**Supplemental data**

**Table 1. Overview of the medication use.**

|  |  |
| --- | --- |
| **Type of medication**  **(with specified combinations)** | **Number of patients (% of total sample)** |
|  |  |
| **Monotherapy** | **4 (2.0)** |
| SABA | 2 (1.0) |
| SAMA | 0 (0.0) |
| LABA | 0 (0.0) |
| LAMA | 0 (0.0) |
| ICS | 2 (1.0) |
|  |  |
| **Bronchodilator combinations\*** | **11 (5.5)** |
| SABA/SAMA | 1 (0.5) |
| LABA/SABA | 1 (0.5) |
| LAMA/SABA | 1 (0.5) |
| LABA/LAMA | 4 (2.0) |
| LABA/SAMA/SABA | 0 (0.0) |
| LAMA/SABA/SAMA | 1 (0.5) |
| LABA/LAMA/SABA | 2 (1.0) |
| LABA/LAMA/SABA/SAMA | 1 (0.5) |
|  |  |
| **ICS containing combinations\*** | **178 (88.6)** |
| ICS/SABA | 3 (1.5) |
| ICS/SAMA | 0 (0.0) |
| ICS/LABA | 24 (11.9) |
| ICS/LAMA | 3 (1.5) |
| ICS/SABA/SAMA | 2 (1.0) |
| ICS/LABA/SABA | 25 (12.4) |
| ICS/LAMA/SABA | 4 (2.0) |
| ICS/LABA/SAMA | 8 (4.0) |
| ICS/LAMA/SAMA | 1 (0.5) |
| ICS/LABA/LAMA | 19 (9.5) |
| ICS/LABA/SABA/SAMA | 13 (6.5) |
| ICS/LAMA/SABA/SAMA | 1 (0.5) |
| ICS/LABA/LAMA/SABA | 41 (20.4) |
| ICS/LABA/LAMA/SAMA | 3 (1.5) |
| ICS/LABA/LAMA/SABA/SAMA | 31 (15.4) |
|  |  |
| **Maintenance OCS** | **39 (19.4)** |
| **Missing** | **8 (4.0)** |

Values are presented as frequencies (percentages).   
*Abbreviations*. SABA: short acting beta agonist; SAMA: short acting muscarinic antagonist; ICS: inhalation corticosteroids; LAMA: long acting muscarinic antagonist; LABA: long acting beta agonist; OCS: oral corticosteroids. \*the presented combinations include both single-inhaler combination therapies as well as multi-inhaler combination therapies

**Table 2**. Differences in amount of improvement (Δ6MWD) after stratifying for different age groups and smoking status.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Stratification variable** | **Grouping** | **N = 201** | | |
|  |  | Δ6MWD (m) | N | p-value |
| Sex | Male  Female | 19.9 ± 41.0  15.9 ± 51.3 | 84  117 | 0.551 |
| Age | 18-40 years  40-65 years  65+ years | 6.6 ± 28.0  18.1 ± 39.9  18.4 ± 58.9 | 11  116  74 | 0.732 |
| Smoking status | Current  Former  Never | 9.8 ± 42.1  14.7 ± 47.1  21.9 ± 49.7 | 17  92  86 | 0.481 |

Data are expressed as mean ± SD.

**Table 3.** Odds ratios for a clinically important improvement of ≥27 m in the second 6MWT in comparison with the first 6MWT in patients with asthma.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| *Variable* | *Reference* | *OR* | *LL* | *UL* | *p-value* |
| Age ≥65 years | Age <65 years | 1.21 | 0.67 | 2.19 | 0.534 |
| Male gender | Female gender | 0.97 | 0.54 | 1.74 | 0.908 |
| BMI ≥30 | BMI <30 | 0.77 | 0.44 | 1.36 | 0.369 |
| Blood eosinophils ≥150 cells/μL | Blood eosinophils  <150 cells/μL | 0.90 | 0.48 | 1.70 | 0.751 |
| OCS use | no OCS use | 0.76 | 0.36 | 1.59 | 0.465 |
| mMRC ≥2 | mMRC <2 | 1.35 | 0.64 | 2.83 | 0.432 |
| Rollator yes | Rollator no | 0.99 | 0.44 | 2.26 | 0.989 |
| 6MWD1 <350m | 6MWD1 ≥350m | 0.82 | 0.43 | 1.58 | 0.557 |
| 6MWT1 desat. | 6MWT1 no desat. | 1.01 | 0.39 | 2.61 | 0.985 |
| FEV1/FVC <70 | FEV1/FVC ≥70 | 0.68 | 0.36 | 1.28 | 0.234 |
| RV/TLC ≥40 | RV/TLC <40 | 0.78 | 0.42 | 1.46 | 0.443 |
| HADS-A ≥10 | HADS-A <10 | 0.84 | 0.43 | 1.62 | 0.592 |
| HADS-D ≥10 | HADS-D <10 | 0.85 | 0.42 | 1.71 | 0.643 |

Models adjusted for age, sex, and BMI (in analyses considering any of these variables as independent variable, only the two other variables were used for adjustment).   
*Abbreviations*. OR: Odds Ratio; LL: lower limit of the 95% confidence interval for the OR; UL: upper limit of the 95% confidence interval for the OR; BMI: body mass index; OCS: oral corticosteroid; mMRC: modified Medical Research Council; 6MWD1: six-minute walking distance of the first test; 6MWT1: first six-minute walking test; FEV1: forced expiratory volume in one second; FVC: forced vital capacity; RV: residual volume; TLC: total lung capacity; HADS-A: Hospital Anxiety and Depression Scale, Anxiety subscale; HADS-D: Hospital Anxiety and Depression Scale, Depression subscale.

**Table 4**. Test-retest reliability analysis of the 6-minute walking test (6MWT): Distance, oxygen saturation, heart rate and Borg symptom scores.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | *6MWT1* | *6MWT2* | *Delta* | *ICC&* |
|  |  |  |  |  |
| **Six minute walking distance (6MWD)** | | | | |
| 6MWD, meters | 392 (376-408) | 410 (393-427) | 18 (11-24)\* | 0.91 (0.86-0.94) |
| 6MWD, %predicted | 63.2 (60.8-65.5) | 66.0 (63.5-68.6) | 2.9 (1.7-4.0)\* | 0.87 (0.82-0.91) |
|  |  |  |  |  |
| **Arterial oxygen saturation (SpO2)** | | | | |
| SpO2 pre-test (at rest), % | 94.8 (94.4-95.1) | 94.7 (94.4-95.0) | -0.1 (-0.4-0.2) | 0.64 (0.55-0.71) |
| SpO2 end-test (peak exertion), % | 92.9 (92.2-93.5) | 92.6 (92.0-93.3) | -0.2 (-0.6-0.1) | 0.82 (0.77-0.86) |
| Δ SpO2, % | -1.9 (-2.4 - -1.4) | -2.0 (-2.6 - -1.5) | -0.1 (-0.5-0.3) | 0.68 (0.60-0.75) |
|  |  |  |  |  |
| **Borg dyspnea and fatigue scores** | | | | |
| Borg dyspnea pre-test (at rest) | 2.1 (1.8-2.3) | 2.0 (1.8-2.2) | -0.1 (-0.3-0.2) | 0.50 (0.38-0.59) |
| Borg dyspnea end-test (peak exertion) | 5.0 (4.7-5.3) | 5.3 (4.9-5.6) | 0.2 (0.0-0.5) | 0.64 (0.55-0.71) |
| Δ Borg dyspnea | 3.0 (2.7-3.2) | 3.3 (3.0-3.6) | 0.3 (0.0-0.6)\* | 0.44 (0.32-0.54) |
| Borg fatigue pre-test (at rest) | 1.9 (1.7-2.1) | 1.7 (1.5-2.0) | -0.1 (-0.3-0.0) | 0.62 (0.52-0.70) |
| Borg fatigue end-test (peak exertion) | 4.2 (3.9-4.5) | 4.5 (4.1-4.8) | 0.3 (0.0-0.5)\* | 0.69 (0.61-0.76) |
| Δ Borg fatigue | 2.3 (2.1-2.6) | 2.7 (2.4-3.0) | 0.4 (0.1-0.7)\* | 0.47 (0.35-0.57) |
|  |  |  |  |  |
| **Heart rate (HR)** | | | | |
| HR pre-test (at rest), beats/min | 81 (80-83) | 84 (82-85) | 2 (1-4)\* | 0.74 (0.66-0.80) |
| HR end-test (peak exertion), beats/min | 105 (103-107) | 109 (107-112) | 4 (3-6)\* | 0.71 (0.59-0.78) |
| Δ HR, beats/min | 24 (22-26) | 26 (24-28) | 2 (0-4)\* | 0.57 (0.47-0.65) |

Data are expressed as mean and 95% Confidence Interval. & The two-way random ICC with single measures (ICC2,1) was calculated. \* p<0.05  
*Abbreviations.* 6MWT: 6-minute walking test; ICC: intraclass correlation coefficient; 6MWD: Six minute walking distance; SpO2: Arterial oxygen saturation; HR: Heart rate; min: minute.

**Table 5**. Comparison of patient characteristics and 6MWD in patients with vs. without rollator use during the 6MWT.

|  |  |  |
| --- | --- | --- |
|  | *No rollator use* | *Rollator use* |
|  |  |  |
| Number of patients (%) | 164 (81.6) | 37 (18.4) |
|  |  |  |
| Age, years | 60 ± 12 | 67 ± 10\* |
| BMI, kg/m2 | 30.1 ± 6.2 | 35.2 ± 9.1\* |
| FFMI, kg/m2 | 18.0 ± 2.6 | 18.8 ± 3.6 |
| FEV1, % pred | 79 ± 27 | 73 ± 28 |
| FEV1/FVC ratio, % | 60 ± 16 | 58 ± 18 |
| RV, % pred | 114 ± 31 | 123 ± 45 |
| RV/TLC ratio, % | 40 ± 9 | 47 ± 11\* |
| TLC, % pred | 104 ± 16 | 104 ± 21 |
| MIP, % pred | 93 ± 28 | 85 ± 23 |
| MEP, % pred | 74 ± 25 | 69 ± 24 |
| 6MWD1, m | 426 (411-440) | 244 (217-271)\* |
| 6MWD1, %pred | 67 (65-69) | 45 (40-50)\* |
| 6MWD2, m | 444 (428-459) | 258 (227-289)\* |
| 6MWD2, %pred | 70 (68-72) | 48 (43-54)\* |
| Δ6MWD, m | 18 (11-26) | 14 (3-25) |

Data are expressed as mean ± SD or mean and 95% Confidence Interval, as appropriate. \* no rollator use vs. rollator use: p<0.05  
*Abbreviations*. BMI: body mass index; FFMI: fat-free mass index; FEV1: forced expiratory volume in one second; FVC: forced vital capacity; RV: residual volume; TLC: total lung capacity; MIP: maximal inspiratory pressure, MEP: maximal expiratory pressure; 6MWD1: six-minute walking distance of the first test.