

DIAGNOSE AND GRADE *two separate axes — and only one of them picks the inhaler*

**THE DIAGNOSIS**

Post-bronchodilator FEV<sub>1</sub>/FVC < 0.70 with compatible symptoms and exposure. **Spirometry is mandatory** — COPD diagnosed without it is frequently wrong, and a substantial proportion of "COPD" patients turn out to have asthma, heart failure or nothing at all.

**GOLD 1–4 — airflow limitation**

By FEV<sub>1</sub> per cent predicted: ≥ 80 (GOLD 1), 50–79 (2), 30–49 (3), < 30 (4). Useful for prognosis and for surgical and transplant decisions — but **it does not select the inhaler**.

**ABE — symptoms and exacerbations**

**This is what drives treatment.** Assessed by symptom burden (mMRC or CAT) and **exacerbation history in the past year**. The old **C and D groups were merged into a single group E**, because exacerbation risk mattered more than symptoms.

CHOOSE THE INITIAL INHALER *by ABE group*

| Group | Definition                                                                                   | Initial therapy                                                                                                                     |
|-------|----------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| A     | Low symptoms, 0–1 moderate exacerbations with no hospitalization                             | A single bronchodilator — either a LAMA or a LABA.                                                                                  |
| B     | High symptoms, 0–1 moderate exacerbations with no hospitalization                            | LABA plus LAMA combination.                                                                                                         |
| E     | ≥ 2 moderate exacerbations, or ≥ 1 leading to hospitalization — regardless of symptom burden | LABA plus LAMA as first choice. Consider first-line triple therapy (LABA/LAMA/ICS) if the blood eosinophil count is ≥ 300 cells/μL. |

**Escalating later:** in a high-risk patient already on LABA/LAMA who continues to exacerbate, **add an ICS if the eosinophil count is ≥ 100 cells/μL**. If exacerbations persist despite triple therapy, consider **roflumilast** (chronic bronchitis with FEV<sub>1</sub> < 50%) or **azithromycin** (particularly in former smokers), checking QTc and hearing first.

THE EOSINOPHIL RULE *who benefits from inhaled steroid, and who is harmed*

**WHEN ICS HELPS**

Higher eosinophils predict ICS benefit in preventing exacerbations. ≥ 300 cells/μL supports triple therapy from the outset in group E; ≥ 100 supports adding ICS when escalating. Also favor ICS with a **history or features of asthma**.

**WHEN IT HARMS**

Eosinophils below 100 predict little benefit, while the harms remain. **ICS increases pneumonia risk** in COPD, along with oral candidiasis, dysphonia, and bone and skin effects. **Blanket triple therapy for everyone is not appropriate** — and where it was started without indication, **de-escalation is reasonable** in patients with low eosinophils and no exacerbations, with follow-up.

THE NON-INHALER CARE *most of the mortality benefit lives here*

| Intervention             | Detail                                                                                                                                                                                                                                                                  |
|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Smoking cessation        | <b>The only intervention that alters the rate of lung function decline</b> , and the highest-yield thing you will do. Offer pharmacotherapy and behavioral support at every contact, not just advice.                                                                   |
| Pulmonary rehabilitation | Consistently improves <b>breathlessness, exercise capacity and quality of life</b> , and reduces readmission after an exacerbation. <b>Markedly under-referred</b> .                                                                                                    |
| Long-term oxygen therapy | <b>Improves survival only in chronic severe resting hypoxemia</b> — typically PaO <sub>2</sub> ≤ 55 mmHg, or ≤ 59 mmHg with cor pulmonale or polycythemia. Must be used ≥ 15 hours a day. <b>It is not a treatment for breathlessness</b> in the non-hypoxemic patient. |
| Vaccination              | <b>Influenza, pneumococcal, COVID-19, RSV where eligible, and pertussis-containing boosters</b> . Reduces exacerbations and admissions.                                                                                                                                 |
| Inhaler technique        | <b>Check it at every visit and before escalating</b> . A large proportion of "treatment failure" is device technique or adherence, not inadequate pharmacology. Match the device to the patient's inspiratory flow and dexterity.                                       |
| Treat the comorbidities  | <b>Cardiovascular disease, heart failure, anxiety and depression, osteoporosis, and lung cancer screening</b> . Most COPD patients die of something other than respiratory failure, and comorbidity drives much of the symptom burden.                                  |

WHEN IT MIGHT NOT BE COPD *or not only COPD*

| Consider                       | Clue and action                                                                                                                                                                                                                                                   |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Asthma or overlap              | Younger, never-smoker, atopy, marked variability and reversibility, high eosinophils. Matters because asthma <b>requires</b> inhaled corticosteroid and must never be treated with a long-acting bronchodilator alone.                                            |
| Alpha-1 antitrypsin deficiency | <b>Test every COPD patient at least once</b> — particularly with <b>early onset, minimal smoking history, basal emphysema, a family history, or unexplained liver disease</b> . It changes family screening and may qualify the patient for augmentation therapy. |
| Heart failure                  | Frequently coexists and is frequently mislabelled as COPD. <b>Orthopnea, raised JVP, edema</b> — check <b>NT-proBNP and an echocardiogram</b> . Both can drive the same breathlessness.                                                                           |
| Bronchiectasis                 | <b>Chronic copious sputum, recurrent infection, hemoptysis</b> . A CT chest changes management, including airway clearance and organism-directed antibiotics.                                                                                                     |
| Lung cancer                    | COPD is a major independent risk factor. <b>New or changed cough, hemoptysis or weight loss warrants imaging</b> , and eligible patients should be in a <b>screening program</b> .                                                                                |

PEARLS & PITFALLS

- FEV<sub>1</sub> **does not choose the inhaler**. Exacerbation history and symptoms do — that is the whole point of the ABE grouping.
  - Check the eosinophil count before adding an inhaled steroid**. Below 100 the benefit is minimal and the pneumonia risk is real.
  - Confirm the diagnosis with spirometry**. Treating undiagnosed heart failure or asthma as COPD is common.
- Oxygen improves survival only in chronic resting hypoxemia**, and only if worn most of the day. It is not for breathlessness.
  - Check inhaler technique before escalating**. Most apparent treatment failure is device failure.
  - Refer to pulmonary rehabilitation** — it outperforms most drug escalations for symptoms and function, and is routinely forgotten.