Global Initiative for
Chronic Obstructive
Lung Disease

2024
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Global Strategy for the Diagnosis, Management, and Prevention of Chronic Obstructive Pulmonary Disease

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GOLD 2024 Novel Recommendations

Claus F. Vogelmeier on behalf of GOLD Science Committee

- **Chapter 3** and **Chapter 4** have been consolidated into one chapter to reduce repetitive information and the chapters included in the 2024 document are as follows:
  - **Chapter 1: Definition and Overview**
  - **Chapter 2: Diagnosis and Assessment**
  - **Chapter 3: Prevention and Management of COPD**
  - **Chapter 4: Management of Exacerbations**
  - **Chapter 5: COPD and Comorbidities**
  - **Chapter 6: COVID-19 and COPD**

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- Algorithms for assessment and treatment unchanged

Initial Pharmacological Treatment

Figure 3.7

≥ 2 moderate exacerbations or ≥ 1 leading to hospitalization

GROUP E

LABA + LAMA*

consider LABA+LAMA+ICS if blood eos ≥ 300*

0 or 1 moderate exacerbations (not leading to hospital admission)

GROUP A

A bronchodilator

mMRC 0-1, CAT < 10

GROUP B

LABA + LAMA*

mMRC ≥ 2, CAT ≥ 10

*single inhaler therapy may be more convenient and effective than multiple inhalers; single inhalers improve adherence to treatment

Exacerbations refers to the number of exacerbations per year

Single-inhaler triple versus dual bronchodilator therapy for GOLD group E patients with COPD: real-word study

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Study design

- Clinical Practice Research Datalink (CPRD)
- COPD pts ≥40 yrs, ≥2 moderate or 1 severe exacerbation(s), no TX before – GOLD E

Single inhaler triple (n=467) | LAMA-LABA (n=1596)

Up to 1 yr

- Hazard ratio for blood eos ≥300 vs. <300 cells/µL
  - moderate-severe exacerbation
  - severe pneumonia

S Suissa Eur Respir J. 2023;62:2300883.

Single-inhaler triple versus dual bronchodilator therapy for GOLD group E patients with COPD: real-word study

Results

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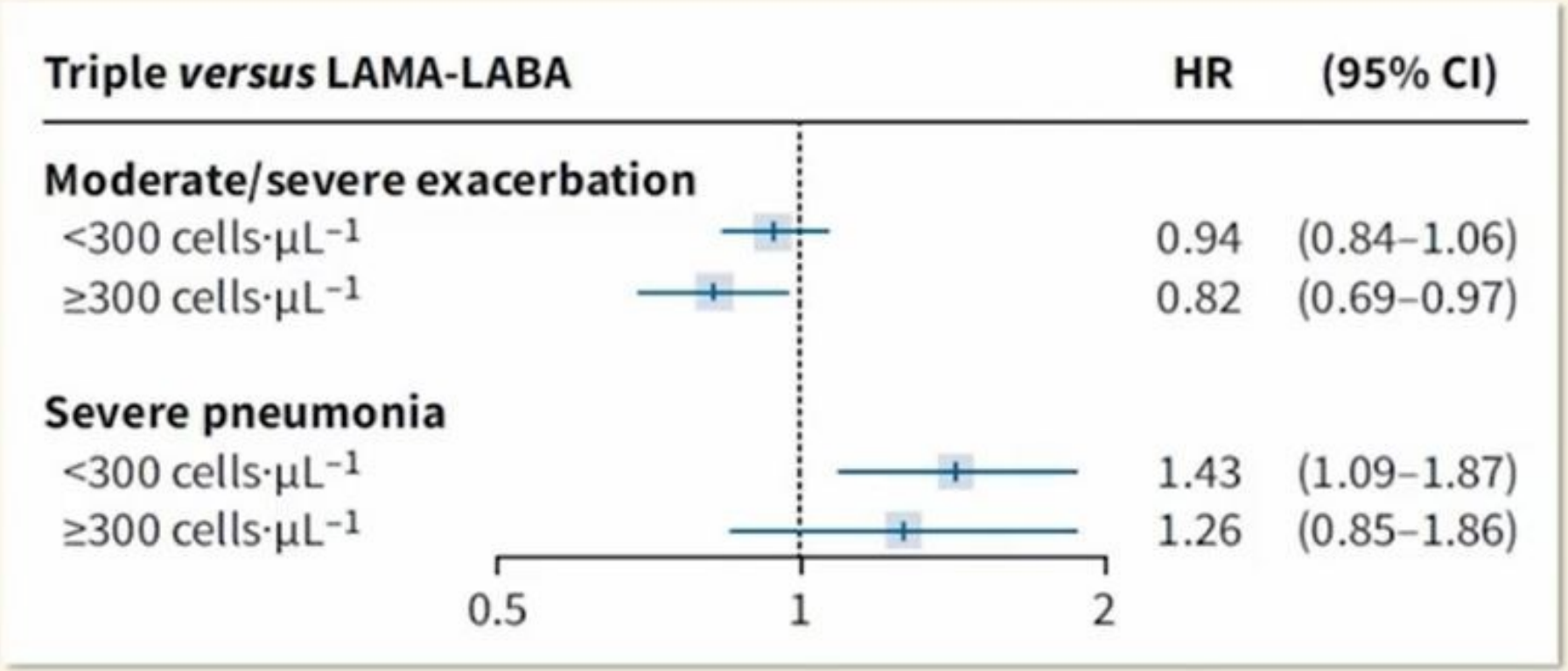
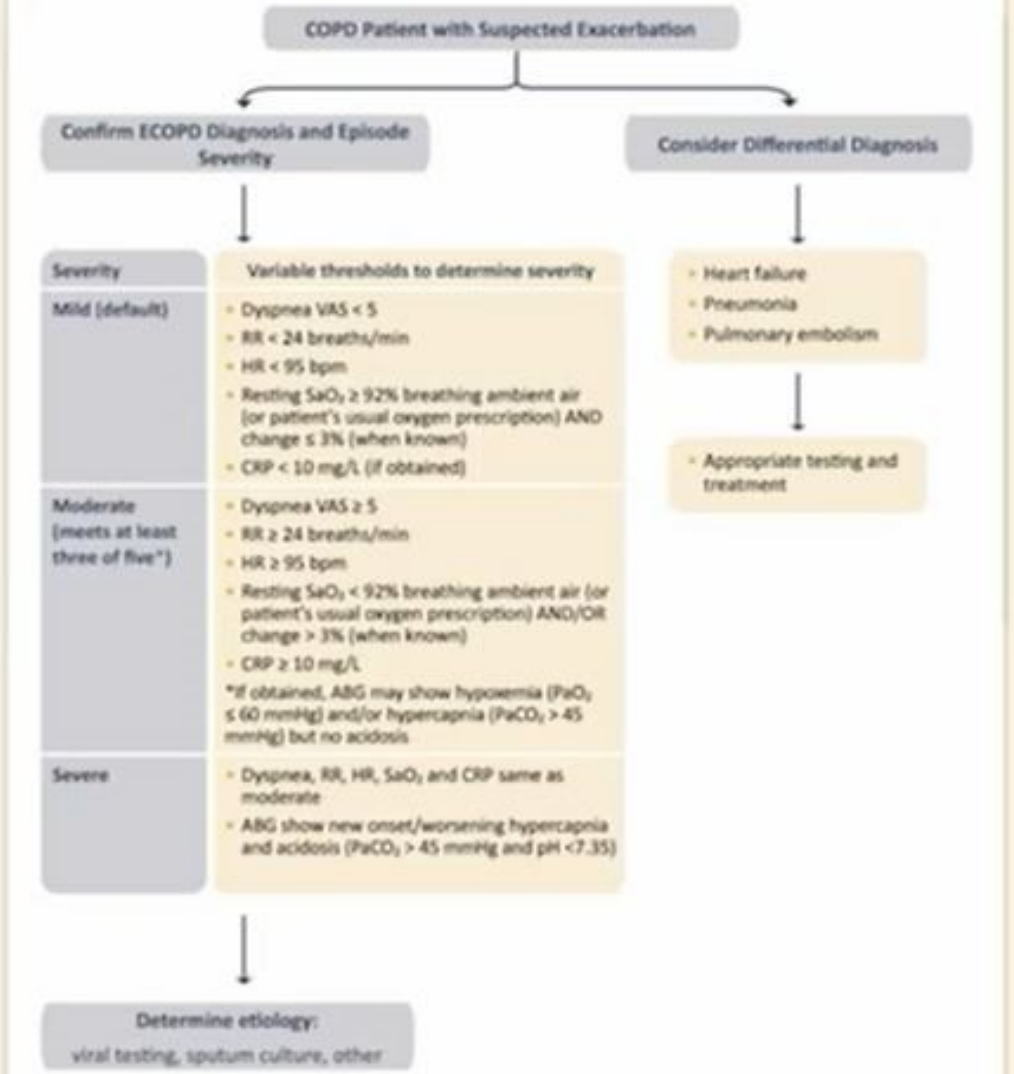


S Suissa Eur Respir J. 2023;62:2300883.

Classification of the Severity of COPD Exacerbations

Figure 4.3



Adapted from: The ROME Proposal, Celli et al. (2021) Am J Respir Crit Care Med. 204(11): 1251-8.

Abbreviations: VAS visual analog dyspnea scale; RR respiratory rate; HR heart rate; SaO_2 oxygen saturation; CRP C-reactive protein; ABG arterial blood gases; PaO_2 Arterial pressure of oxygen.

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- A new section on **Hyperinflation** has been added (Page 17)

Dynamic Lung Hyperinflation

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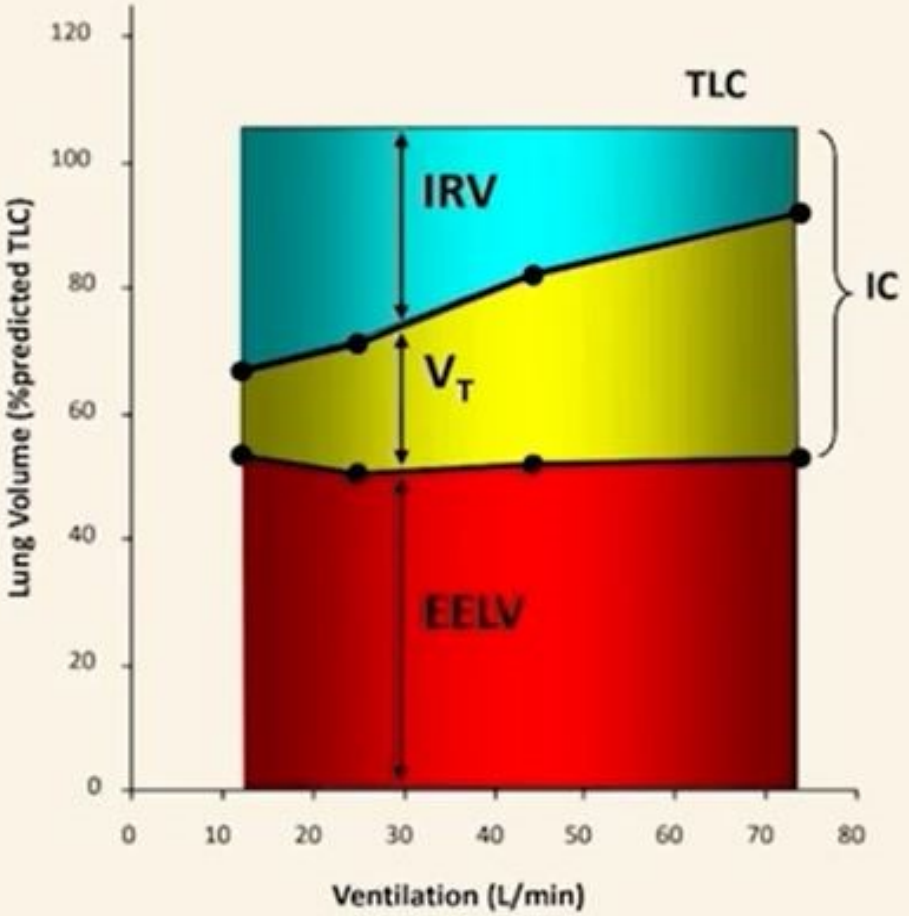
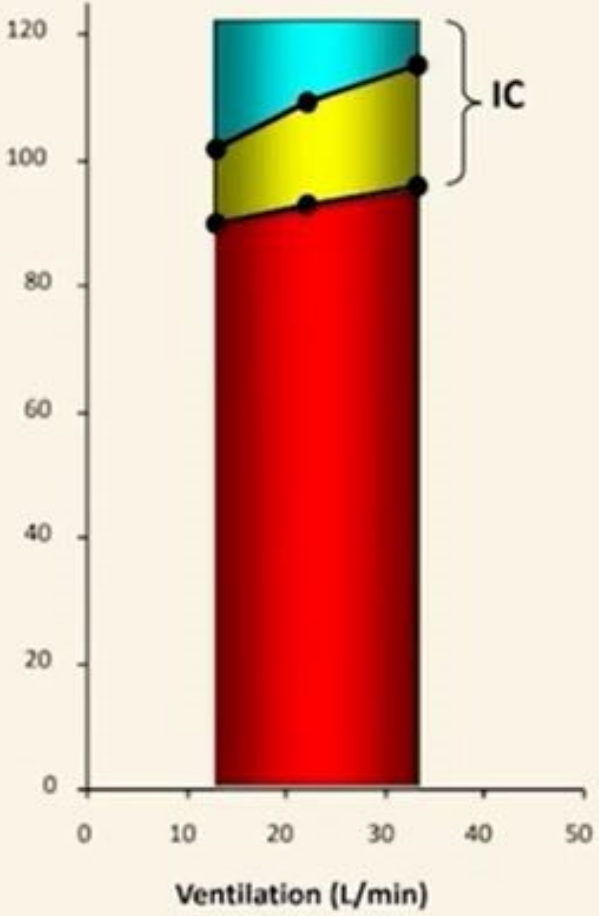
Normal



COPD



Ferguson, Proc Am Thorac Soc 2006

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- In the **Spirometry** section further clarification about pre-bronchodilator spirometry has been added (Page 26

Lower limit of normal versus fixed FEV_1/FVC

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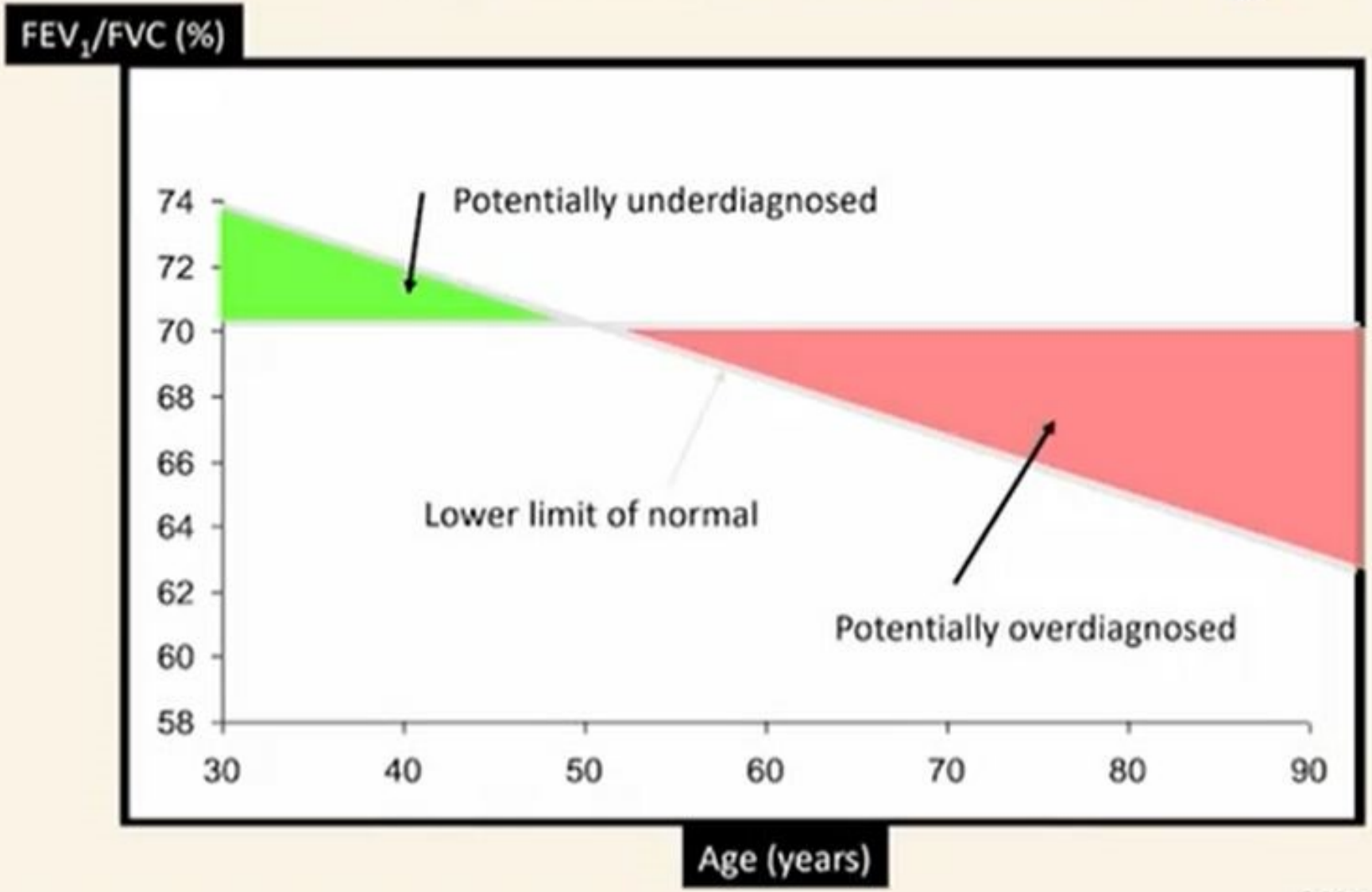

D Mannino et al, *Thorax* 2007; 62: 237-241

Proposal – when to do post bronchodilator (BD) spirometry

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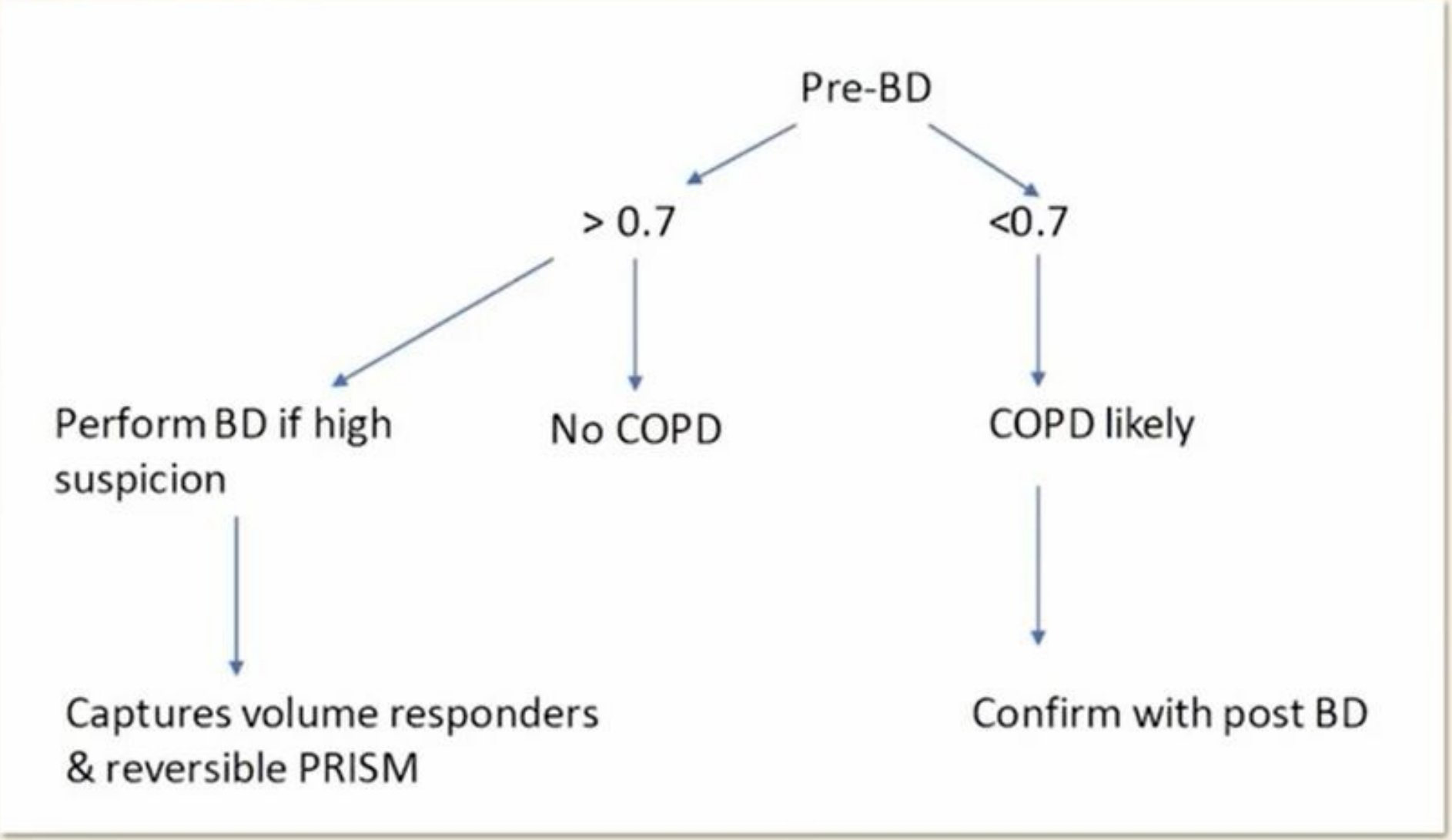

Courtesy D Singh

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- A new section on **Screening for COPD in Targeted Populations** (Page 29) has been added with information on **Leveraging Lung Cancer Imaging for COPD screening** (Page 29), including spirometry screening in targeted populations, and **Leveraging Incidental Lung Imaging Abnormalities for COPD Screening** (Page 30)

Prevalence, symptom burden, and underdiagnosis of COPD in a lung cancer screening cohort

Prevalence of reported respiratory symptoms last 12 months

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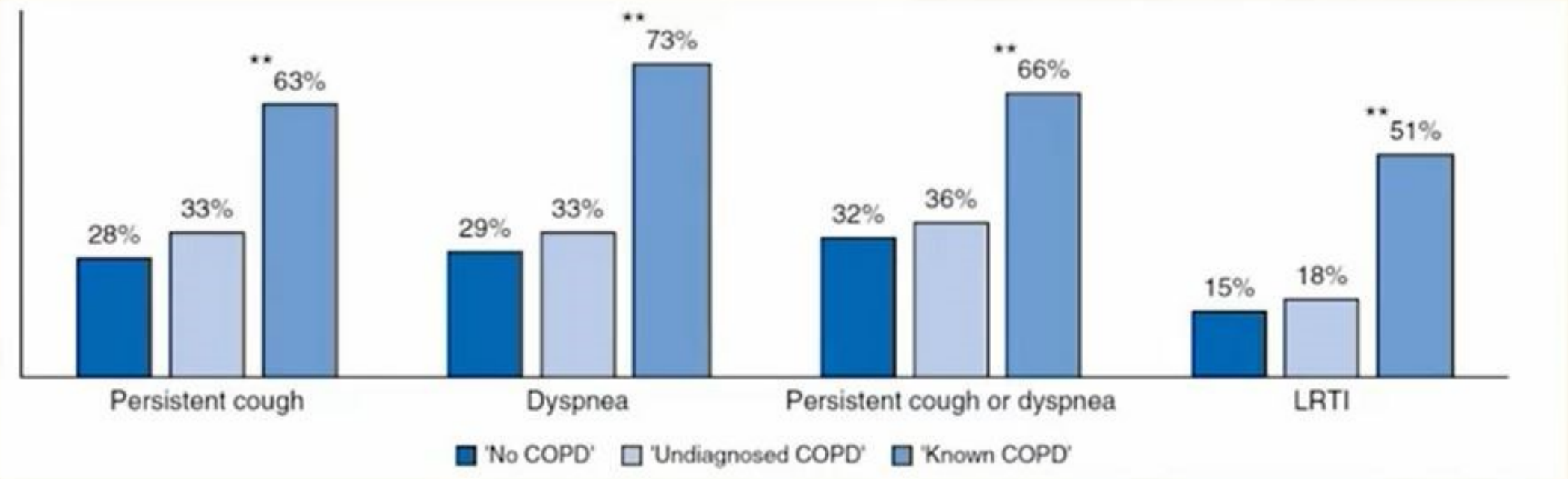
**p≤0.001



LRTI: lower respiratory tract infection

M Ruparel et al Ann Am Thorac Soc 2020; 17: 869–78

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- **Interstitial Lung Abnormalities** are now covered (Page 38)

Suspected Interstitial Lung Disease in COPDGene Study

Flow chart

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JA Rose et al Am J Respir Crit Care Med 2023; 207:60–68

Suspected Interstitial Lung Disease in COPDGene Study

Serial chest computed tomography scans from two participants with interstitial lung abnormalities (ILA)

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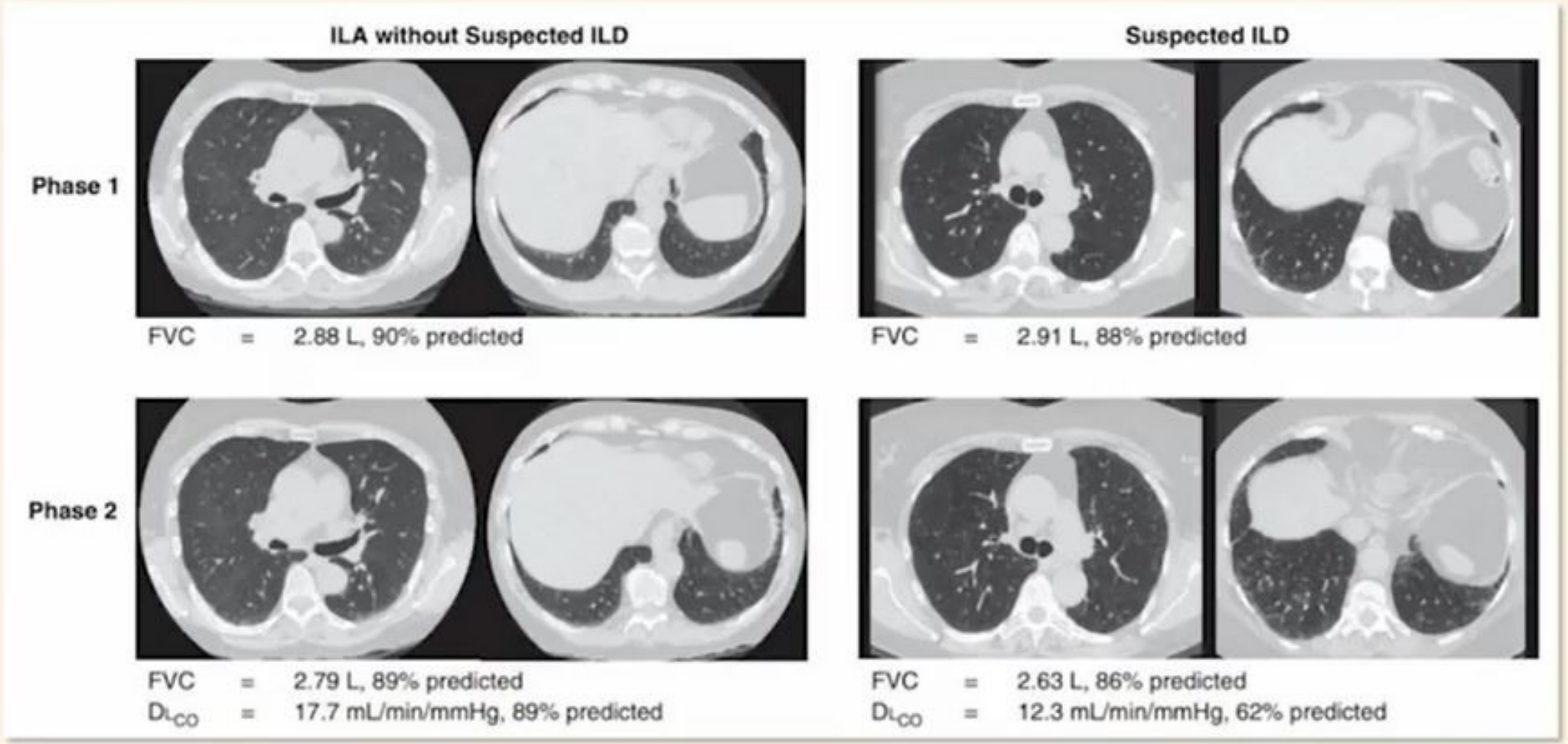

JA Rose et al Am J Respir Crit Care Med 2023; 207:60–68

Suspected Interstitial Lung Disease in COPDGene Study

Survival

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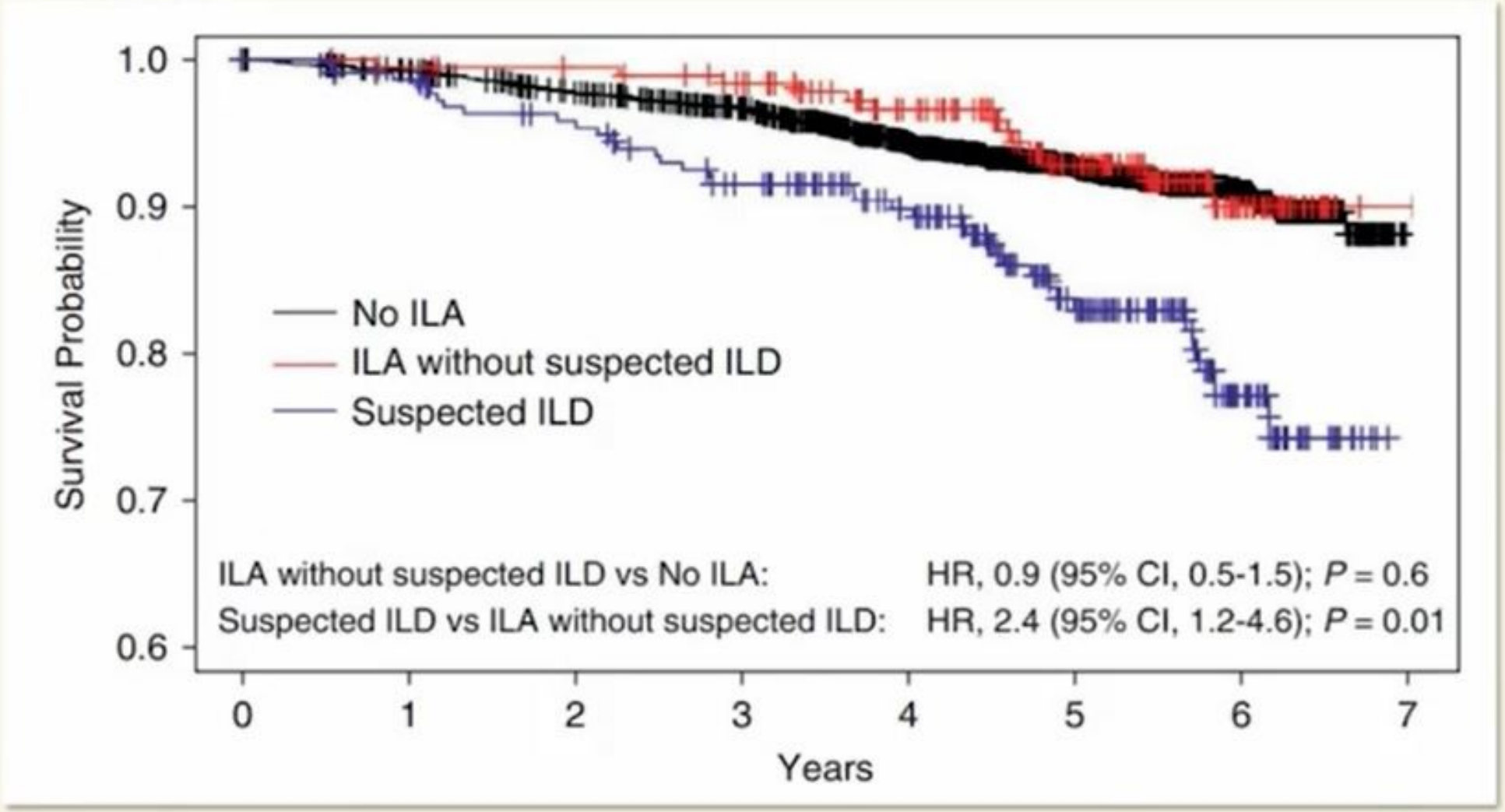

JA Rose et al Am J Respir Crit Care Med 2023; 207:60–68

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- The section on **Smoking Cessation** has been revised (Page 43)
- A new section on **Pharmacotherapies for Smoking Cessation** has been added (Page 69)

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Vaping/E-cigarettes

- …The efficacy of vaping with regard to smoking cessation remains controversial…

  an increased risk of respiratory disease among former and current e-cigarette users was observed even when adjusted for cigarette and other combustible tobacco product use, demographic characteristics, and chronic health conditions…

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Vaping/E-cigarettes

- …based on the available evidence and the lack of knowledge about the long-term effects of e-cigarettes on respiratory health, it is not possible to recommend this intervention for smoking cessation in patients with COPD…

Vaccination for Stable COPD

Figure 3.6

- Influenza vaccination is recommended for people with COPD **(Evidence B)**
- The WHO and CDC recommends SARS-CoV-2 (COVID-19) vaccination for people with COPD **(Evidence B)**
- The CDC recommends one dose of 20-valent pneumococcal conjugate vaccine (PCV20); or one dose of 15-valent pneumococcal conjugate vaccine (PCV15) followed by 23-valent pneumococcal polysaccharide vaccine (PPSV23) for people with COPD **(Evidence B)**
- Pneumococcal vaccination has been shown to reduce the incidence of community-acquired pneumonia and exacerbations for people with COPD **(Evidence B)**
- The CDC recommends the new respiratory syncytial virus (RSV) vaccine for individuals over 60 years and/or with chronic heart or lung disease **(Evidence A)**
- The CDC recommends Tdap (dTaP/dTPa) vaccination to protect against pertussis (whooping cough) for people with COPD that were not vaccinated in adolescence **(Evidence B)**, and Zoster vaccine to protect against shingles for people with COPD over 50 years **(Evidence B)**

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Burden of RSV estimates in older adults in industrialized countries

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RSV is prevalent but under-recognized in older adults

Systematic literature review and meta-analysis estimated the annual burden of RSV-ARI among those aged ≥60 years

Incidence

1.62% (95% CI: 0.84, 3.08)

or **~5.2 million** cases of RSV-ARI*

Hospitalization

0.15% (95% CI: 0.09, 0.22)

or **~470,000** hospitalizations*

In-hospital case fatality rate

7.13% (95% CI: 5.40, 9.36)

or **~33,000** deaths*

Global RSV burden may be under-estimated in older adults:

This study was carried out in high-income countries (North America, Europe, and Asia-Pacific regions)

Routine laboratory confirmation of RSV is not widely established in older adults

*Calculated using the European population aged ≥60 years old in 2019
ARI, acute respiratory infections; CI, confidence intervals
Savic M *et al. Influenza Other Respir Viruses* 2023;17(1):e13031

Shared Clinical Decision-Making (SCDM)

RSV Vaccination for Adults 60 Years and Older

- Respiratory syncytial virus (RSV) is a cause of severe respiratory illness across the lifespan. Each year in the United States, RSV leads to approximately 60,000-160,000 hospitalizations and 6,000-10,000 deaths among adults 65 years and older.
- Adults 60 years of age and older now have the option to receive one dose of RSV vaccine based on a SCDM process between a patient and their health care provider.
- Consider multiple factors when discussing RSV vaccination with your patients. SCDM recommendations are optional and are informed by whether the patient has any risk factors for severe RSV disease; a patient's risk of exposure to RSV; a patient's preferences for RSV vaccination; and the clinical discretion of the health care provider.

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Underlying medical conditions associated with increased risk for severe RSV disease include:

Chronic lung disease (e.g., COPD and asthma)

Chronic kidney disease

Moderate or severe immunocompromise

Chronic cardiovascular disease (e.g., CHF and CAD)

Chronic liver disease

Chronic hematologic disorders

Chronic or progressive neurologic or neuromuscular conditions

Diabetes Mellitus

Any underlying *condition* that a provider determines might increase the risk of severe RSV disease

Other factors associated with **increased** risk for severe RSV disease include:

Frailty or advanced age, as determined by the healthcare provider

Residence in a nursing home or other long-term care facility

Any underlying *factor* a provider determines might increase the risk of severe RSV disease

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- **Managing Inhaled Therapy** has been expanded (Page 53) and includes information on a patient's **Ability to use the Delivery System Correctly** (Page 54) and **Choice of Inhaler Device** (Page 55)

Choosing wisely….the right device

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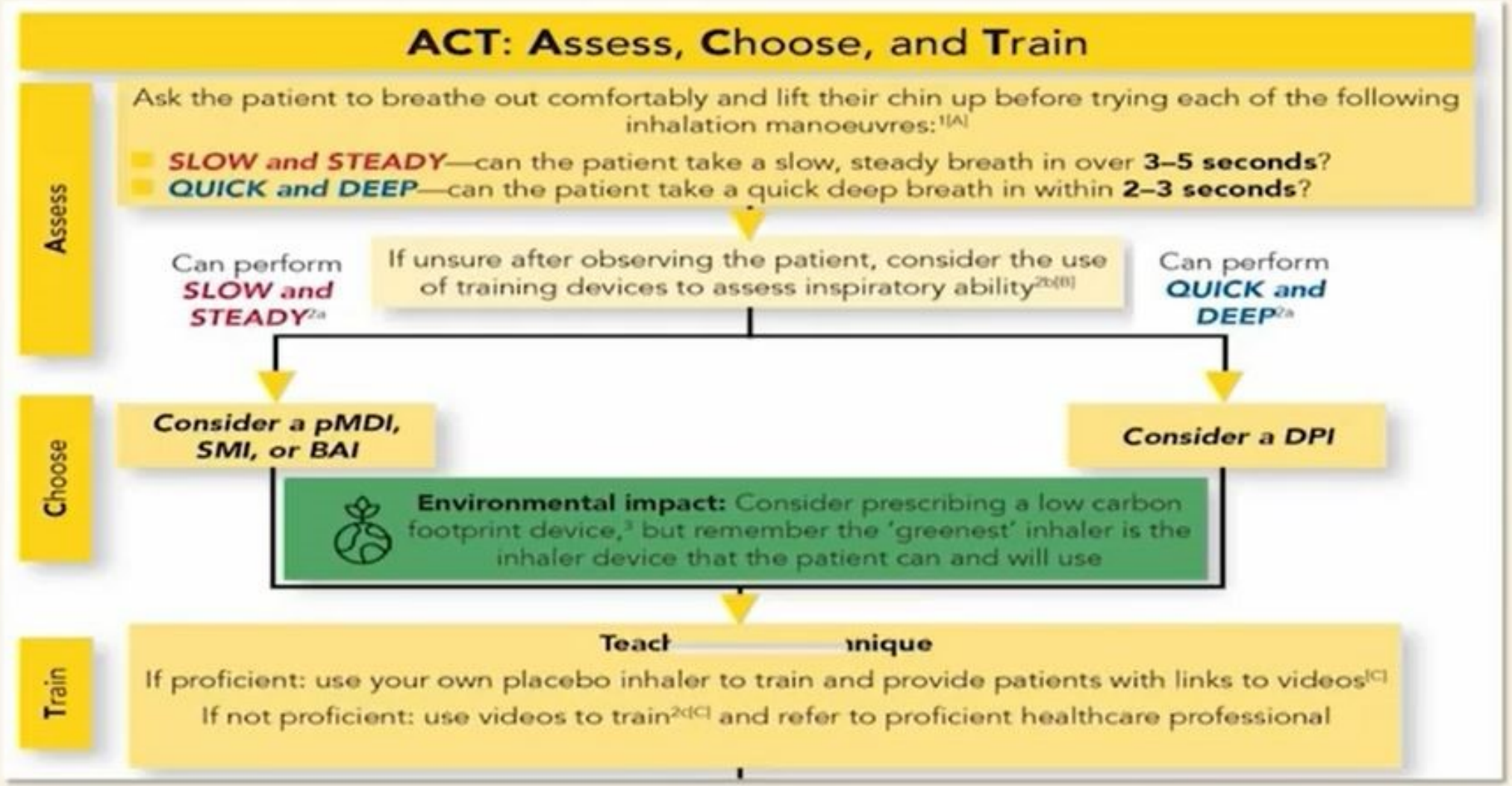
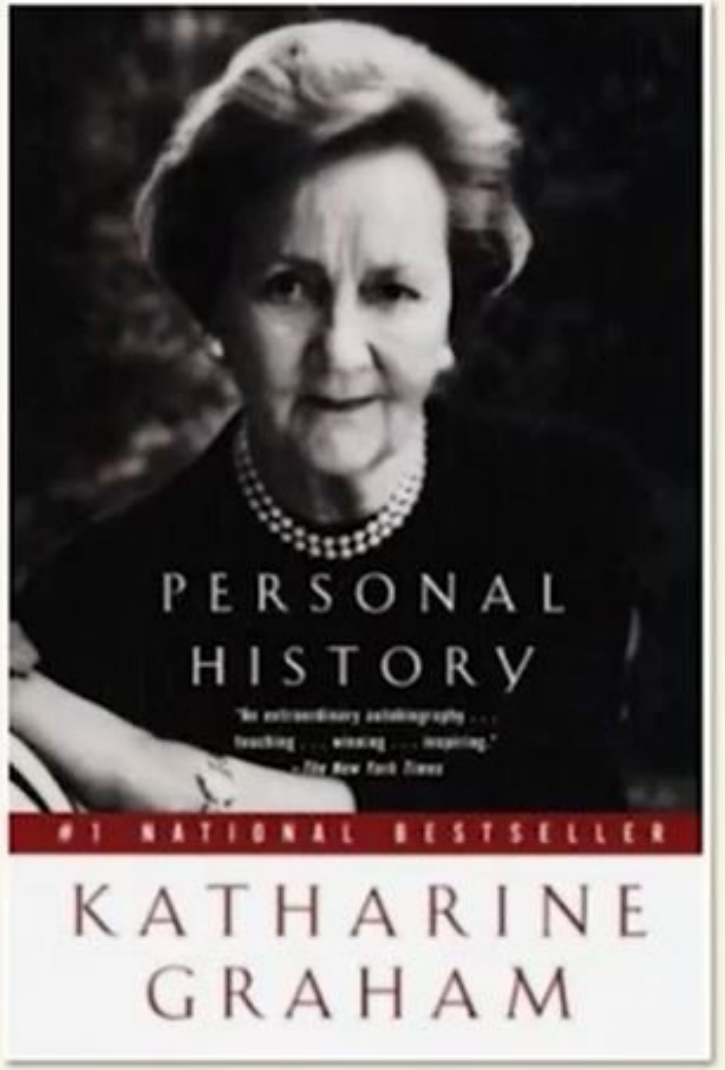


Usmani et al. www.guidelines.co.uk/respiratory/

„The greatest wealth is health“



Katharine Graham 1917-2001