Supplementary Table S1. Incidence rates of moderate or severe exacerbations according to different inhaled therapies in the propensity score-matched cohort

|  |  |  |  |
| --- | --- | --- | --- |
| Treatment | n | IR\* | IRR\* (95% CI) |
| No regular treatment | 107 | 0.31 | 1 |
| LAMA monotherapy or LABA monotherapy | 54 | 0.25 | 0.81 (0.38–1.72) |
| ICS/LABA combination therapy | 26 | 0.62 | 1.99 (0.82–4.85) |
| LABA/LAMA combination therapy | 6 | 0.56 | 1.79 (0.29–10.94) |
| Triple therapy | 12 | 0.54 | 1.71 (0.51–5.70) |

CI: confidence interval; ICS: inhaled corticosteroid; IR: incidence rate (per patient-year); IRR: incidence rate ratio; LABA: long-acting β-agonist; LAMA: long-acting muscarinic antagonist.

\*Unadjusted.

Supplementary Table S2. Subgroup analyses of change from baseline to 12 months in the SGRQ-C total score in the propensity score-matched cohort

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Subgroup |  | No regular treatment | Regular treatment | *P* value for Interaction |
| mMRC dyspnea score |  |  |  | 0.524 |
| 0 | Mean change from baseline (95% CI) | 6.6 (3.8 to 9.5) | 0.8 (–2.0 to 3.5) |  |
|  | Mean difference (95% CI) | –5.9 (–9.8 to –1.9) |  |
| 1 | Mean change from baseline (95% CI) | 6.8 (3.9 to 9.7) | 3.4 (0.6 to 6.2) |  |
|  | Mean difference (95% CI) | –3.4 (–7.4 to 0.6) |  |
| CAT score  |  |  |  | 0.920 |
| < 10 | Mean change from baseline (95% CI) | 7.7 (5.0 to 10.5) | 2.4 (–0.2 to 5.1) |  |
|  | Mean difference (95% CI) | –5.3 (–9.1 to –1.5) |  |
| ≥ 10 | Mean change from baseline (95% CI) | 8.5 (4.2 to 12.7) | 3.5 (–0.6 to 7.7) |  |
|  | Mean difference (95% CI) | –5.0 (–10.9 to 1.0) |  |
| Post-bronchodilator FEV1% |  |  |  | 0.057 |
| ≥ 50% predicted | Mean change from baseline (95% CI) | 7.3 (5.0 to 9.6) | 2.1 (–0.2 to 4.4) |  |
|  | Mean difference (95% CI) | –5.2 (–8.5 to –1.9) |  |
| < 50% predicted | Mean change from baseline (95% CI) | 0.7 (–5.0 to 6.4) | 3.9 (–0.2 to 7.9) |  |
|  | Mean difference (95% CI) | 3.2 (–3.8 to 10.2) |  |

CAT: COPD Assessment Test; CI: confidence interval; COPD: chronic obstructive pulmonary disease; mMRC: modified Medical Research Council.

Supplementary Table S3. Subgroup analyses of change from baseline to 12 months in the mMRC dyspnea score in the propensity score-matched cohort

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Subgroup |  | No regular treatment | Regular treatment | *P* value for Interaction |
| mMRC dyspnea score |  |  |  | 0.245 |
| 0 | Mean change from baseline (95% CI) | 0.8 (0.6 to 0.9) | 0.4 (0.2 to 0.5) |  |
|  | Mean difference (95% CI) | –0.4 (–0.6 to –0.2) |  |
| 1 | Mean change from baseline (95% CI) | 0.2 (0.1 to 0.3) | –0.04 (–0.16 to 0.09) |  |
|  | Mean difference (95% CI) | –0.3 (–0.4 to –0.1) |  |
| CAT score  |  |  |  | 0.043 |
| < 10 | Mean change from baseline (95% CI) | 0.5 (0.3 to 0.7) | –0.1 (–0.2 to 0.1) |  |
|  | Mean difference (95% CI) | –0.6 (–0.8 to –0.3) |  |
| ≥ 10 | Mean change from baseline (95% CI) | 0.4 (0.1 to 0.7) | 0.3 (0.03 to 0.6) |  |
|  | Mean difference (95% CI) | –0.1 (–0.5 to 0.3) |  |
| Post-bronchodilator FEV1  |  |  |  | 0.068 |
| ≥ 50% predicted | Mean change from baseline (95% CI) | 0.5 (0.3 to 0.6) | 0.1 (–0.1 to 0.2) |  |
|  | Mean difference (95% CI) | –0.4 (–0.6 to –0.2) |  |
| < 50% predicted | Mean change from baseline (95% CI) | 0.1 (–0.2 to 0.5) | 0.3 (0.04 to 0.5) |  |
|  | Mean difference (95% CI) | 0.2 (–0.3 to 0.6) |  |

CAT: COPD Assessment Test; CI: confidence interval; COPD: chronic obstructive pulmonary disease; mMRC: modified Medical Research Council.