

2023 Global Initiative for Chronic Obstructive Lung Disease (GOLD) Report



Key Points for Practice:

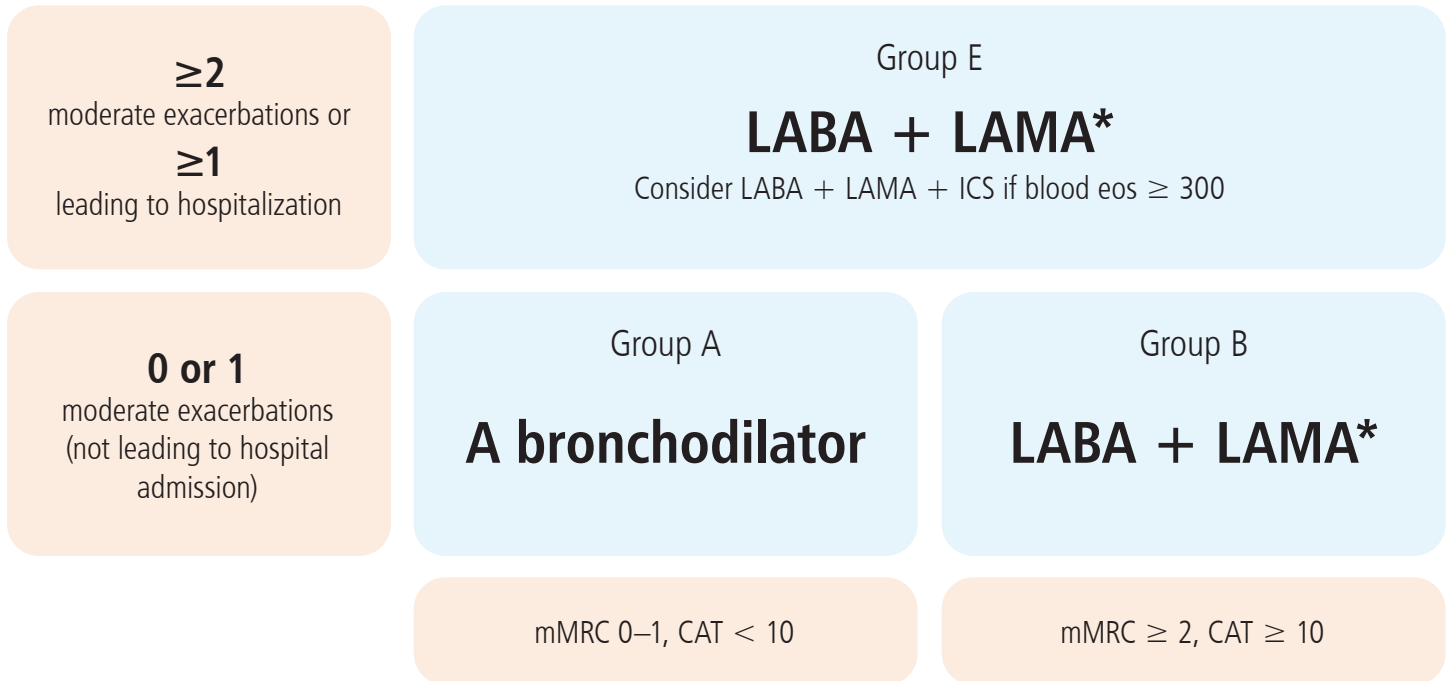
- Combination long-acting beta agonist (LABA)+long-acting muscarinic antagonist (LAMA) is the preferred initial treatment choice for patients with COPD.
- Long-term inhaled corticosteroid (ICS) monotherapy and LABA+ICS are not recommended regimens in COPD.

Additional Treatment Options

- Addition of a **phosphodiesterase-4 (PDE4) inhibitor to a regimen of long-acting bronchodilators +/- ICS can be considered** in patients with severe to very severe airflow limitation, chronic bronchitis, and exacerbations.
- **Azithromycin can be considered in former smokers** with exacerbations despite appropriate therapy.
- **Theophylline is not recommended** unless other long-term treatment bronchodilators are not an option, and **statin therapy and beta blockers are not recommended** for the prevention of exacerbations.
- **If there is an indication for an ICS, then LABA+LAMA+ICS is recommended.** If a concurrent diagnosis of asthma and COPD is suspected, pharmacotherapy should primarily follow asthma guidelines, but pharmacological and non-pharmacological approaches may also be needed for their COPD.
- **Rescue short-acting bronchodilators should be prescribed to all patients** for immediate symptom relief.
- **Smoking cessation is key.** Combination nicotine replacement therapy (NRT), which includes a nicotine patch and a short-acting NRT (i.e., nicotine gum or lozenge), and varenicline are considered first-line pharmacotherapies for smoking cessation.

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Algorithm for Initial Pharmacological Treatment



*Single inhaler therapy may be more convenient and effective than multiple inhalers.
Exacerbations refers to the number of exacerbations per year.

Abbreviations:

eos = blood eosinophil count in cells/ μ l

mMRC = modified Medical Research Council dyspnea questionnaire

CAT™ = COPD Assessment Test™

Per the updated 2023 GOLD guidelines, initial pharmacotherapy should be based on the patient's GOLD group and preferably should include a LABA or LAMA.

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Algorithm for Follow-Up Pharmacological Treatment

If response to initial treatment is inadequate and inhaler adherence and technique are appropriate, base follow-up treatment on predominant trait (dyspnea or exacerbations).

Dyspnea:

- For patients with persistent breathlessness or exercise limitation on bronchodilator monotherapy, two long-acting bronchodilators are recommended.
- If this does not improve symptoms, consider switching inhaler device or molecules.

Exacerbations:

- For patients with persistent exacerbations on bronchodilator monotherapy, escalation to LABA+LAMA is recommended.
- For patients with exacerbations on bronchodilator monotherapy and a blood eosinophil count ≥ 300 cells/ μ L, **escalation to LABA+LAMA+ICS** may be considered due to a greater magnitude of ICS response with higher eosinophil counts.
- In patients who develop further exacerbations on LABA+LAMA therapy (or low eosinophil counts < 100 cells/ μ L):
 - **Escalate to LABA+LAMA+ICS** OR
 - **Add roflumilast** for patients with a forced expiratory volume in the first second (FEV1) $< 50\%$ predicted and chronic bronchitis, particularly if they have experienced at \geq one hospitalization for an exacerbation in the previous year
OR
 - **Add a macrolide**, particularly azithromycin, especially in those who are not current smokers.

References

1. Global Initiative for Chronic Obstructive Pulmonary Disease. Global strategy for the diagnosis, management, and prevention of chronic obstructive pulmonary disease, updated 2023. goldcopd.org/2023-gold-report-2
2. Barua RS et al. 2018 ACC Expert Consensus Decision Pathway on Tobacco Cessation Treatment. *J Am Coll Cardiol.* 2018;72(25):3332-3365.