

Table 6. Ecologic Covariates Used in the Sensitivity Analysis of the American Cancer Society Study

Ecologic Covariate	Number of Cities		Description	Relative Risk for All-Cause Mortality in the Sulfate Cohort
	Sulfates	Fine Particles		
Demographic Data				
Population Change	139	48	Percent net change in number of residents between 1980 and 1986.	0.85 (0.81-0.89)
Race				
Whites	151	50	Percent of persons in 1980 who classify themselves as Caucasian.	1.02 (0.98-1.06)
African Americans	151	50	Percent of persons who classify themselves as African American (1980)	1.01 (0.96-1.06)
Socio-economic Data				
Income	151	50	Per capita income for 1979.	0.93 (0.88-0.97)
Unemployment	151	50	Percent of total civilian labor force who were unemployed in 1986.	1.12 (1.06-1.19)
Poverty	151	50	Percent of individuals living below the poverty level in 1979.	0.95 (0.89, 1.01)
Education	151	50	Percentage of persons 25 years of age or older who indicated that they had completed 4 years of high school or some years of college.	0.91 (0.86-0.96)
Income disparity	151	50	Gini coefficient, based on income distribution in 1979.	0.88 (0.84, 0.93)
Health Services Data				
Physicians	138	48	Number of professionally active, non-federal physicians with known addresses per 100,000 resident population as of July 1, 1985.	0.95 (0.89-1.01)
Hospital beds	139	48	Number of hospital beds per 100,000 resident population as of July 1, 1985.	1.13 (1.06-1.21)
Climate Data				
Temperature	135	46	Average maximum daily temperature in Fahrenheit for the years 1980 to 1989 inclusive.	0.88 (0.85-0.92)
Temperature variation	135	46	Average monthly variance in maximum daily temperature in Fahrenheit for the years 1980 to 1989 inclusive.	1.18 (1.11-1.24)
Relative humidity	95	37	Average minimum daily relative humidity in whole percent for the years 1984 to 1989 inclusive was averaged by month.	1.05 (0.99-1.12)
Variation relative humidity	95	37	Average monthly variance in minimum daily relative humidity for the years 1984 to 1989 inclusive.	0.96 (0.90-1.02)
Physical Environment Data				
Altitude	110	38	Measured as meters above sea-level.	1.05 (0.99-1.12)
Water hardness	109	49	Concentration of CaCO ₃ (ppm) in drinking water, ca. 1970.	1.08 (1.02-1.13)
Gaseous Co-pollutants				
Carbon monoxide	107	44	All gaseous co-pollutants were measured as annual average of daily average concentrations for 1980 from residential, commercial or mobile monitors, except for ozone in which daily one-hour maximum concentrations were used	0.98 (0.92-1.03)
Nitrogen dioxide	74	33		0.93 (0.87-0.99)
Ozone	117	45		0.93 (0.87-0.99)
Sulfur dioxide	113	38		1.30 (1.23-1.38)