Title: Patients with severe COPD show significant improvements in dyspnea and lung function with once-daily QVA149: The BLAZE study

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Body: Introduction Patients with severe COPD experience marked deterioration in lung function and breathlessness compared to patients with mild-to-moderate COPD. We report improvement of dyspnea and lung function in patients with severe COPD in the BLAZE study with QVA149, a dual bronchodilator combining the long-acting β₂-agonist indacaterol and the long-acting muscarinic antagonist glycopyrronium, versus placebo (PB) and tiotropium (TIO). Method In this 6-wk, multicenter, blinded, placebo-controlled, 3-period, crossover study, patients ≥40yrs with moderate-to-severe COPD were randomized to QVA149 110/50µg or TIO 18µg or PB. Improvements in patient-reported dyspnea via the innovative self-administered computerized (SAC) Baseline and Transition Dyspnea Index (BDI/TDI) and FEV₁ AUC₀–⁴h were assessed. Results 78 (31.6%) of the 247 patients randomized had severe COPD. The percentage of patients with severe COPD achieving ≥1 point improvement in SAC-TDI total score was higher with QVA149 (41.7%) compared with TIO (30.0%; odds ratio 1.66; p=0.185) and PB (21.7%; odds ratio 2.98; p=0.007). QVA149 provided rapid bronchodilation, with statistically significant (p<0.001) improvements in FEV₁ AUC₀–⁴h versus PB and TIO. Least squares mean treatment difference between QVA149-PB and QVA149-TIO were 1.92 (p<0.001) and 0.76 (p=0.042) for SAC-TDI and 254mL and 92mL (both p<0.001) for FEV₁ AUC₀–⁴h, respectively. Conclusion In patients with severe COPD, once-daily QVA149 provided clinically meaningful and statistically superior improvements in lung function which translated into better control of breathlessness compared to placebo and tiotropium.