Table S1. Adjusted odds ratios and 95% confidence interval for self-reported symptom for respiratory and allergic disease and prevalence of acute and chronic diseases doctor-diagnosed by region

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| --- | --- | --- | --- | --- | --- | --- |
| **Region** | Ulsan | Shiwha & Banweol | Gwangyang Bay | Cheongju | Daesan | Pohang |
| Respiratory symptom |  |  |  |  |  |  |
| Cough | 1.24 (0.97, 1.58) | 1.16 (0.91, 1.47) | 0.97 (0.78, 1.22) | 1.05 (0.84, 1.31) | 1.11 (0.67, 1.84) | 1.61 (1.20, 2.14) |
| Sputum | 1.22 (0.97, 1.53) | 0.98 (0.79, 1.22) | 1.13 (0.92, 1.37) | 0.86 (0.72, 1.04) | 1.50 (0.93, 2.40) | 1.85 (1.39, 2.47) |
| Dyspnea | 0.89 (0.72, 1.11) | 1.19 (0.94, 1.52) | 1.12 (0.79, 1.58) | 1.01 (0.86, 1.18) | 1.24 (0.82, 1.89) | 1.72 (1.30, 2.28) |
| Wheezing | 0.95 (0.70, 1.29) | 1.15 (0.79, 1.67) | 1.15 (0.78, 1.69) | 0.75 (0.58, 0.96) | 1.47 (0.72, 3.01) | 2.81 (1.66, 4.76) |
| Symptoms of allergic rhinitis | 0.99 (0.85, 1.15) | 1.14 (0.98, 1.33) | 1.02 (0.92, 1.14) | 1.00 (0.88, 1.15) | 1.07 (0.74, 1.53) | 1.25 (1.01, 1.55) |
| Symptoms of atopic dermatitis | 1.24 (0.96, 1.61) | 1.01 (0.80, 1.27) | 1.01 (0.88, 1.15) | 1.03 (0.84, 1.27) | 0.81 (0.44, 1.51) | 1.58 (1.22, 2.05) |
| Symptoms of allergic conjunctivitis | 0.80 (0.66, 0.96) | 1.25 (1.03, 1.52) | 0.90 (0.82, 1.00) | 1.04 (0.90, 1.21) | 0.71 (0.50, 1.01) | 2.45 (1.92, 3.13) |
| Acute diseases |  |  |  |  |  |  |
| Acute bronchitis | 0.91 (0.42, 1.97) | 0.97 (0.44, 2.14) | 1.64 (1.07, 2.51) | 1.54 (0.52, 4.60) | 0.08 (0.01, 0.73) | 2.27 (0.67, 7.65) |
| Pneumonia | 0.57 (0.34, 0.94) | 0.97 (0.41, 2.26) | 0.61 (0.16, 2.37) | 0.83 (0.51, 1.35) | 0.90 (0.24, 3.44) | 1.92 (0.66, 5.59) |
| Acute eyes disorder | 1.56 (0.83, 2.92) | 1.17 (0.63, 2.16) | 0.92 (0.54, 1.58) | 1.41 (0.70, 2.84) | 2.24 (0.26, 19.42) | 3.14 (1.11, 8.86) |
| Acute dermatic disorder | 1.39 (0.67, 2.90) | 0.56 (0.31, 1.00) | 1.32 (0.49, 3.50) | 1.32 (0.63, 2.78) | 0.54 (0.15, 1.93) | 2.54 (0.89, 7.27) |
| Chronic diseases |  |  |  |  |  |  |
| COPD | 0.99 (0.55, 1.79) | 1.53 (0.71, 3.27) | 0.63 (0.44, 0.91) | 1.32 (0.70, 2.51) | 1.80 (0.38, 8.41) | 1.21 (0.55, 2.66) |
| Asthma | 0.78 (0.48, 1.30) | 1.40 (0.85, 2.30) | 0.93 (0.72, 1.21) | 1.17 (0.76, 1.81) | 1.64 (0.53, 5.02) | 12.30 (3.01, 50.30) |
| Sinusitis | 0.89 (0.53, 1.51) | 1.41 (0.90, 2.20) | 0.85 (0.66, 1.09) | 0.89 (0.65, 1.22) | 0.72 (0.22, 2.38) | 2.17 (0.91, 5.13) |
| Allergic rhinitis | 0.90 (0.71, 1.14) | 0.89 (0.74, 1.07) | 1.02 (0.86, 1.21) | 0.99 (0.82, 1.20) | 0.86 (0.45, 1.63) | 0.87 (0.65, 1.18) |
| Allergic dermatitis | 0.94 (0.66, 1.34) | 0.90 (0.64, 1.25) | 0.86 (0.66, 1.12) | 1.01 (0.72, 1.44) | 1.04 (0.45, 2.39) | 2.82 (1.41, 5.65) |
| Allergic conjunctivitis | 0.84 (0.49, 1.46) | 0.85 (0.59, 1.22) | 0.74 (0.51, 1.09) | 1.12 (0.73, 1.70) | N/C | 1.40 (0.53, 3.74) |
| Hypertension | 0.95 (0.76, 1.18) | 0.90 (0.77, 1.06) | 0.97 (0.87, 1.07) | 0.98 (0.82, 1.16) | 0.56 (0.40, 0.80) | 1.26 (1.03, 1.53) |
| Stroke | 0.82 (0.47, 1.40) | 1.37 (0.83, 2.28) | 1.01 (0.72, 1.42) | 1.27 (0.81, 1.98) | 0.51 (0.24, 1.10) | 2.41 (1.23, 4.72) |
| Angina/ myocardial infarction | 1.27 (0.70, 2.32) | 0.78 (0.53, 1.16) | 0.89 (0.66, 1.19) | 1.25 (0.85, 1.84) | 0.75 (0.35, 1.62) | 1.26 (0.78, 2.03) |
| Diabetes | 1.19 (0.88, 1.63) | 0.94 (0.76, 1.16) | 0.91 (0.80, 1.03) | 1.04 (0.83, 1.32) | 0.71 (0.44, 1.15) | 1.21 (0.93, 1.58) |
| Anemia | 0.72 (0.51, 1.03) | 0.86 (0.61, 1.21) | 1.07 (0.87, 1.32) | 1.00 (0.71, 1.39) | 1.21 (0.49, 3.00) | 2.15 (1.24, 3.74) |
| Thyroid disease | 0.84 (0.59, 1.20) | 0.76 (0.56, 1.01) | 0.86 (0.68, 1.09) | 0.85 (0.61, 1.18) | 1.22 (0.48, 3.13) | 1.36 (0.87, 2.10) |
| Cancers |  |  |  |  |  |  |
| Lung  | N/C | 1.31 (0.28, 6.12) | N/C | 1.42 (0.16, 12.83) | N/C | N/C |
| Stomach  | 0.60 (0.29, 1.24) | 1.28 (0.49, 3.39) | 0.44 (0.13, 1.52) | 1.56 (0.78, 3.11) | 0.56 (0.22, 1.41) | 1.56 (0.59, 4.13) |
| Colon  | 1.28 (0.35, 4.67) | 1.07 (0.39, 2.89) | 0.62 (0.16, 2.33) | 0.82 (0.37, 1.81) | 2.06 (0.44, 9.68) | 5.45 (0.72, 41.25) |
| Liver  | 0.51 (0.08, 3.15) | 0.50 (0.09, 2.76) | N/C | 0.68 (0.17, 2.74) | N/C | 2.85 (0.36, 22.62) |
| Breast  | 0.99 (0.31, 3.15) | 1.01 (0.40, 2.56) | N/C | 1.34 (0.58, 3.09) | 1.74 (0.31, 9.79) | 0.32 (0.13, 0.82) |
| Uterine  | 1.27 (0.35, 4.55) | 3.82 (0.50, 29.40) | 1.41 (0.16, 12.67) | 3.77 (0.88, 16.11) | 0.45 (0.10, 2.11) | 1.92 (0.56, 6.57) |
| Other  | 0.65 (0.35, 1.22) | 0.95 (0.59, 1.53) | 0.41 (0.14, 1.24) | 0.95 (0.59, 1.51) | 6.46 (0.86, 48.74) | 1.10 (0.90, 1.34) |
| The data are presented as odds ratio (95% confidence interval) adjusted for age, sex, body mass index, smoking, education level, and occupational exposure.N/C, not calculated because of including zero cell frequency. |