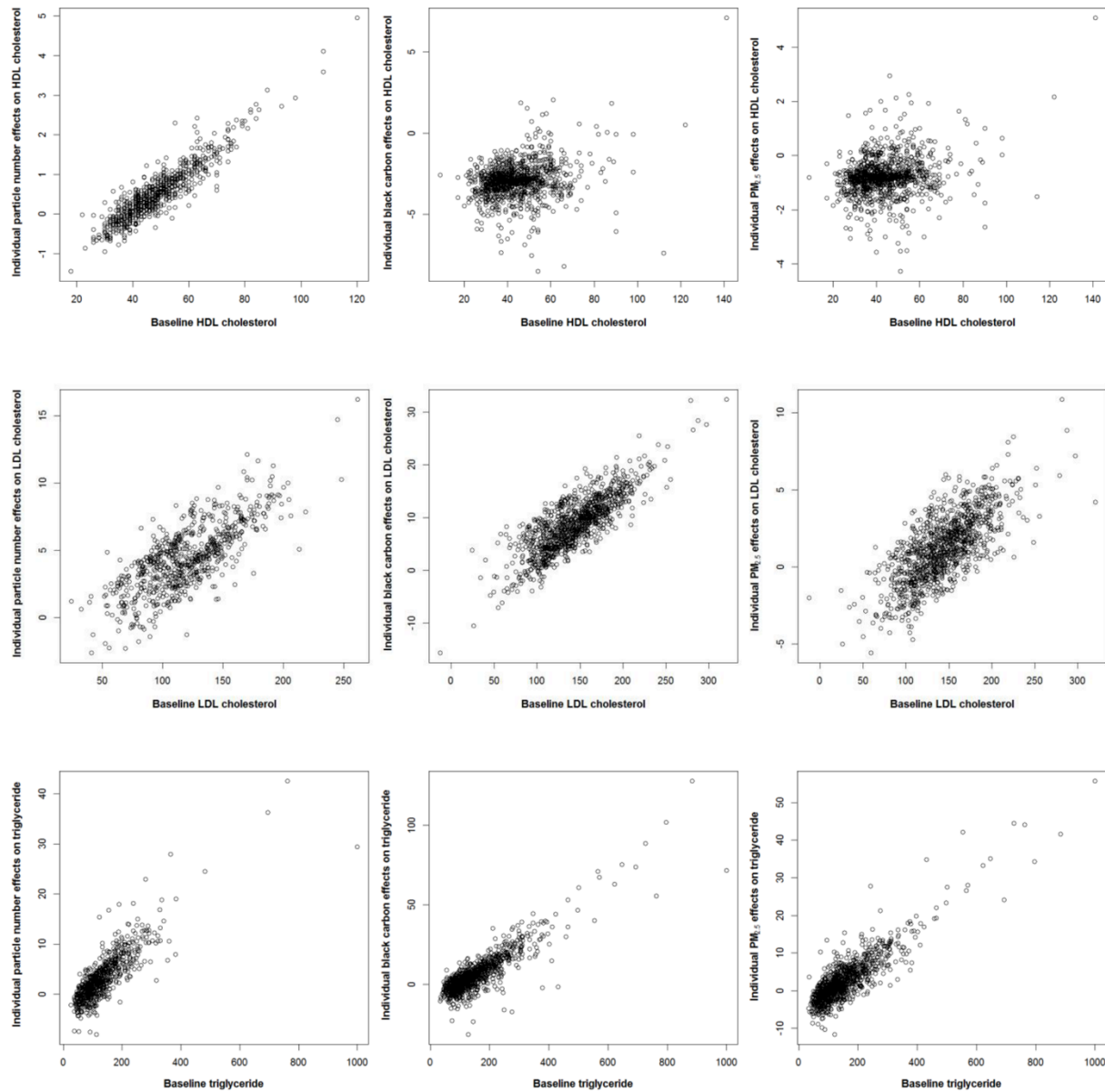
Figure S1



**Figure S1.** Individual effects of traffic-related air pollutants on systolic blood pressure and diastolic blood pressure versus baseline systolic blood pressure and baseline diastolic blood pressure, respectively. We fit linear mixed-effects models with random intercepts and slopes for individual air pollutant effects to check for heterogeneous associations with the same outcomes of interest. We adjusted for temperature, relative humidity, sine and cosine terms of the days of the season, age, physician-diagnosed diabetes, body mass index, smoking status, cumulative cigarette pack-years, current use of statin, and current use of antihypertensive medications. Conditional on algorithm convergence, we obtained the subject-specific random slopes and calculated the individual effects (by adding the fixed and random effects) for participants with more than one visit. Subsequently, we plotted these individual effects (that correspond to individual increases in the outcome for an interquartile range increase in exposure) versus the outcome of interest measured at baseline. The units of the y-axes correspond the units of the outcome. Estimates are limited to participants with more than one study visit.

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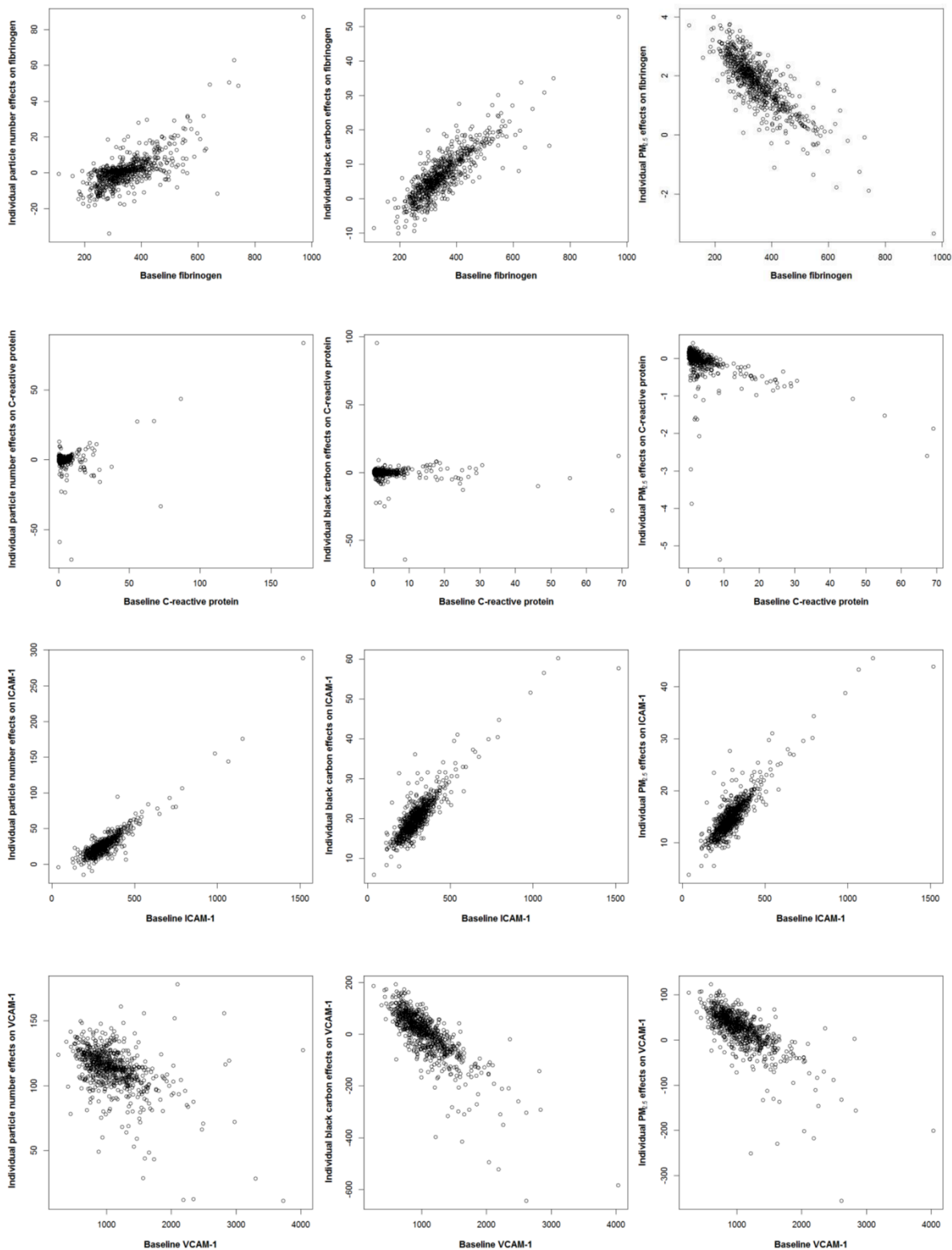
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