

## ONLINE SUPPLEMENT

### **Nebulized Versus Dry Powder Long-Acting Muscarinic Antagonist Bronchodilators in Patients With COPD and Suboptimal Peak Inspiratory Flow Rate**

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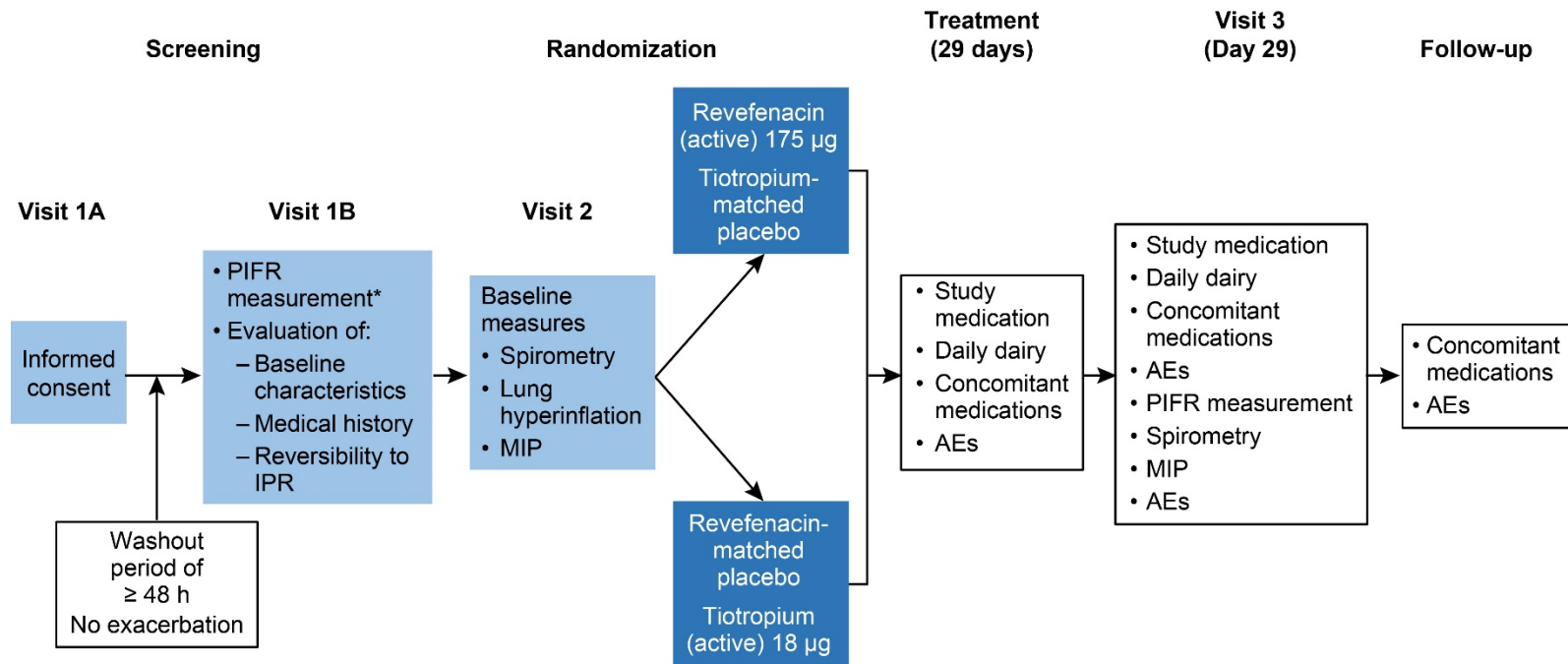
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#### **Methods**

##### **Randomization and Treatment Allocation**

After screening, eligible patients were randomized to 1 of 2 treatment groups using Interactive Web Response System (Day 1/Visit 2) with the following stratification factors: baseline peak inspiratory flow rate ( $<40$  L/min and  $\geq 40$  L/min) against the resistance of Diskus; long-acting  $\beta$ -agonist use; and Global Initiative for Chronic Obstructive Lung Disease airway limitation grade (2, 3, and 4). Randomization was allocated centrally with blocking at the study site level.

**e-Figure. Study Design**



\*PIFR measured using In-Check device at both resistances set to Diskus and Handihaler (for descriptive purposes)

AE = adverse event; IPR = ipratropium; MIP = maximal inspiratory pressure; PIFR = peak inspiratory flow rate