



HỘI HỒ HẤP
THÀNH PHỐ HỒ CHÍ MINH

HỘI NGHỊ THƯỜNG NIÊN HỘI HỒ HẤP - HRS 2026
THE ANNUAL CONFERENCE OF THE HO CHI MINH RESPIRATORY SOCIETY

ĐIỀU TRỊ COPD DỰA TRÊN TRỰC VIÊM INTERLEUKIN BẰNG CHỨNG HIỆN TẠI VÀ TRIỂN VỌNG

THS.BS. TRẦN THỊ THÚY TƯỜNG

GV-BM NTQ ĐHYD TPHCM

PK HEN-COPD BV ĐHYD TP HCM+KHOA HỒ HẤP BV NDGD

VŨNG TÀU, TP.HCM - NGÀY 21 THÁNG 3 NĂM 2026

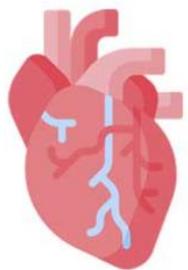
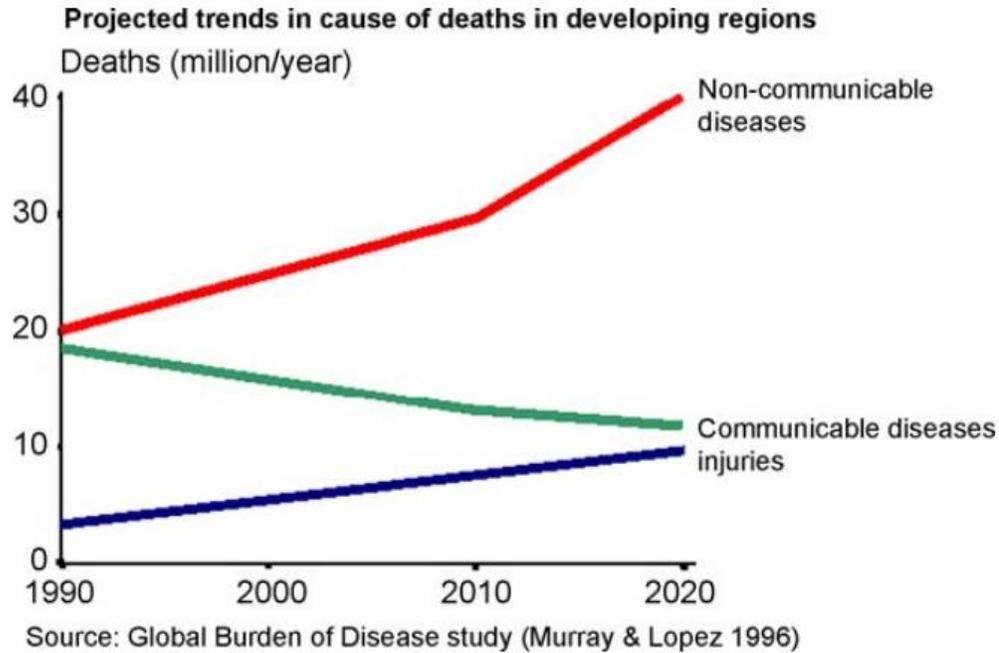
NỘI DUNG CHÍNH

1 Cập nhật điều trị COPD 2026

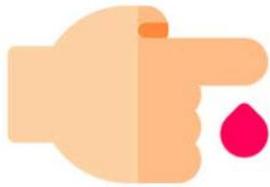
2 CÁC BẰNG CHỨNG ANTI-INTERLEUKIN

3 CÁC IL TRIỂN VỌNG TRONG ĐIỀU TRỊ COPD

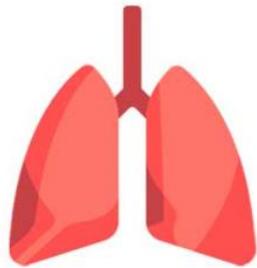
Thế kỷ 21: Kỷ nguyên của các bệnh không lây



Cardiovascular Diseases



Diabetes



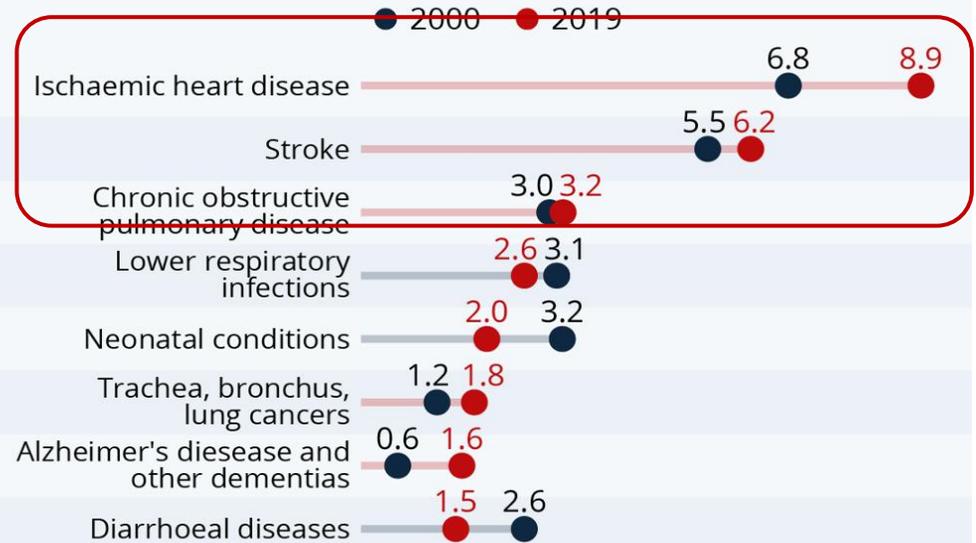
Chronic Respiratory Diseases



Cancer

The World's Leading Causes Of Death

Total number of people who died from the following conditions (in millions)



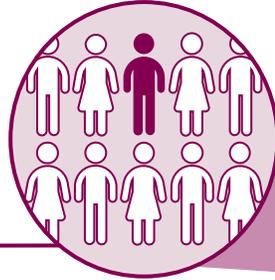
Source: World Health Organization

COPD và bệnh tim mạch: nguyên nhân gây tử vong hàng đầu hiện nay

- <https://www.who.int/news-room/fact-sheets/detail/noncommunicable-diseases>
- Li J. Et al. *Int J Surg*. 2025 Mar 1;111(3):2385-2397

COPD là một trong những nguyên nhân hàng đầu gây tử vong trên toàn thế giới

Ước tính ~600 triệu
bệnh nhân COPD trên
thế giới vào năm 2050^{1*}



COPD là nguyên nhân phổ
biến thứ 2 gây nhập cấp cứu
tại một số quốc gia^{2,3}

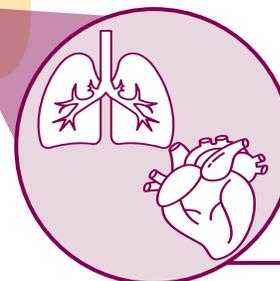


COPD là nguyên nhân gây tử
vong hàng thứ 3 toàn thế giới^{4*}

1. Tim thiếu máu cục bộ
2. Đột quy
- 3. COPD**



Bệnh nhân COPD tử vong do
cả nguyên nhân hô hấp và
không liên quan đến hô
hấp, bao gồm các nguyên
nhân tim mạch⁵



*In 2019

CV, cardiovascular

1. Boers E, et al. Global burden of chronic obstructive pulmonary disease through 2050. JAMA Network Open. 2023;6(12):e2346598-e.

Lane ND, et al. BMJ Open Respir Res 2018;5:e000334; 3. Nardini S, et al. Multidiscip Respir Med 2014;9:46; 4. World Health Organization. The top 10 causes of death. 2023. Available from:

<https://www.who.int/news-room/fact-sheets/detail/the-top-10-causes-of-death> (Accessed 1 April 2023); 5. Mannino DM, et al. Respir Med 2006;100:115–122

PHÂN LOẠI COPD DỰA VÀO NGUYÊN NHÂN BỆNH SINH

2026

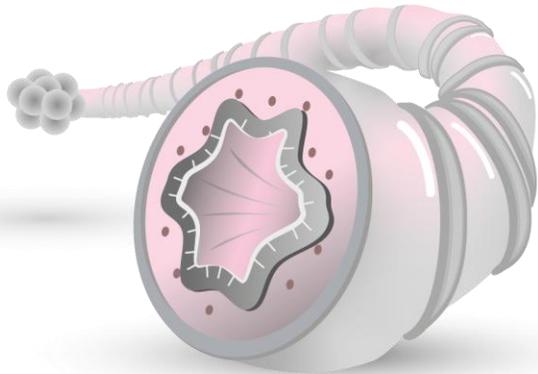
Classification	Description
Genetically determined COPD (COPD-G)	Alpha-1 antitrypsin deficiency (AATD) Other genetic variants with smaller effects acting in combination
COPD due to abnormal lung development (COPD-D)	Early life events, including premature birth and low birthweight, among others
Environmental COPD	
Cigarette smoking COPD (COPD-C)	<ul style="list-style-type: none">• Exposure to tobacco smoke, including <i>in utero</i> or via passive smoking• Vaping or e-cigarette use• Cannabis
Biomass and pollution exposure COPD (COPD-P)	Exposure to household pollution, ambient air pollution, wildfire smoke, occupational hazards
COPD due to infections (COPD-I)	Childhood infections, tuberculosis-associated COPD, HIV-associated COPD
COPD & asthma (COPD-A)	Particularly childhood asthma
COPD of unknown cause (COPD-U)	

*Adapted from Celli et al. (2022) and Stolz et al. (2022)

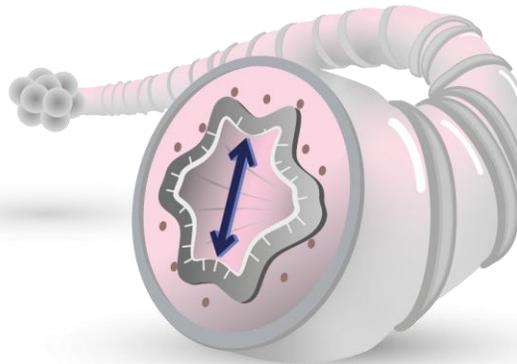


ĐIỀU TRỊ NỀN TẢNG COPD

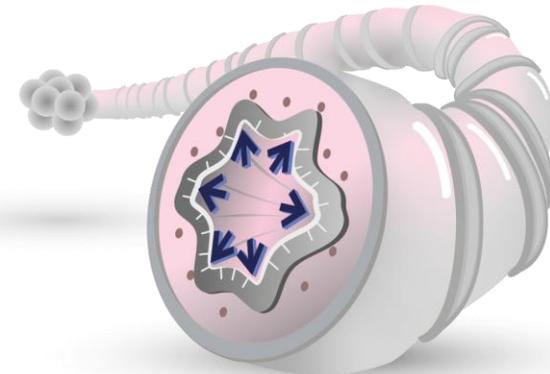
ICS^{1,2}
giảm viêm



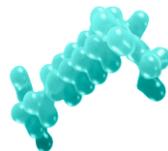
LABA³⁻⁵
thúc đẩy giãn phế quản



LAMA⁶⁻⁸
ức chế co thắt phế quản



Fluticasone furoate
Budesonide



Vilanterol
Formoterol
Salmeterol
Indacaterol

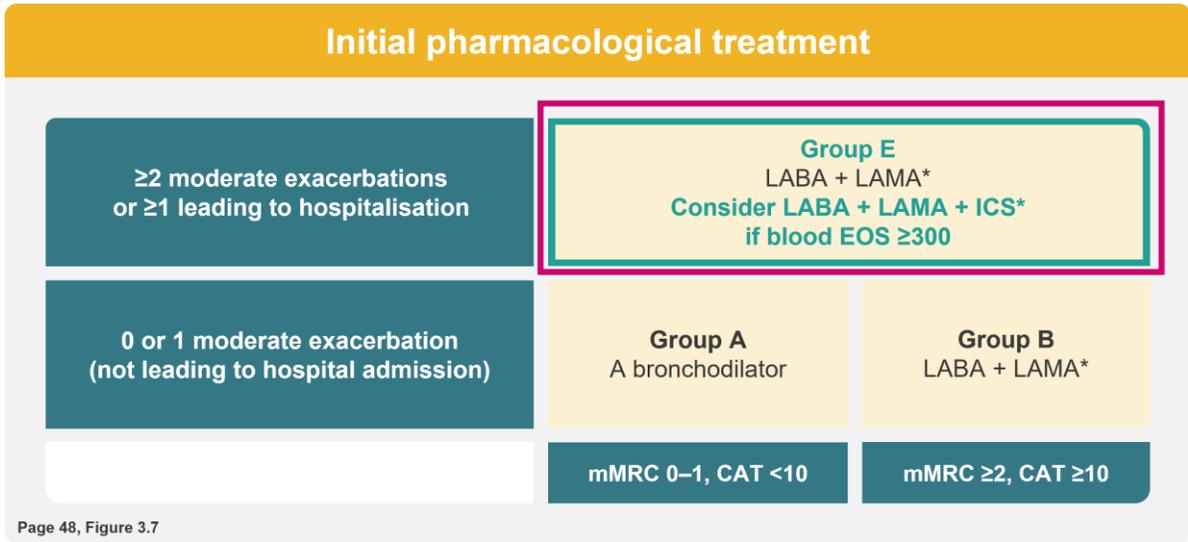


Umeclidinium
Glycopyrronium
Tiotropium

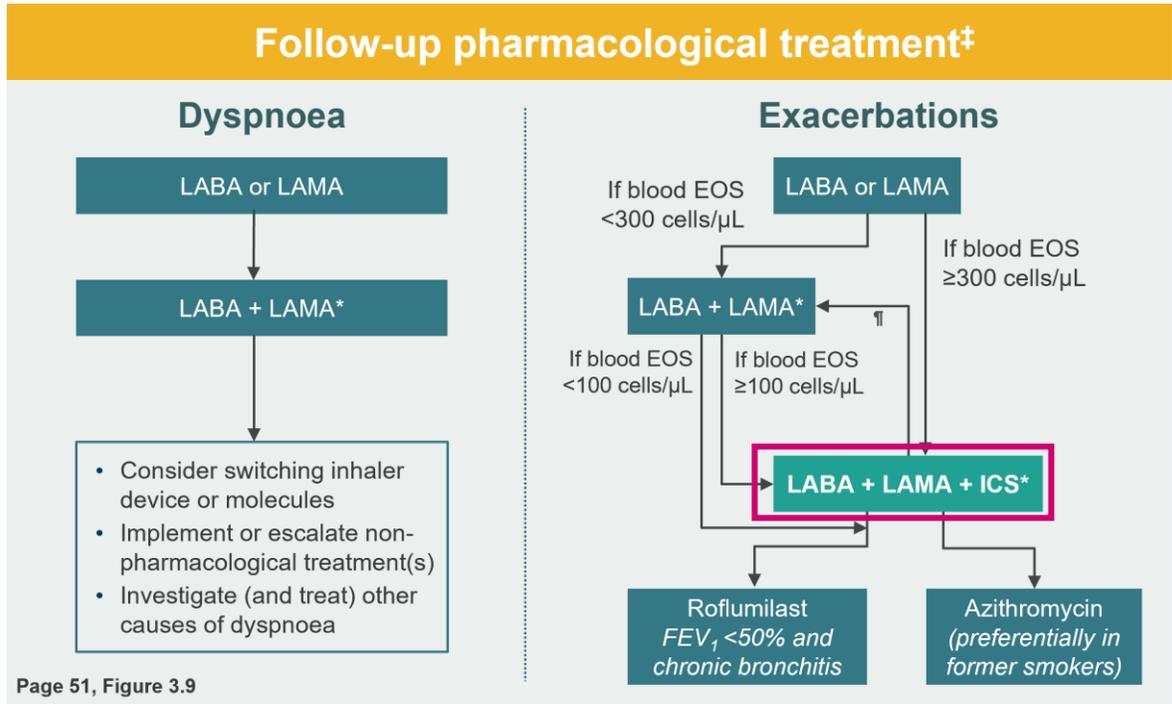
GOLD 2023- 2025-2026 nhấn mạnh vai trò của liệu pháp bộ ba



Đợt cấp: yếu tố then chốt giúp cân nhắc liệu pháp bộ ba là lựa chọn khởi trị hoặc **tăng bậc**



GOLD 2026



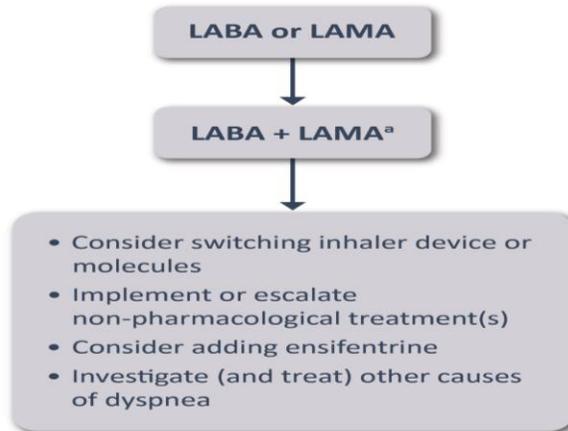
Follow-up Pharmacological Treatment

Figure 3.9

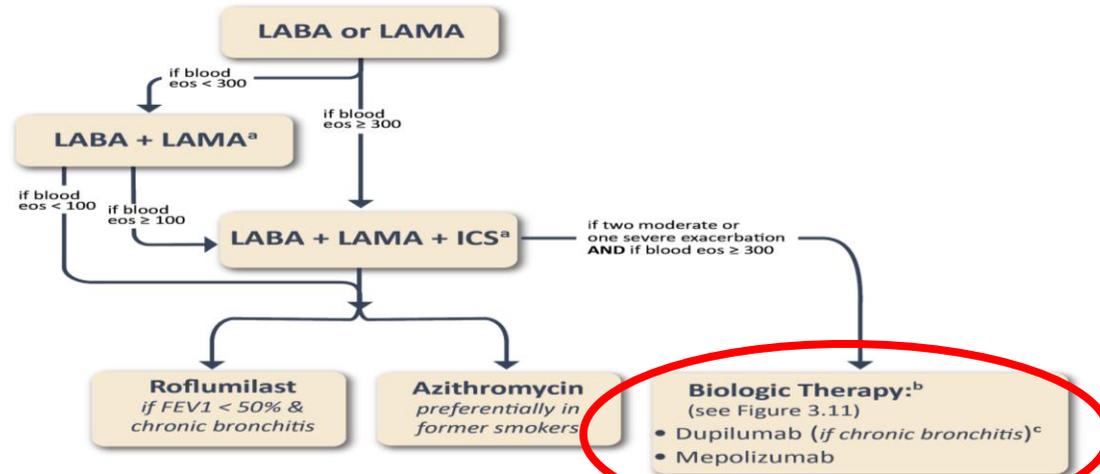
2 Adjust Treatment

CONTINUE CURRENT TREATMENT
unless dyspnea or exacerbation(s) require optimization

• IF PERSISTENT DYSPNEA



• IF ONE OR MORE MODERATE OR SEVERE EXACERBATION

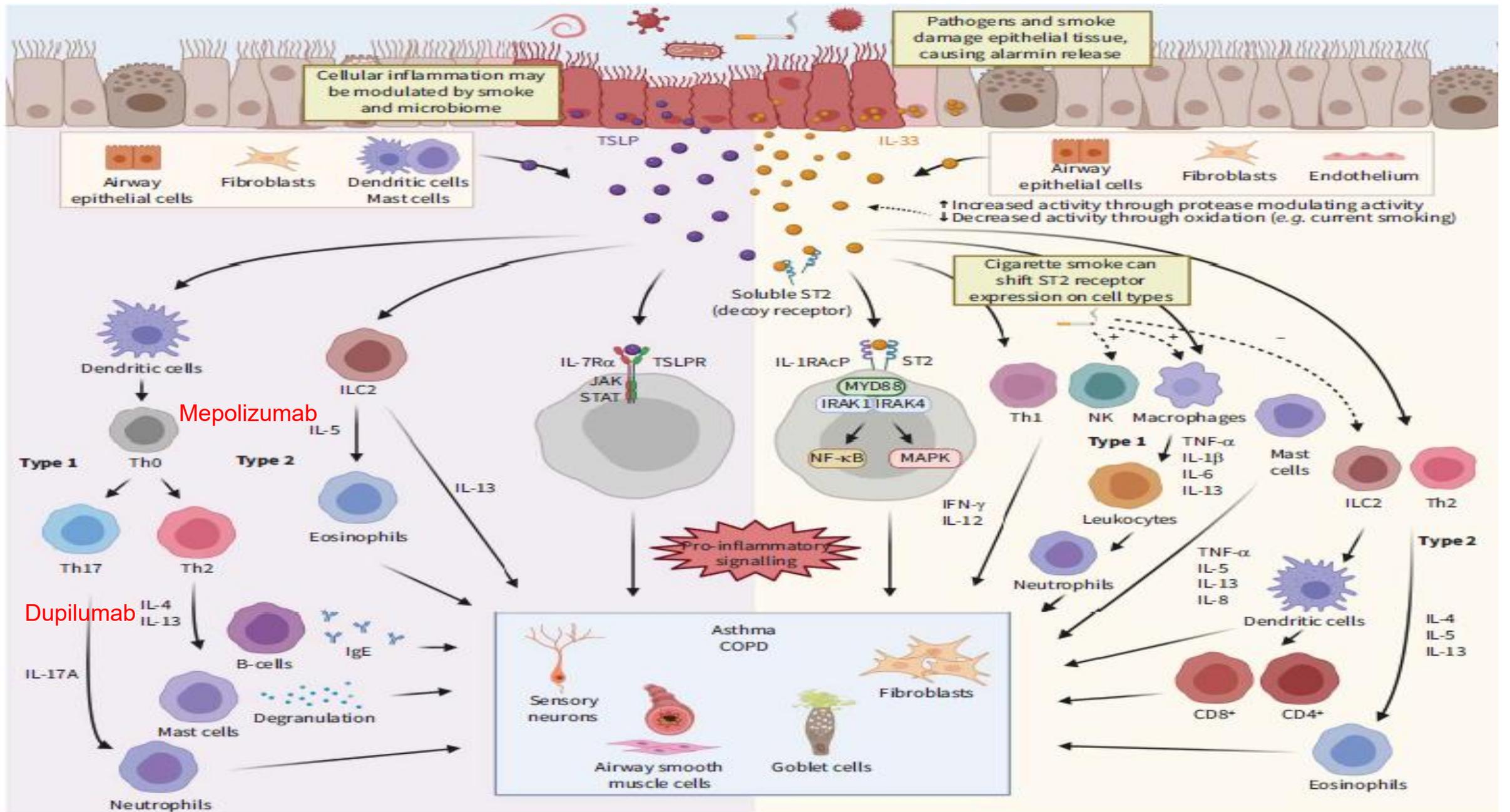


^aSingle inhaler therapy may be more convenient and effective than multiple inhalers; single inhalers improve adherence to treatment.

^bListed in order of approval in the US.

^cPatient-reported history of chronic bronchitis (chronic productive cough) for 3 months in the year up to screening, absent other known causes. Consider de-escalation of ICS if pneumonia or other considerable side-effects. In case of blood eosinophils ≥ 300 cells/ μ l de-escalation is more likely to be associated with the development of exacerbations.





Calderon A, Dimond C, Choy D, Pappu R, Grimaldeston M, Mohan D, Chung K. Targeting interleukin-33 and thymic stromal lymphopoietin pathways for novel pulmonary therapeutics in asthma and COPD. Eur Respir Rev 2023; 32: 220144. PUBMED.

BẰNG CHỨNG ĐIỀU TRỊ LIỆU PHÁP SINH HỌC COPD

BẢNG CHỨNG ĐIỀU TRỊ LIỆU PHÁP SINH HỌC COPD

Evidence Supporting Use of Biologics in the Treatment of COPD

Figure 3.11

Molecule/RCT*	Key inclusion criteria ^a	Annualized rate of moderate/severe exacerbations	Lung function improvement (pre-BD FEV1) ^d	Quality of life improvement (SGRQ)
Dupilumab (300 mg/2 weeks)				
BOREAS ¹ (n=939)	FEV1 post-BD 30-70% chronic bronchitis ^b eos ≥ 300 (screen)	RR 0.70; P < 0.001	83mL; P < 0.001 (95% CI: 42, 125)	-3.4; P = 0.002 (95% CI: -5.5, -1.3)
NOTUS ² (n=935)	FEV1 post-BD 30-70% chronic bronchitis ^b eos ≥ 300 (screen)	RR 0.66; P < 0.001	62mL; P = 0.02 (95% CI: 11, 113)	-3.4 ^e (95% CI: -5.8, -0.9)
Mepolizumab (100 mg/4 weeks)				
METREO ³ (n=674)	FEV1 post-BD 20-80% eos ≥ 150 (screen) or eos ≥ 300 (previous year)	RR 0.80; NS	19mL; NS (95% CI: -29, 67)	-1.8; NS (95% CI: -4.5, 0.8)
METREX ³ (n=836)	FEV1 post-BD 20-80% eos ≥ 150 (screen) or eos ≥ 300 (previous year) ^c	RR 0.82; P = 0.04	-10mL; NS (95% CI: -54, 33)	0.2; NS (95% CI: -2.8, 3.2)
MATINEE ⁴ (n=804)	FEV1 post-BD 20-80% eos ≥ 300 (screen) and eos ≥ 150 (previous year)	RR 0.79; P = 0.01	-9.0mL; NS (95% CI: -60.1, 42.1)	-2.3; NS (95% CI: -4.6, 0.1)

*Molecules are listed in order of approval in the US.

These results cannot be directly compared across trials as there were different patient populations included.

a: all studies recruited patients with exacerbations in the previous year while receiving inhaled triple therapy

b: patient-reported history of chronic bronchitis (chronic productive cough) for 3 months in the year up to screening, absent other known causes

c: pre-defined eosinophilic population

d: at 52 weeks

e: significance not tested according to hierarchical testing procedure

NS: not statistically significant; eos: blood eosinophils (cells/ μ L); SGRQ: St George's Respiratory Questionnaire; BD: bronchodilator; RR: risk ratio.

References: ¹Bhatt et al. N Engl J Med 2023;389:205-214; ²Bhatt et al. N Engl J Med 2024;390:2274-2283; ³Pavord et al. N Engl J Med 2017;377:1613-1629; ⁴Sciruba et al. N Engl J Med 2025;392:1710-1720; .

CÁC THUỐC SINH HỌC ĐIỀU TRỊ COPD

Table 1

Possible therapeutic targets for the biological treatment of COPD and ongoing clinical trials.

Therapeutic target	Biologic	Phase III clinical trials	Ongoing clinical trials	Results
IL-5	Mepolizumab	METREO & METRIX	MATINEE	18–20% reduction of moderate-severe exacerbations compared with placebo (non-significant)
IL-5 receptor	Benralizumab	GALATHEA & TERRANOVA	RESOLUTE	18% and 7% reduction of moderate-severe exacerbations compared with placebo (non-significant)
IL-4 and 13 receptor	Dupilumab	BOREAS	NOTUS	34% reduction of exacerbations, improvement of lung function and state of health (significant)
TSLP	Tezepelumab		COURSE	Unavailable
IL-33	Itepekimab	AERIFY	AERIFY-2	Unavailable
Il-33	Tozorakimab	OBERON & TITANIA	PROSPERO	Unavailable
ST2 (IL-339 receptor)	Astegolimab	ALIENTO	ARNASA	Unavailable

Dupilumab for COPD with Blood Eosinophil Evidence of Type 2 Inflammation

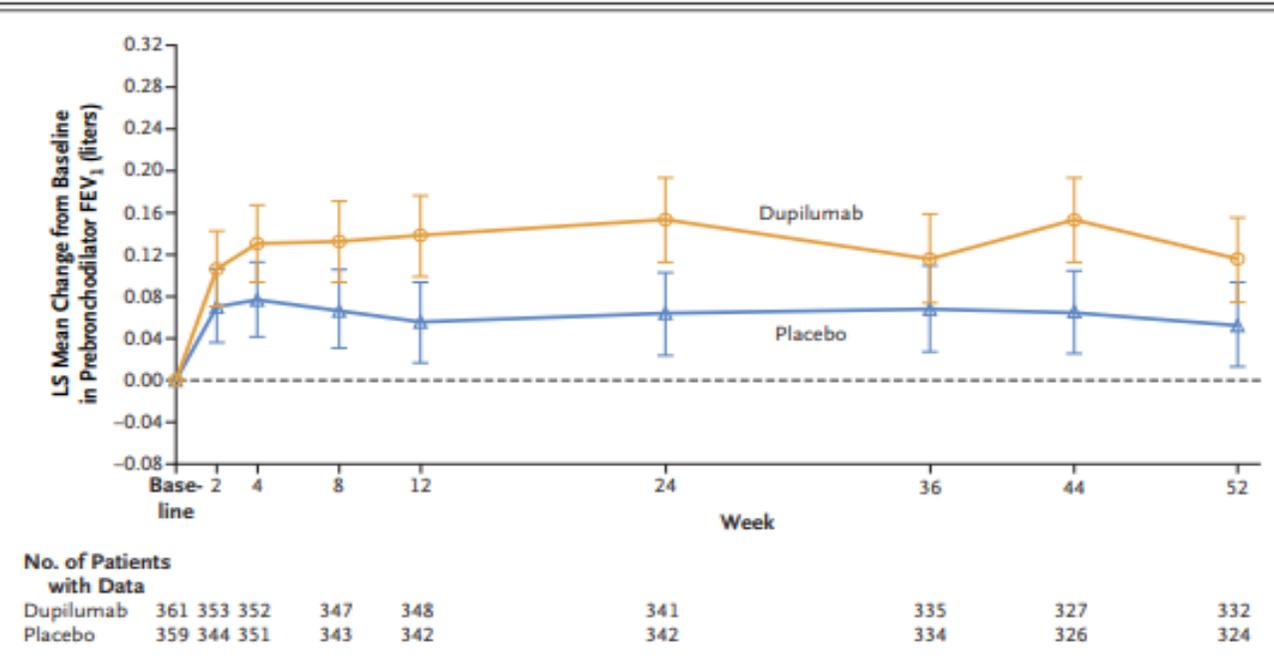
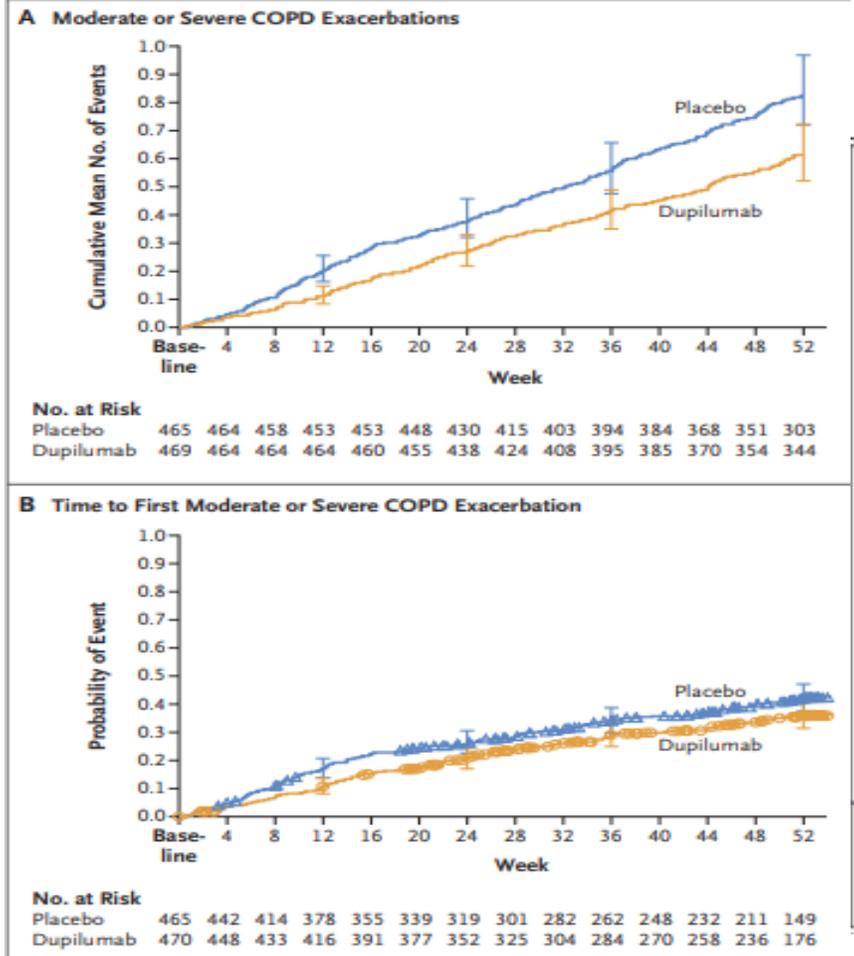


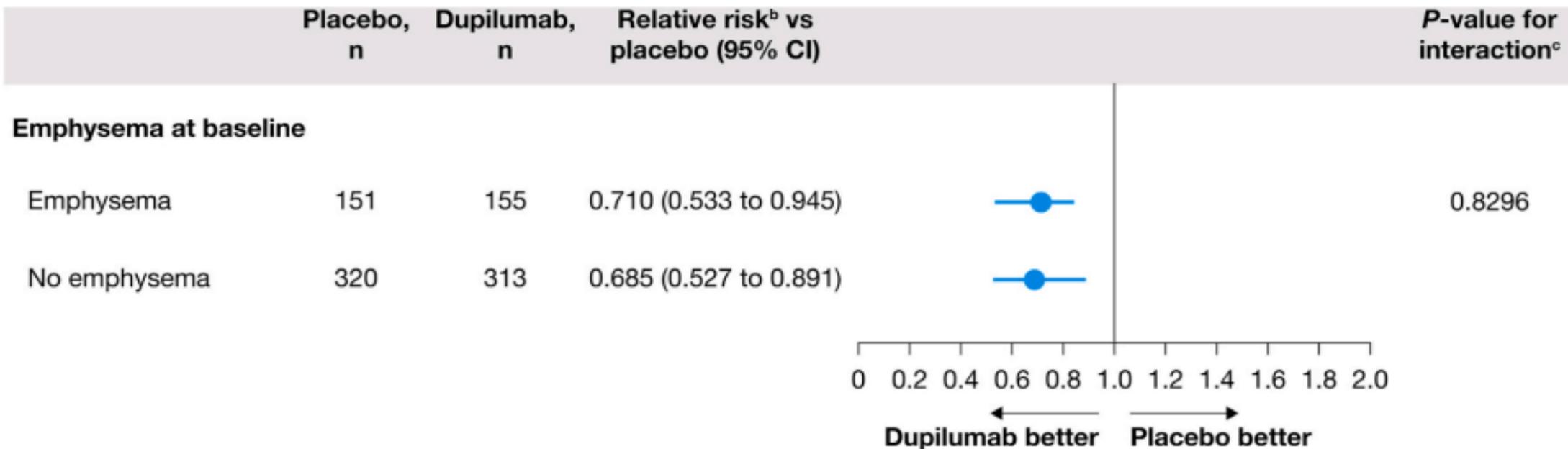
Figure 2. Change in Prebronchodilator FEV₁ over Time.
 I bars indicate 95% confidence intervals. FEV₁ denotes forced expiratory volume in 1 second, and LS denotes least squares.

Figure 1. Cumulative Moderate or Severe COPD Exacerbations and Time to the First Moderate or Severe COPD Exacerbation Event during the 52-Week Trial Period.
 I bars indicate 95% confidence intervals. Triangles and circles indicate censored data. COPD denotes chronic obstructive pulmonary disease.



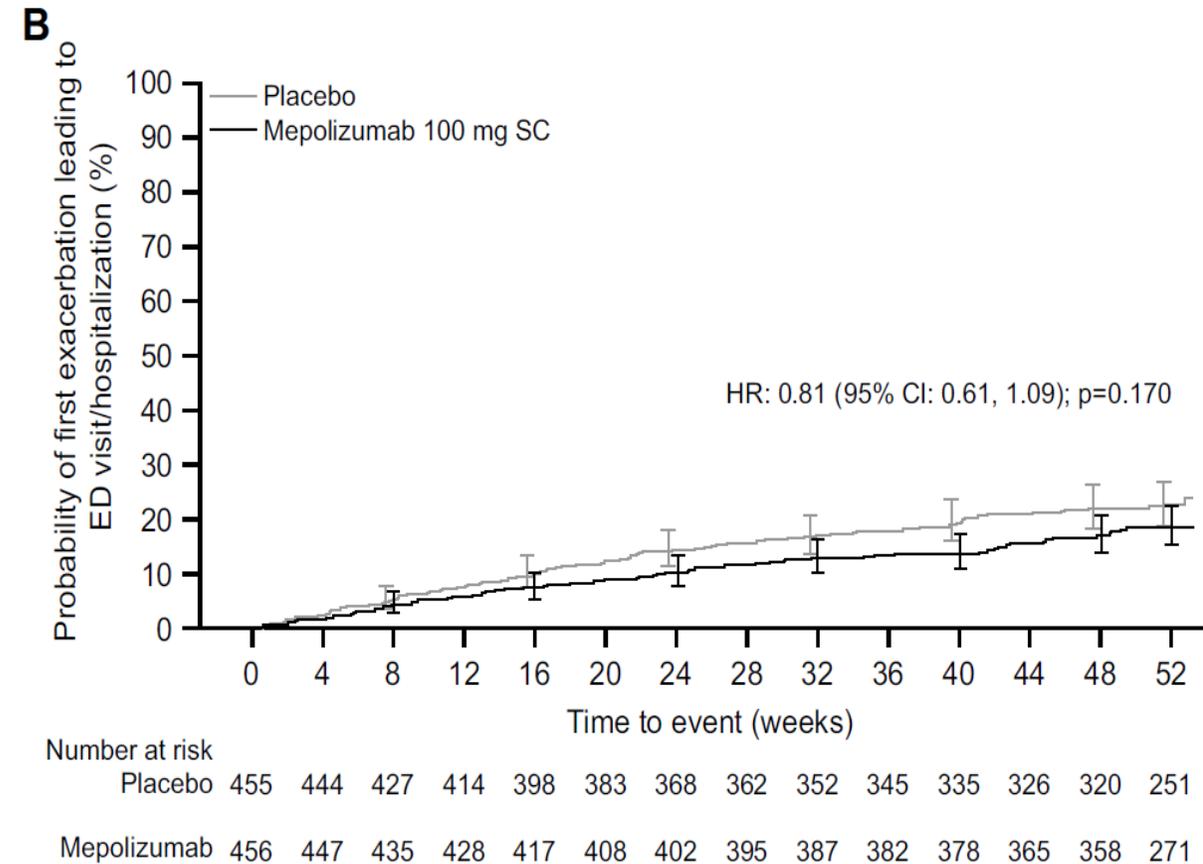
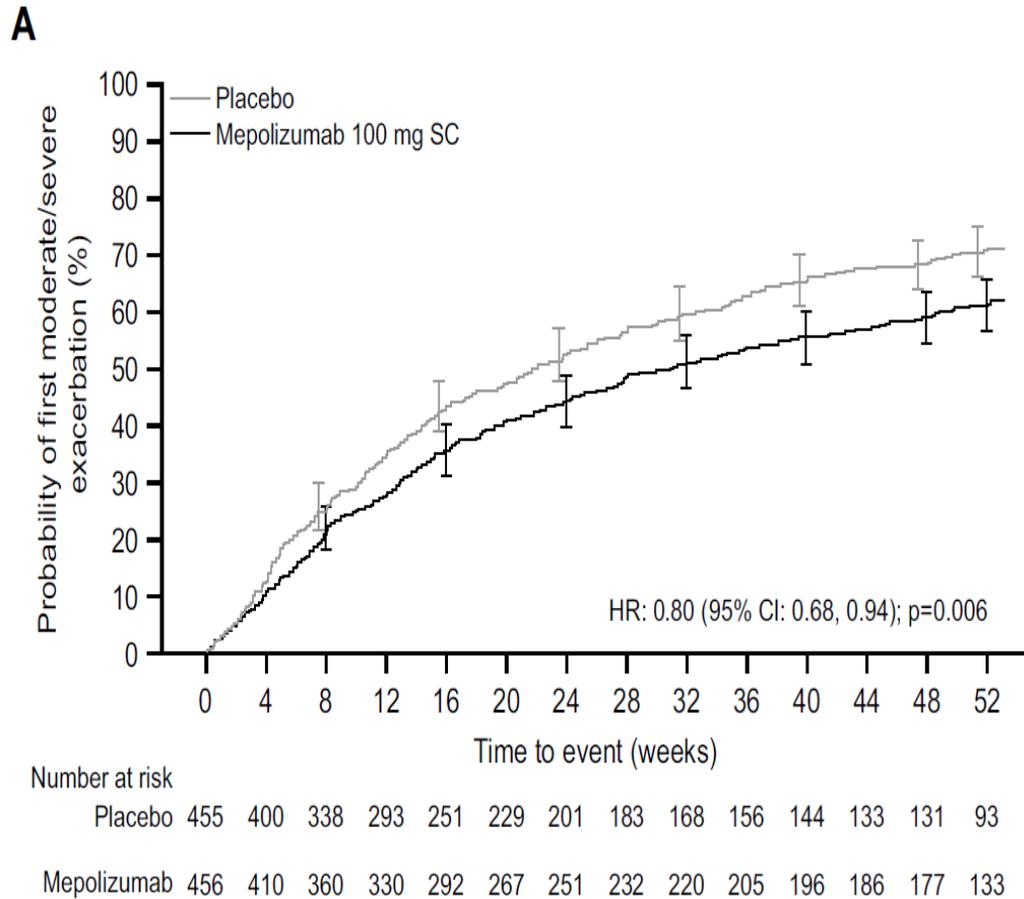
Dupilumab reduces exacerbations and improves lung function in patients with chronic obstructive pulmonary disease and emphysema: Phase 3 randomized trial (BOREAS)

Surya P. Bhatt ^{a,*,1}, Klaus F. Rabe ^{b,**,1}, Nicola A. Hanania ^c, Claus F. Vogelmeier ^d, Mona Bafadhel ^e, Stephanie A. Christenson ^f, Alberto Papi ^g, Dave Singh ^h, Elizabeth Laws ⁱ, Paula Dakin ^j, Jennifer Maloney ^j, Xin Lu ⁱ, Deborah Bauer ⁱ, Ashish Bansal ^j, Lacey B. Robinson ^k, Raolat M. Abdulai ^k



Bhatt SP, Rabe KF, Hanania NA, Vogelmeier CF, Bafadhel M, Christenson SA, et al. Dupilumab reduces exacerbations and improves lung function in patients with chronic obstructive pulmonary disease and emphysema: Phase 3 randomized trial (BOREAS). *Respiratory medicine*. 2025;236:107846.

Mepolizumab giảm thời gian đến đợt cấp trung bình và nặng



Mepolizumab giảm đợt cấp TB/ NẶNG HÀNG NĂM

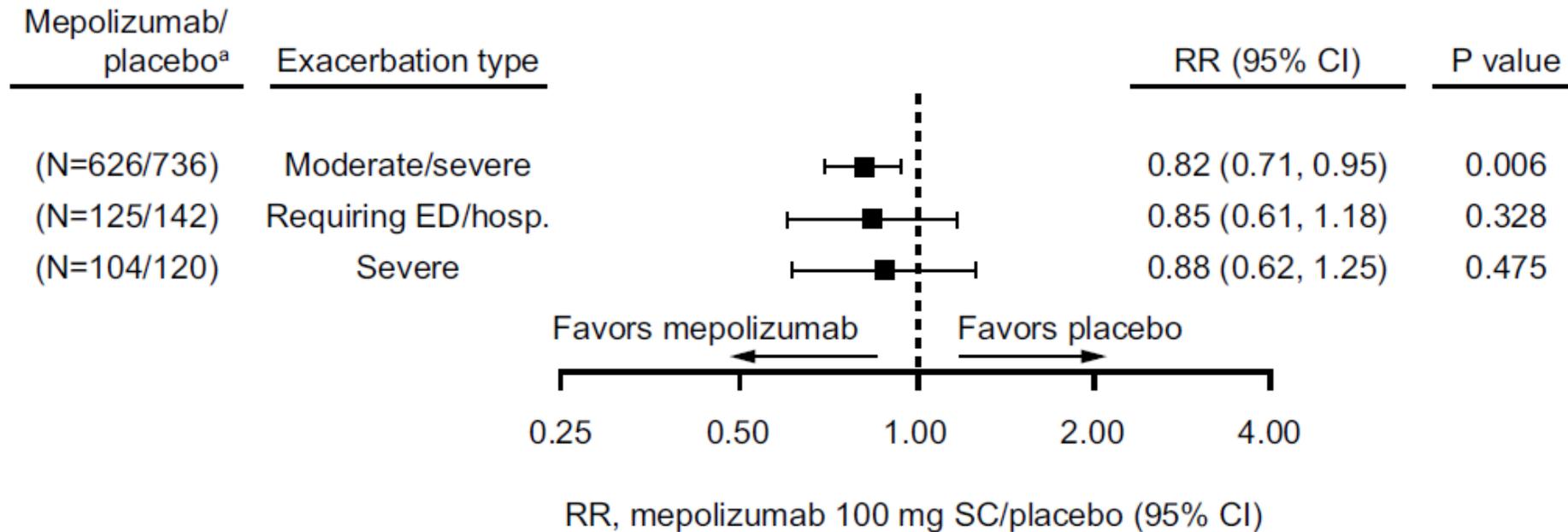
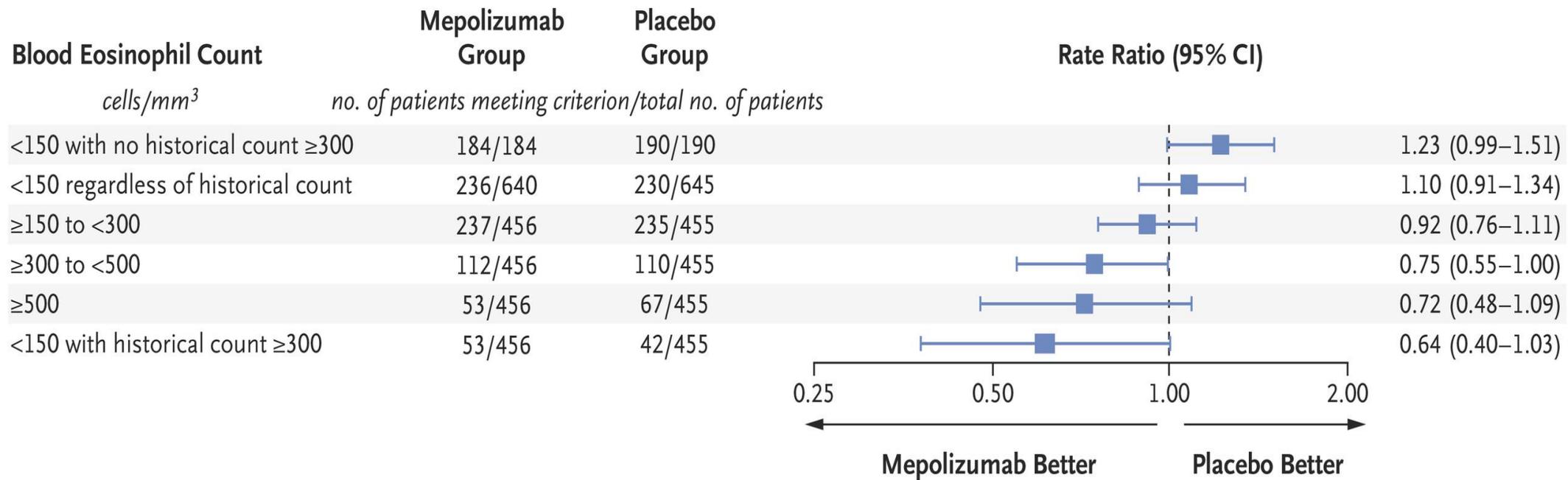
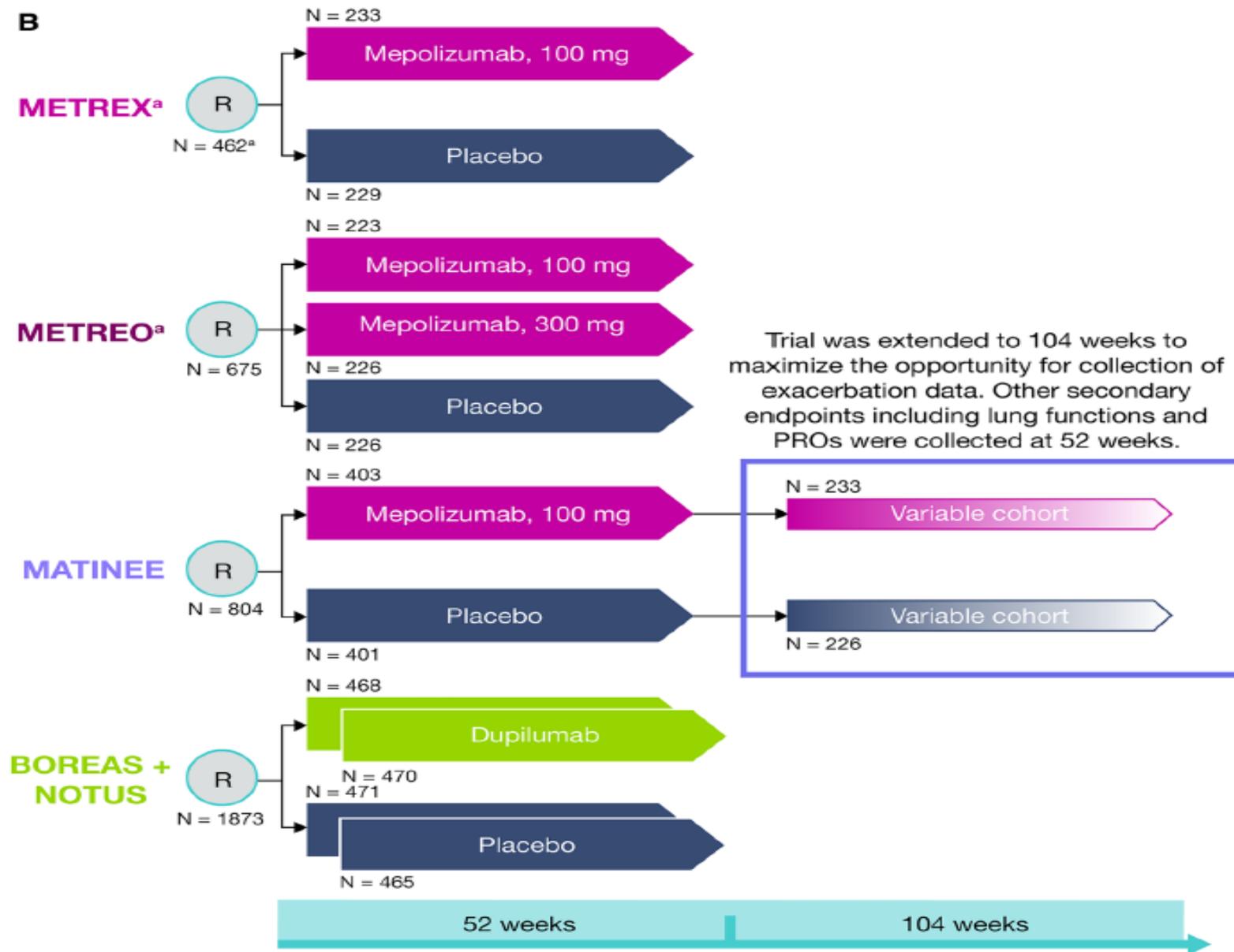


Figure 1 Reduction in annual rate of exacerbations. ^aNumbers indicate number of exacerbations experienced in each group.
Abbreviations: CI, confidence interval; ED, emergency department; hosp., hospital; RR, rate ratio; SC, subcutaneous.

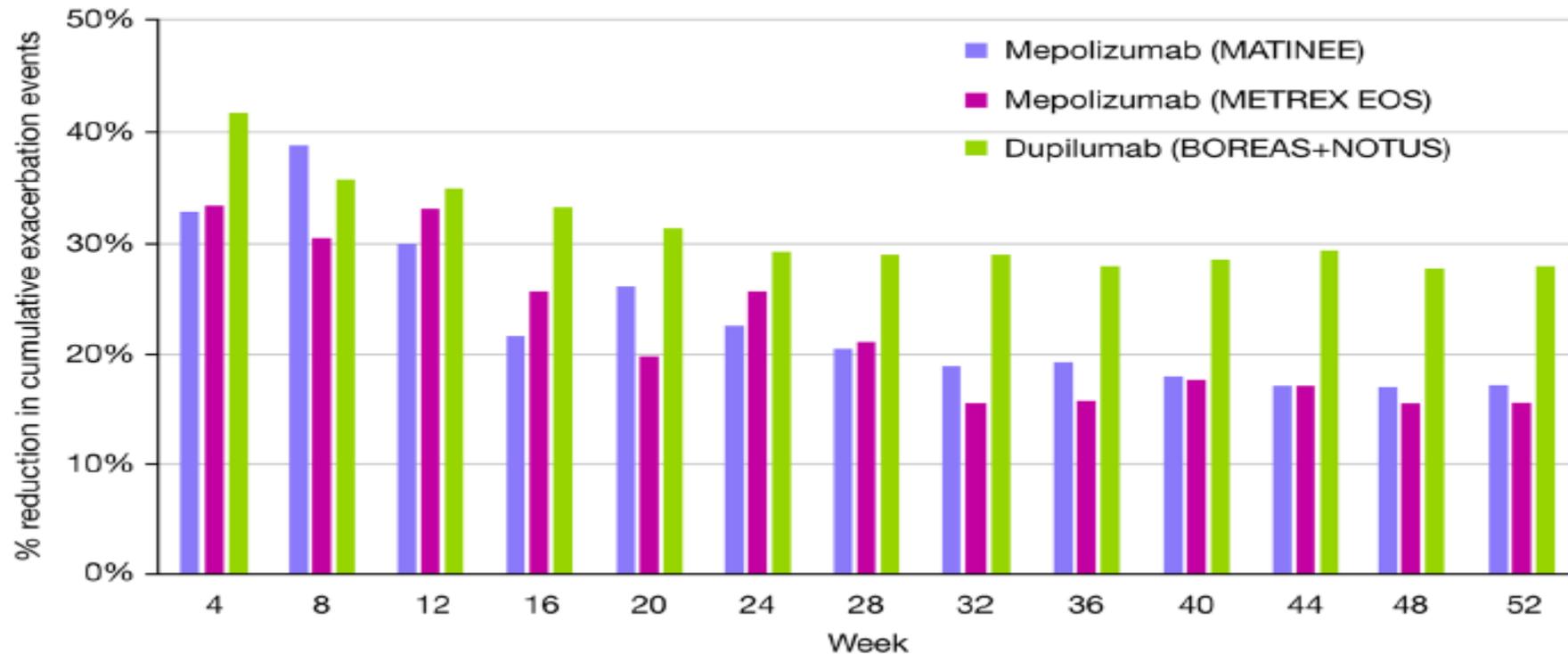
Hiệu quả dựa vào số tế bào EOSINOPHIL



SO SÁNH GIÁN TIẾP 2 THUỐC



So sánh gián tiếp giữa Mepolizumab và Dupilumab



Bhatt SP, Freemantle N, Soliman M, Heble J, Cabon Y, Mayen Herrera E, et al. Dupilumab Versus Mepolizumab for COPD: Evaluating Efficacy Outcomes Using Placebo-Adjusted Indirect Treatment Comparison. *Pulmonary Therapy*. 2025:1-17.

CÁC IL TRIỂN VỌNG TRONG ĐIỀU TRỊ COPD

Vai trò đa dạng và khác biệt của trục IL-33/ST2

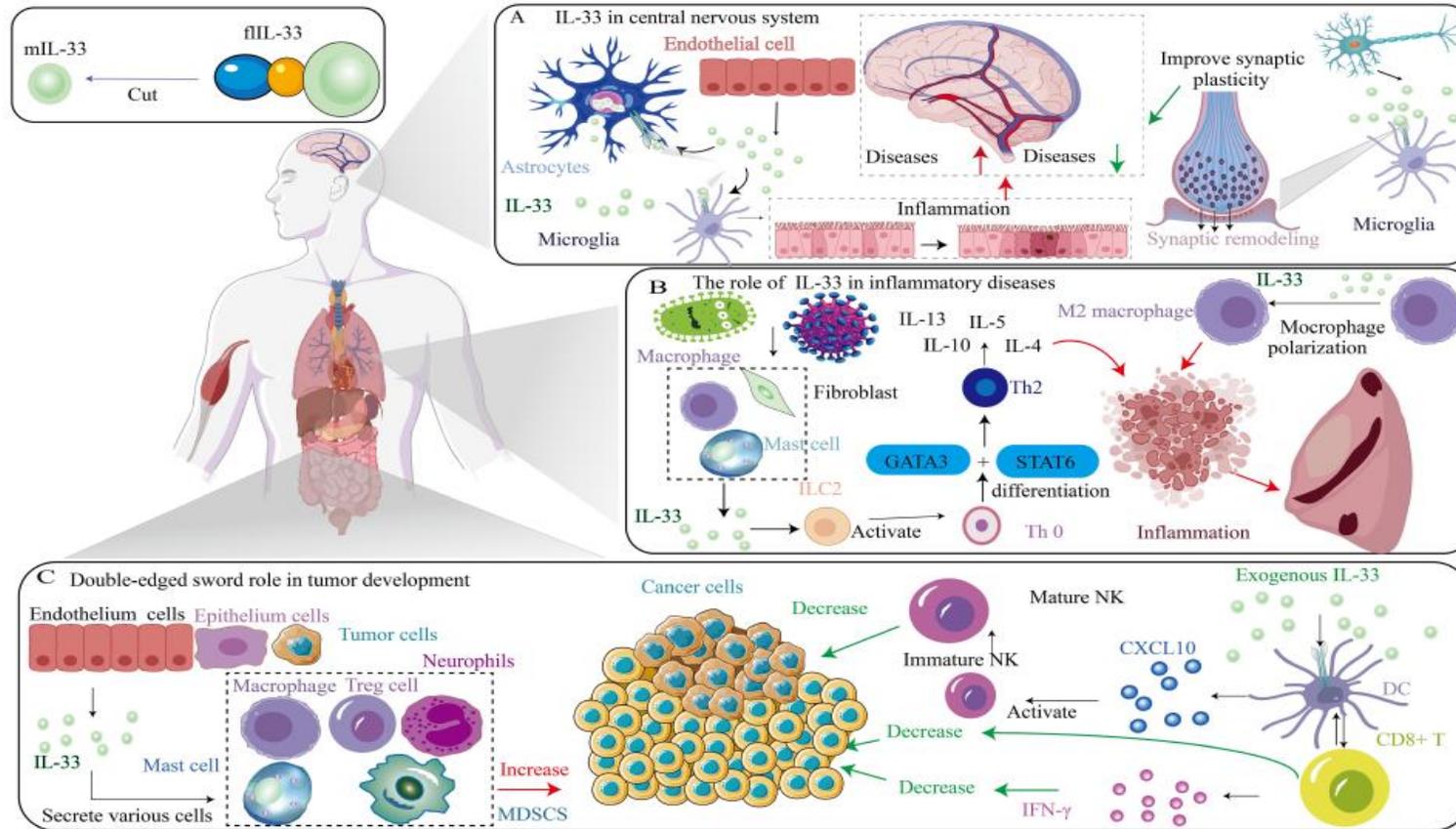
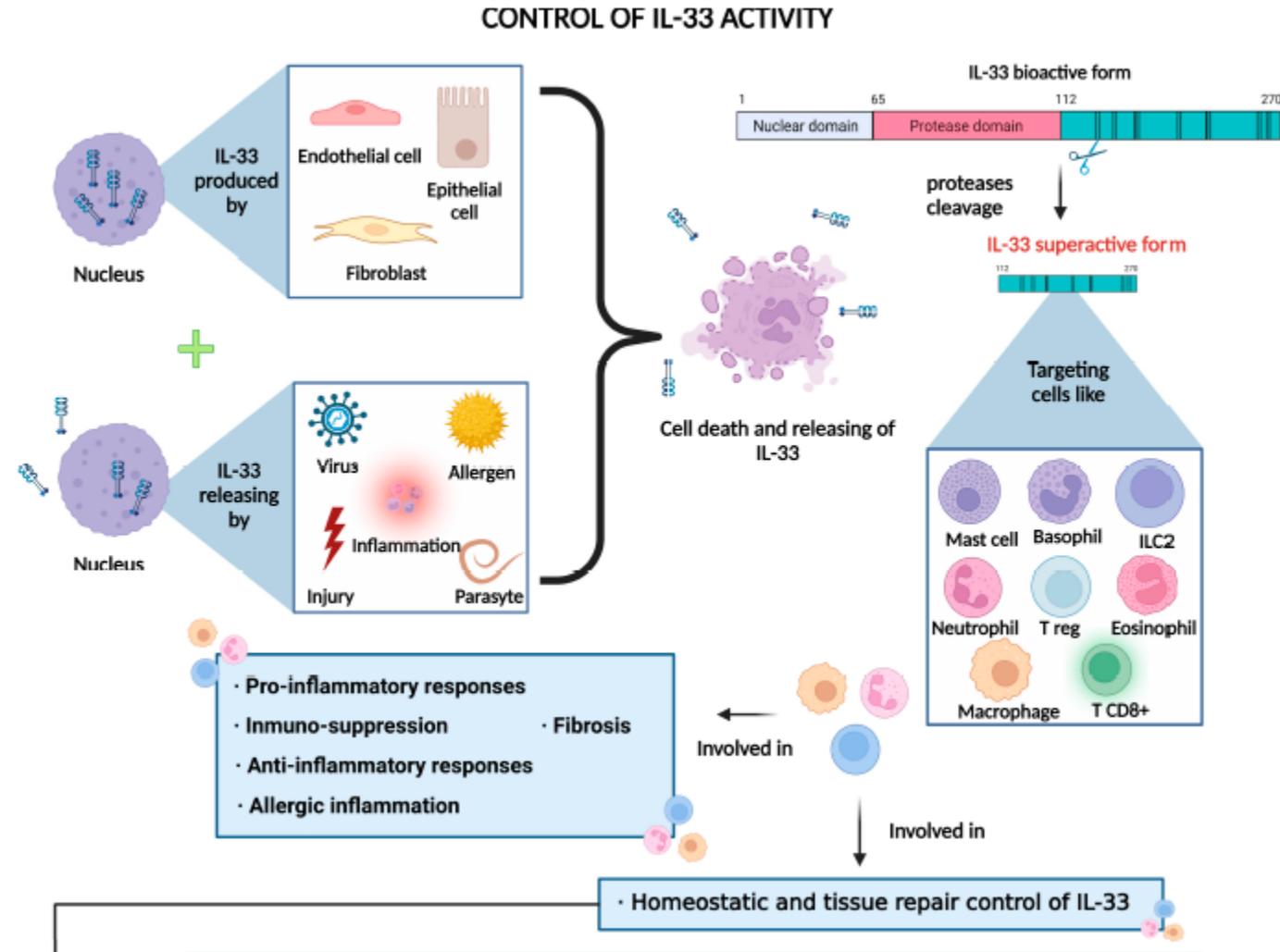
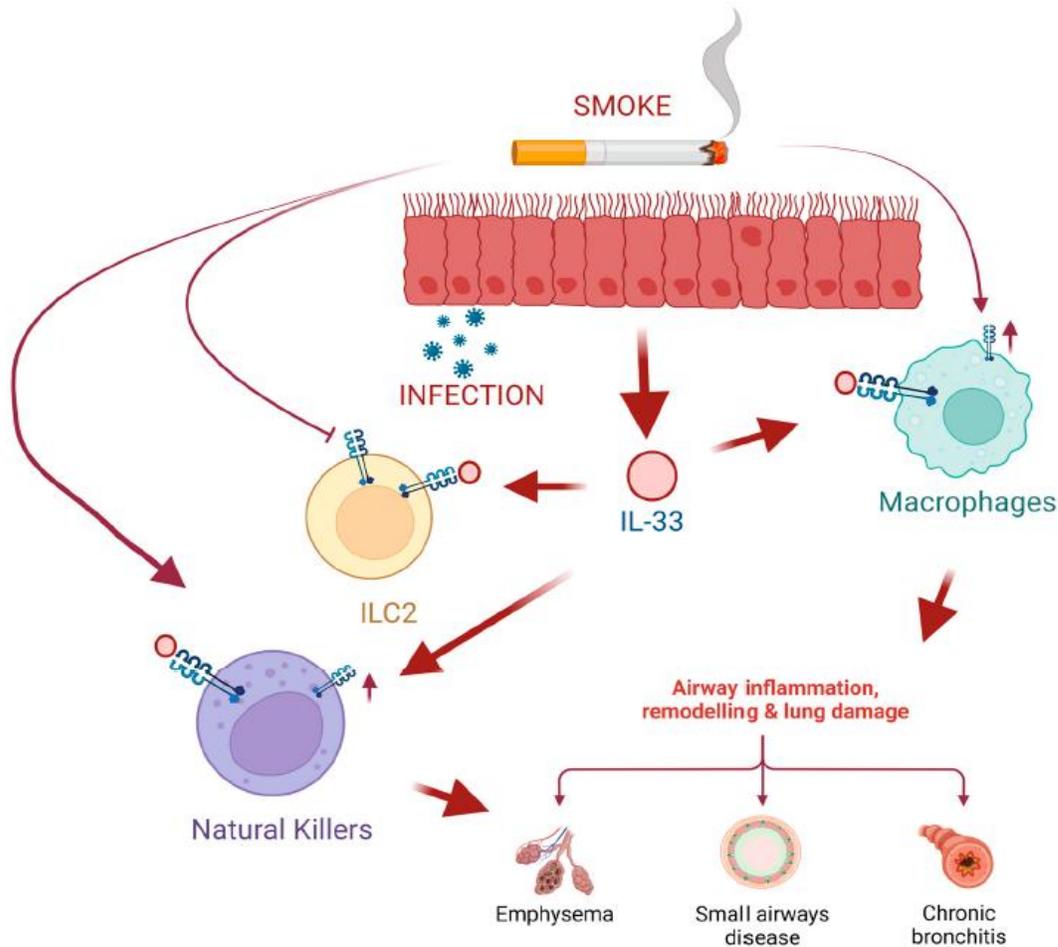


FIGURE 2
Different role of IL-33/ST2 axis in diverse diseases. (A) The role of IL-33 in central nervous system. (B) The role of IL-33 in inflammatory diseases. (C) Double-edged sword role of IL-33 in tumor development.

VAI TRÒ IL-33 TRONG COPD



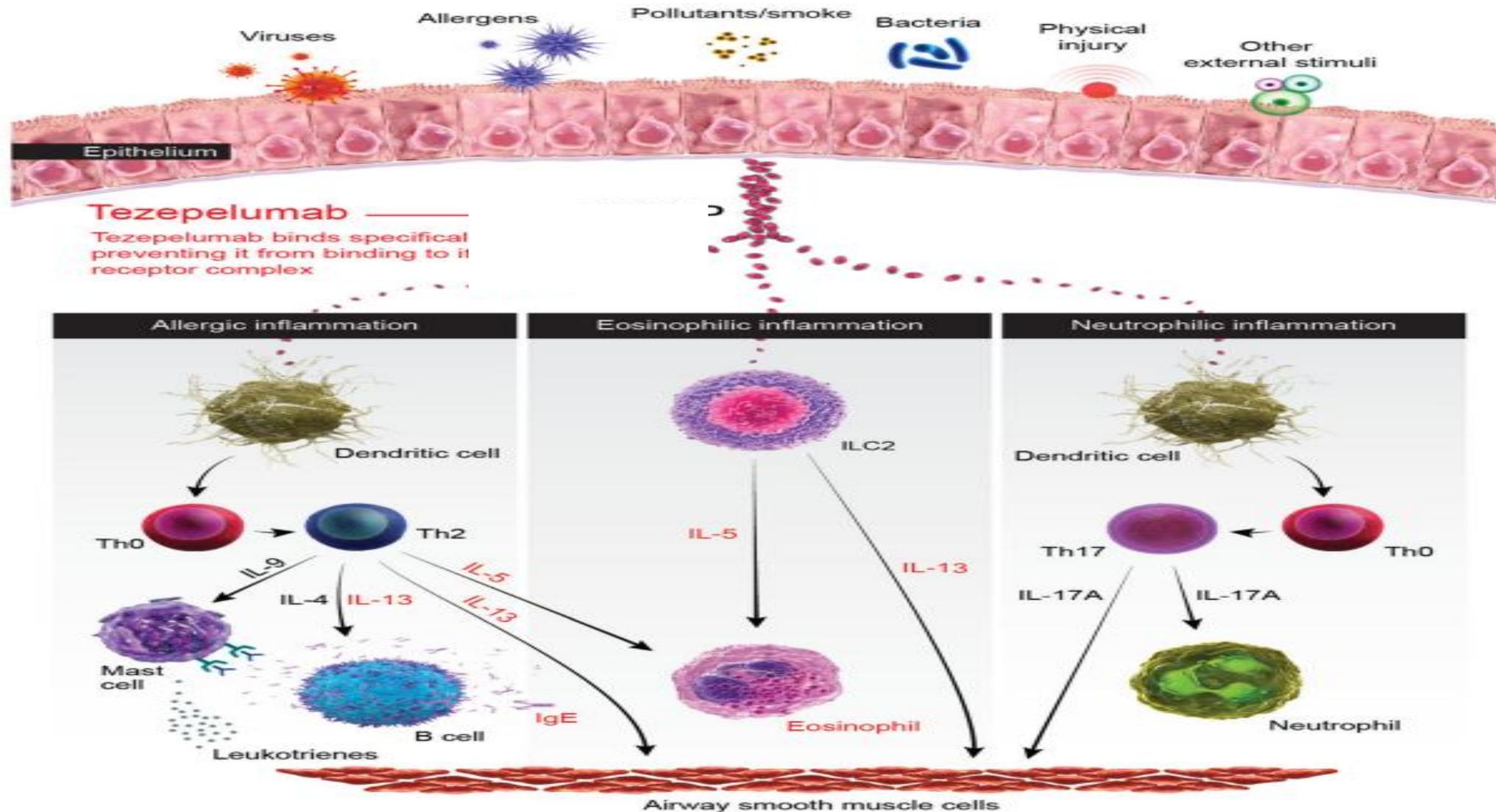
Riera-Martínez L, Cànaves-Gómez L, Iglesias A, Martín-Medina A, Cosío BG. The role of IL-33/ST2 in COPD and its future as an antibody therapy. International journal of molecular sciences. 2023;24(10):8702.

KHÁNG INTERLEUKIN-33/ST2 TRÊN COPD

TABLE 1 Continued						
Study/drug	Target population	Study design	Dose	Key inclusion criteria	Key results summary	Key results according to type 2 inflammation
NCT03615040 [15] COPD ST2OP AsteGolimab (anti-ST2)	Moderate to very severe COPD	n=40 patients per arm Primary end-point: annualised rate reduction of moderate-to-severe COPD exacerbations during 48-week treatment period	1:1 490 mg every 4 weeks, placebo	Age 40–75 years, current and former smokers, FEV ₁ 30–80%; ≥2 moderate or severe exacerbations in prior 12 months	22% annualised exacerbation rate reduction (p=0.195) Post-BD improvement in FEV ₁ of 40.0 mL (p=0.094) for astegolimab versus placebo group at 48 weeks Improvement in SQGRQ-c of –3.3 points (p=0.039) for astegolimab versus placebo group at 48 weeks	Annualised exacerbation rate reduction: 37% reduction in patients with baseline blood eosinophils <300 per μL versus 37% increase in patients with blood eosinophils >300 cells·μL ⁻¹ (p=0.072)
NCT04701983 NCT04751487 AERIFY-1 and AERIFY-2 studies Itepekimab (anti-IL-33)	Moderate-to-severe COPD	n=310 patients per arm Annualised rate reduction of moderate-to-severe COPD exacerbations in former smokers during 52-week treatment period	1:1:1 300 mg every 2 weeks, every 4 weeks, placebo	Age 40–85 years, former smokers [†] , chronic bronchitis, ≥2 moderate or ≥1 severe COPD exacerbation in prior 12 months		Study ongoing
NCT05037929 ALIENTO study AsteGolimab (anti-ST2)	Moderate to very severe COPD	n=310 patients per arm Annualised rate reduction of moderate-to-severe COPD exacerbations during 52-week treatment period	1:1:1 476 mg every 2 weeks, 476 mg every 4 weeks, placebo	Age 40–90 years, current and former smokers, FEV ₁ 20–80%; ≥2 moderate or severe exacerbations in 12-month period within prior 24 months		Study ongoing
NCT04631016 FRONTIER-4 Tozorakimab (MEDI3506) (anti-IL-33)	Moderate-to-severe COPD	n=114 (57 patients per arm) Primary end-point: change from baseline to week 12 in pre-BD FEV ₁	1:1 Tozorakimab, placebo	Age 40–75; current or former smokers with COPD, chronic bronchitis, ≥1 moderate or severe COPD exacerbation in the previous 12 months, dual or triple therapy		Study ongoing
NCT05166889 OBERON study Tozorakimab (MEDI3506) (anti-IL-33)	Moderate to very severe COPD	n=1272 (424 patients per arm) Primary end-point: annualised rate of moderate-to-severe COPD exacerbations in participants who are former smokers [†]	1:1:1 Tozorakimab dose 1, tozorakimab dose 2, placebo	Age ≥40, current and former smokers, FEV ₁ ≥20%, ≥2 moderate COPD exacerbations or ≥1 severe COPD exacerbation in the prior 12 months		Study ongoing

Calderon AA, Dimond C, Choy DF, Pappu R, Grimbaldston MA, Mohan D, Chung KF. Targeting interleukin-33 and thymic stromal lymphopoietin pathways for novel pulmonary therapeutics in asthma and COPD. *European Respiratory Review*. 2023;32(167).

TSLP và các cytokine biểu mô đường thở được cho kích hoạt quá trình viêm và tăng phản ứng quá mức đường thở¹⁻³



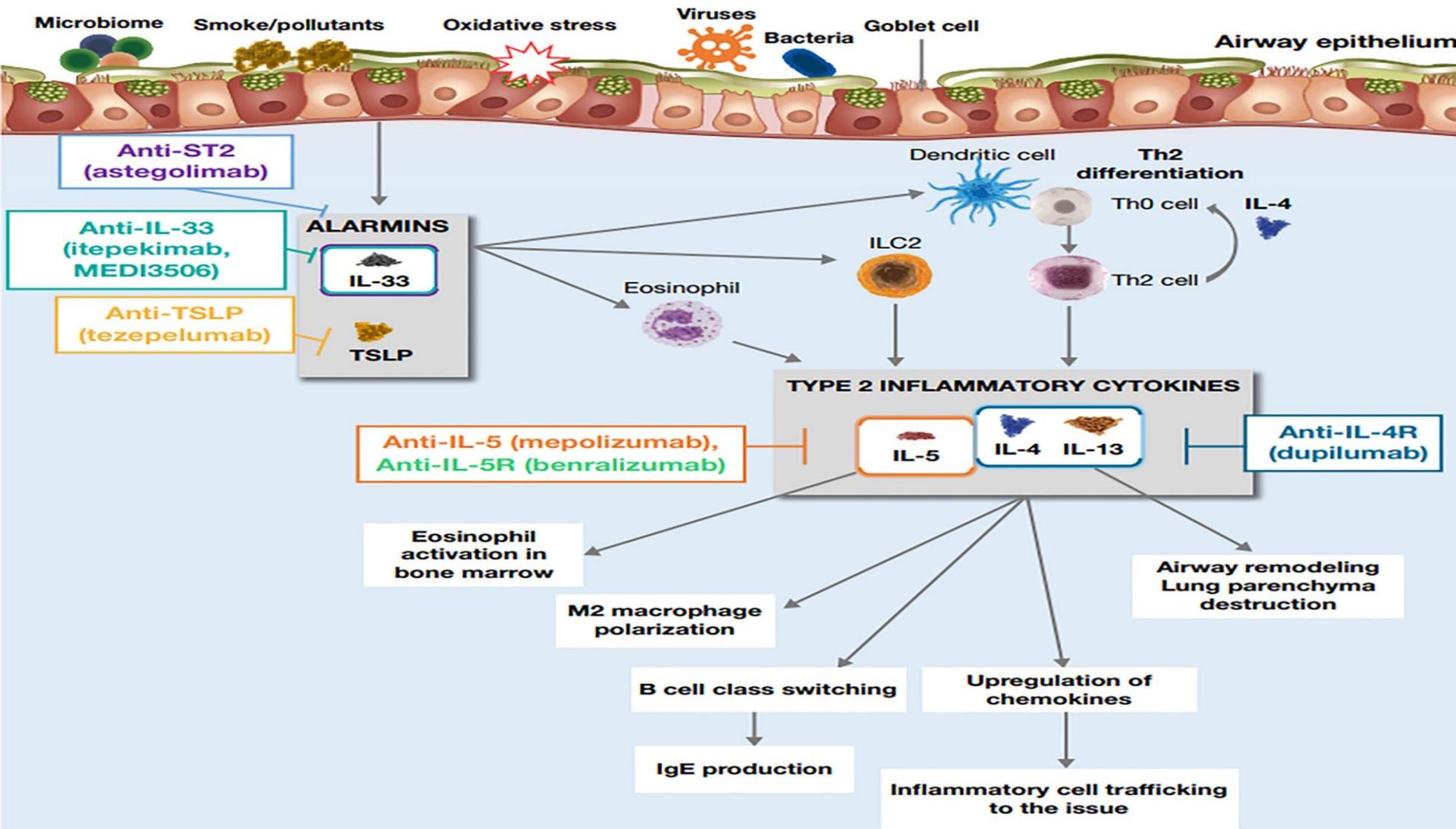
← Ngày cơ trơn đường thở, tăng phản ứng quá mức, khả năng tái cấu trúc đường thở^{1,2} →

au GM et al. *Opin Ther* s. 2020;24:777–

erg CM et al. *Eur J.* 6:2000260;

s-Gow A et al. *Res.* 1:268

VAI TRÒ ANTI- TSPL/ IL-33 TRONG COPD



NC ANTI-TSPL TRÊN COPD

TABLE 1 Continued						
Study/drug	Target population	Study design	Dose	Key inclusion criteria	Key results summary	Key results according to type 2 inflammation
NCT05158387 TITANIA study Tozorakimab (MEDI3506) (anti-IL-33)	Moderate to very severe COPD	n=1272 (424 patients per arm) Primary end-point: annualised rate of moderate-to-severe COPD exacerbations in participants who are former smokers [§]	1:1:1 Tozorakimab dose 1, tozorakimab dose 2, placebo	Age ≥40, current and former smokers, FEV ₁ ≥20%, ≥2 moderate COPD exacerbations or ≥1 severe COPD exacerbation in the prior 12 months		Study ongoing
Anti-TSLP						
NCT04039113 Tezepelumab (anti-TSLP)	Moderate to very severe COPD	n=338 Primary end-point: moderate or severe COPD exacerbation rate ratio (tezepelumab versus placebo)	1:1 Every 4 weeks or placebo	Age 40–80 years, current and former smokers, FEV ₁ 20–80%; ≥2 moderate or severe exacerbations in 12 months, CAT score ≥15, on triple therapy (ICS/LABA/LAMA)		Data expected 2023
NCT04882124 CSJ117 (inhaled anti-TSLP)	COPD	n=300 Primary end-point: change from baseline in E-RS symptom score at 12 weeks	1:1:1 4 mg, 8 mg and placebo inhaled once daily	Age ≥40 years, former or current smokers with COPD on triple therapy (ICS/LABA/LAMA)		Data expected 2023

ACQ: asthma control questionnaire; BD: bronchodilator; CAT: COPD Assessment Test; COPD: chronic obstructive pulmonary disease; E-RS: Evaluating Respiratory Symptoms–COPD; FEV₁: forced expiratory volume in 1 s; ICS: inhaled corticosteroids; LABA: long-acting beta-agonists; LAMA: long-acting muscarinic antagonist; OCS: oral corticosteroids; SQGRQ-c: St George Respiratory Questionnaire–COPD; Th2: T-helper 2. [‡]: Th2 status defined as: high=immunoglobulin E (IgE) >100 IU·mL⁻¹ and eosinophil count ≥140 cells·μL⁻¹; low IgE <100 IU·mL⁻¹ or eosinophil count <140 cells·μL⁻¹. [¶]: AERIFY-2 contains an additional two arms (itepekimab every 2 weeks, placebo) with current smokers. [†]: Primary end-point will be assessed first in primary population (former smokers) and then assessed in the overall population. [§]: Primary end-point will be assessed first in primary population (former smokers) and then assessed in the overall population.

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Table 2. Summary of findings table for network estimates of biologic medications vs. placebo for COPD across included outcomes.

Treatment	Efficacy outcomes						Safety outcomes	
	Acute exacerbations		Change in FEV1 (L)		Change in SGRQ		Serious adverse events	
	RR (95% CI)	GRADE	MD (95% CI)	GRADE	MD (95% CI)	GRADE	RR (95% CI)	GRADE
Astegolimab	0.78 (0.53 to 1.14)	✓	0.04 (−0.04 to 0.12)	✓✓	−4.10 (−7.60 to −0.60)	✓✓	0.70 (0.38 to 1.28)	✓✓
Benralizumb	0.89 (0.78 to 1.0)	✓✓	−0.001 (−0.05 to 0.05)	✓✓	−1.56 (−3.26 to 0.13)	✓✓	0.96 (0.86 to 1.07)	✓✓✓
Dupilumab	0.68 (0.59 to 0.79)	✓✓✓✓	0.07 (0.02 to 0.13)	✓✓✓	−3.35 (−5.09 to −1.60)	✓✓✓	0.85 (0.68 to 1.06)	✓✓✓
Itepekimab	0.81 (0.61 to 1.07)	✓✓	0.06 (−0.02 to 0.14)	✓✓	−	−	0.80 (0.52 to 1.24)	✓✓
Mepolizumab	0.92 (0.82 to 1.03)	✓✓✓	0.06 (0.01 to 0.11)	✓✓✓	−0.28 (−2.08 to 1.53)	✓✓	0.87 (0.73 to 1.03)	✓✓✓
Tezepelumab	0.83 (0.61 to 1.12)	✓✓	0.05 (−0.02 to 0.13)	✓✓	−2.94 (−6.34 to 0.46)	✓✓	−	−

RR: relative risk; MD: mean difference; CI: confidence interval; GRADE: Grading of Recommendations, Assessment, Development and Evaluation; FEV1:forced vital capacity in one second.

KẾT LUẬN



Điều trị nền tảng COPD hiện tại: LABA, LAMA, ICS



Liệu pháp sinh học kháng interleukin (Dupilumab, Mepolizumab) chỉ định cho nhóm bệnh nhân trung bình-nặng nhiều đợt cấp có eosinophil ≥ 300 TB



Triển vọng với Anti IL 33/ ST2, anti- TSP1 có kháng lực mạnh hơn đang được tiến hành NC pha 3, đa trung tâm trên bệnh nhân COPD.



HỘI HÔ HẤP
THÀNH PHỐ HỒ CHÍ MINH

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CẢM ƠN QUÝ ĐỒNG NGHIỆP ĐÃ CHÚ Ý LẮNG NGHE

VŨNG TÀU, TP.HCM - NGÀY 21 THÁNG 3 NĂM 2026