

Supplementary Table S4. Association between serum cytokine levels and lung cancer in the NCI-MD study, after adjusting for potential confounding

| Cytokine | Quartile ^a | African Americans (N = 255) | | | European Americans (N = 566) | | |
|-------------|-----------------------|-----------------------------|--------------------------|---------------------------------|------------------------------|--------------------------|---------------------------------|
| | | Cases/ controls | OR (95% CI) ^b | P _{trend} ^c | Cases/ controls | OR (95% CI) ^b | P _{trend} ^c |
| IL1 β | <0.19 | 12/57 | 1.00 (reference) | 0.01 | 61/59 | 1.00 (reference) | 0.57 |
| | 0.19 to <0.37 | 20/35 | 2.37 (0.80-5.99) | | 52/77 | 0.89 (0.49-1.61) | |
| | 0.37 to <0.89 | 24/41 | 2.61 (0.80-7.04) | | 91/80 | 1.12 (0.64-1.96) | |
| | \geq 0.89 | 29/37 | 3.85 (1.39-10.71) | | 66/80 | 0.78 (0.44-1.38) | |
| IL-4 | <0.58 | 19/58 | 1.00 (reference) | 0.11 | 56/58 | 1.00 (reference) | 0.78 |
| | 0.58 to <1.19 | 23/42 | 1.73 (0.65-4.60) | | 63/74 | 1.02 (0.57-1.85) | |
| | 1.19 to <2.36 | 21/42 | 1.43 (0.54-3.79) | | 84/76 | 1.15 (0.65-2.04) | |
| | \geq 2.36 | 22/28 | 2.60 (0.93-7.30) | | 67/88 | 0.90 (0.50-1.59) | |
| IL-5 | <0.42 | 22/56 | 1.00 (reference) | 0.19 | 69/60 | 1.00 (reference) | 0.08 |
| | 0.42 to <0.74 | 21/34 | 1.75 (0.66-4.58) | | 51/69 | 0.53 (0.29-0.96) | |
| | 0.74 to <1.39 | 16/42 | 1.36 (0.51-3.63) | | 91/88 | 0.70 (0.41-1.21) | |
| | \geq 1.39 | 26/38 | 2.09 (0.81-5.38) | | 59/79 | 0.51 (0.28-0.92) | |
| IL-6 | <1.36 | 6/42 | 1.00 (reference) | <0.001 | 27/74 | 1.00 (reference) | <0.001 |
| | 1.36 to <2.14 | 8/41 | 0.69 (0.16-3.06) | | 31/76 | 0.90 (0.45-1.80) | |
| | 2.14 to <3.79 | 19/46 | 1.92 (0.53-6.90) | | 80/71 | 2.33 (1.23-4.42) | |
| | \geq 3.79 | 52/41 | 5.51 (1.63-18.62) | | 132/75 | 3.65 (1.91-6.63) | |
| IL-8 | <6.47 | 11/55 | 1.00 (reference) | <0.001 | 26/62 | 1.00 (reference) | <0.001 |
| | 6.47 to <9.31 | 10/44 | 0.82 (0.22-3.00) | | 38/72 | 1.41 (0.70-2.83) | |
| | 9.31 to <22.85 | 31/42 | 2.81 (1.00-7.88) | | 107/75 | 3.59 (1.90-6.77) | |
| | \geq 22.85 | 33/29 | 5.70 (1.97-16.51) | | 99/87 | 2.75 (1.47-5.17) | |
| IL-10 | <6.12 | 16/55 | 1.00 (reference) | 0.01 | 44/61 | 1.00 (reference) | 0.20 |
| | 6.12 to <10.36 | 16/41 | 1.52 (0.53-4.36) | | 63/75 | 1.12 (0.62-2.05) | |
| | 10.36 to <20.63 | 31/38 | 5.73 (2.07-15.54) | | 78/80 | 1.12 (0.62-2.04) | |
| | \geq 20.63 | 22/36 | 2.78 (0.98-7.88) | | 85/80 | 1.56 (0.81-2.61) | |
| IL-12 | <3.34 | 25/49 | 1.00 (reference) | | 76/67 | 1.00 (reference) | |

| | | | | | | | |
|--------------|----------------|-------|-------------------|------|-------|------------------|------|
| | 3.34 to <7.31 | 23/36 | 1.10 (0.44-2.80) | | 82/81 | 0.90 (0.53-1.53) | |
| | 7.31 to <14.86 | 18/42 | 0.71 (0.27-1.89) | | 54/75 | 0.55 (0.31-0.96) | |
| | ≥14.86 | 19/43 | 1.22 (0.48-3.13) | 0.91 | 58/73 | 0.83 (0.47-1.45) | 0.23 |
| GMCSF | <0.50 | 21/55 | 1.00 (reference) | | 62/61 | 1.00 (reference) | |
| | 0.50 to <0.96 | 26/33 | 1.35 (0.53-3.49) | | 55/84 | 0.78 (0.44-1.38) | |
| | 0.96 to <2.51 | 16/45 | 1.06 (0.38-2.92) | | 79/72 | 1.23 (0.70-2.15) | |
| | ≥2.51 | 22/37 | 1.24 (0.46-3.33) | 0.80 | 74/79 | 0.99 (0.57-1.74) | 0.62 |
| IFN γ | <0.98 | 18/59 | 1.00 (reference) | | 54/57 | 1.00 (reference) | |
| | 0.98 to <1.70 | 27/39 | 3.39 (1.39-9.96) | | 73/78 | 1.03 (0.58-1.85) | |
| | 1.70 to <3.79 | 22/41 | 3.09 (1.10-8.63) | | 76/75 | 1.23 (0.68-2.23) | |
| | ≥3.79 | 18/31 | 2.88 (0.96-8.65) | 0.07 | 67/86 | 0.88 (0.49-1.58) | 0.76 |
| TNF α | <1.64 | 13/52 | 1.00 (reference) | | 38/63 | 1.00 (reference) | |
| | 1.64 to <2.10 | 23/40 | 4.46 (1.46-13.66) | | 65/75 | 1.51 (0.81-2.81) | |
| | 2.10 to <2.75 | 21/42 | 3.38 (1.11-10.29) | | 72/78 | 1.42 (0.77-2.62) | |
| | ≥2.75 | 28/36 | 4.18 (1.43-12.17) | 0.03 | 95/80 | 2.01 (1.09-3.69) | 0.04 |

Abbreviations: NCI-MD, National Cancer Institute-Maryland; OR, odds ratio; CI, confidence interval; IL, interleukin; GMCSF, granulocyte-macrophage colony-stimulating factor; IFN, interferon; TNF, tumor necrosis factor.

^aQuartiles were based on serum cytokine cut-off levels among controls.

^bMultivariate unconditional logistic regression analysis adjusted for age (continuous), sex, smoking pack-years (continuous), smoking status (never, former quit ≤15 years, former quit >15 years, and current), education, history of emphysema/bronchitis, history of heart disease, BMI, and regular use of ibuprofen or aspirin.

^cP values were calculated using a two-sided Wald χ^2 statistic.