## Supplementary

Table S1 Baseline characteristics of patients with normal and abnormal chest X-ray in chronic cough

| Characteristics | Patients with normal chest X -ray (n=5,038, 85.2\%) | Patients with abnormal chest X-ray $\text { ( } \mathrm{n}=873,14.8 \% \text { ) }$ | P value |
| :---: | :---: | :---: | :---: |
| Cough duration (months) | Median 6 (IQR, 3-12) | Median 7 (IQR, 3-12) | 0.013 |
| Age (years) | $51.2 \pm 15.6$ | $62.2 \pm 12.5$ | <0.001 |
| Female sex (\%) | 64.6\% | 57.0\% | <0.001 |
| Smoking history (\%) |  |  |  |
| Never smoker | 70.9\% | 62.1\% | <0.001 |
| Former smoker | 17.4\% | 27.5\% | <0.001 |
| Current smoker | 8.8\% | 8.3\% | 0.598 |
| Physician-diagnosed history |  |  |  |
| Respiratory disease (\%) |  |  |  |
| Allergic rhinitis | 12.1\% | 7.1\% | <0.001 |
| Chronic rhinosinusitis | 18.7\% | 17.1\% | 0.263 |
| Asthma | 21.5\% | 21.2\% | 0.839 |
| Chronic obstructive pulmonary disease | 1.4\% | 6.1\% | <0.001 |
| Bronchiectasis | 0.3\% | 2.5\% | <0.001 |
| Pulmonary tuberculosis | 0.2\% | 1.5\% | <0.001 |
| Interstitial lung disease | 0.4\% | 1.8\% | <0.001 |
| None | 56.6\% | 55.0\% | 0.383 |
| Non-respiratory disease (\%) |  |  |  |
| Gastroesophageal reflux disease | 10.3\% | 7.8\% | 0.021 |
| Malignancy | 6.9\% | 9.4\% | 0.007 |
| Heart failure | 0.4\% | 0.3\% | 0.696 |
| Hypertension | 22.0\% | 31.4\% | <0.001 |
| Diabetes mellitus | 8.1\% | 13.6\% | <0.001 |
| None | 62.8\% | 52.7\% | <0.001 |
| Concomitant symptoms (\%) |  |  |  |
| Abnormal throat sensation* | 72.7\% | 68.3\% | 0.008 |
| Sputum | 60.1\% | 70.7\% | <0.001 |
| Postnasal drip/throat clearing | 38.4\% | 29.9\% | <0.001 |
| Rhinorrhea | 33.3\% | 35.1\% | 0.308 |
| Sneeze | 31.5\% | 28.4\% | 0.068 |
| Nasal obstruction | 27.2\% | 18.4\% | <0.001 |
| Dyspnea | 24.7\% | 35.1\% | <0.001 |
| Wheeze | 18.1\% | 25.7\% | <0.001 |

Table S1 (continued)

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| Characteristics | Patients with normal chest X-ray <br> $(\mathrm{n}=5,038,85.2 \%)$ | Patients with abnormal chest X-ray <br> $(\mathrm{n}=873,14.8 \%)$ | P value |
| :--- | :---: | :---: | :---: |
| Hoarseness | $11.5 \%$ | $12.5 \%$ | 0.398 |
| Throat pain | $11.1 \%$ | $9.5 \%$ | 0.154 |
| Heartburn | $19.3 \%$ | $18.4 \%$ | 0.537 |
| Acid regurgitation | $16.2 \%$ | $12.3 \%$ | 0.003 |

Data were presented as mean $\pm$ standard deviation, median (interquartile range), or percentages. *, globus, tickling, or dryness. IQR, interquartile range.

