# Supplementary Materials

Equation 1 The rate of annual FEV1 in liter decline

FEV1 decline, liter= -0.0254×Age+0.03978×ln(Height, cm)-2.404 (For Male)

=-0.0199×Age+0.02825×ln(Height, cm)-1,272 (For Female)

Equation 2 The EQ-5D health utility value of COPD patients with different health states

EQ-5D Health Utility=0.057×Gender+0.003×(FEV1% predicted)-0.003×BMI-0.01×(Number of concomitant diseases in the previous year)-0.029×(number of emergency department visits not resulting hospital admission in previous year)-0.02×(number of hospital admissions in the previous year) +0.668

Table S1 OWSA of IND/GLY vs SAL/FLU

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Scenario | Description | Upper Value Tested | Lower Value Tested | Difference | Absolute Difference |
| ICUR | ICUR | ICUR | ICUR |
| Base case | Base case | -52,519 | -52,519 | 0 | 0 |
| Scenario1 | FEV1 IND/GLY benefit | -36,240 | -648,652 | 612,412 | 612,412 |
| Scenario2 | FEV1 SAL/FLU benefit | 2,283,439 | -29,470 | 2,312,909 | 2,312,909 |
| Scenario3 | Exacerbation IND/GLY rate ratio | -25,520 | -70,158 | 44,638 | 44,638 |
| Scenario4 | Exacerbation SAL/FLU rate ratio | -98,917 | -12,102 | -86,815 | 86,815 |
| Scenario5 | Baseline rate of exacerbation | -53,308 | -46,285 | -7.024 | 7,024 |
| Scenario6 | IND/GLY costs | -19,967 | -87,072 | 67,106 | 67,106 |

Table S2 OWSA of IND/GLY vs Tiotropium

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Scenario | Description | Upper Value Tested | Lower Value Tested | Difference | Absolute Difference |
| ICUR | ICUR | ICUR | ICUR |
| Base case | Base case | 63,244 | 63,244 | 0 | 0 |
| Scenario1 | FEV1 IND/GLY benefit | 31,966 | -153,387 | 185,354 | 185,354 |
| Scenario2 | FEV1 Tiotropium benefit | -265,437 | 32,825 | -298,264 | 298,264 |
| Scenario3 | Exacerbation IND/GLY rate ratio | 106,107 | 25,084 | 81,023 | 81,023 |
| Scenario4 | Exacerbation Tiotropium rate ratio | 21,408 | 107,824 | -86,417 | 86,417 |
| Scenario5 | Baseline rate of exacerbation | 63,257 | 63,284 | -28 | 28 |
| Scenario6 | IND/GLY costs | 121,626 | 4,875 | 116,751 | 116,751 |