

**Asma, BPCO ed Esercizio Fisico
Ferrara, 6 e 7 Novembre 2015**

Overlap asma BPCO



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REVIEW ARTICLE

Jeffrey M. Drazen, M.D., *Editor*

The Asthma–COPD Overlap Syndrome

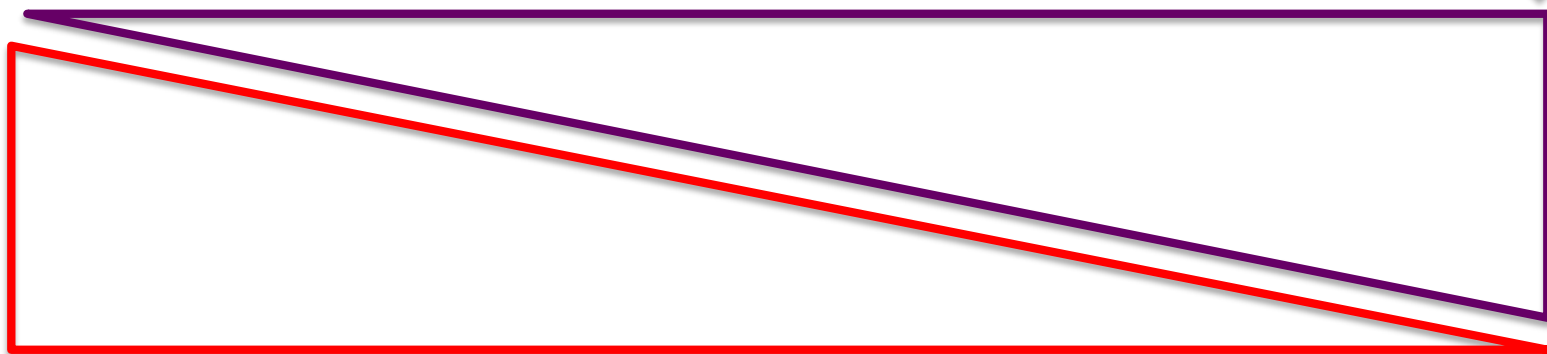
Dirkje S. Postma, M.D., Ph.D., and Klaus F. Rabe, M.D., Ph.D.

(Sept. 2015)

Asthma and COPD

COPD

Tobacco smoking
Develops in mid to later life
Incompletely reversible airflow limitation
CD8+ lymphocytes, neutrophils, systemic inflammation
Systemic comorbidities
Progressive decline in lung function leading to premature death

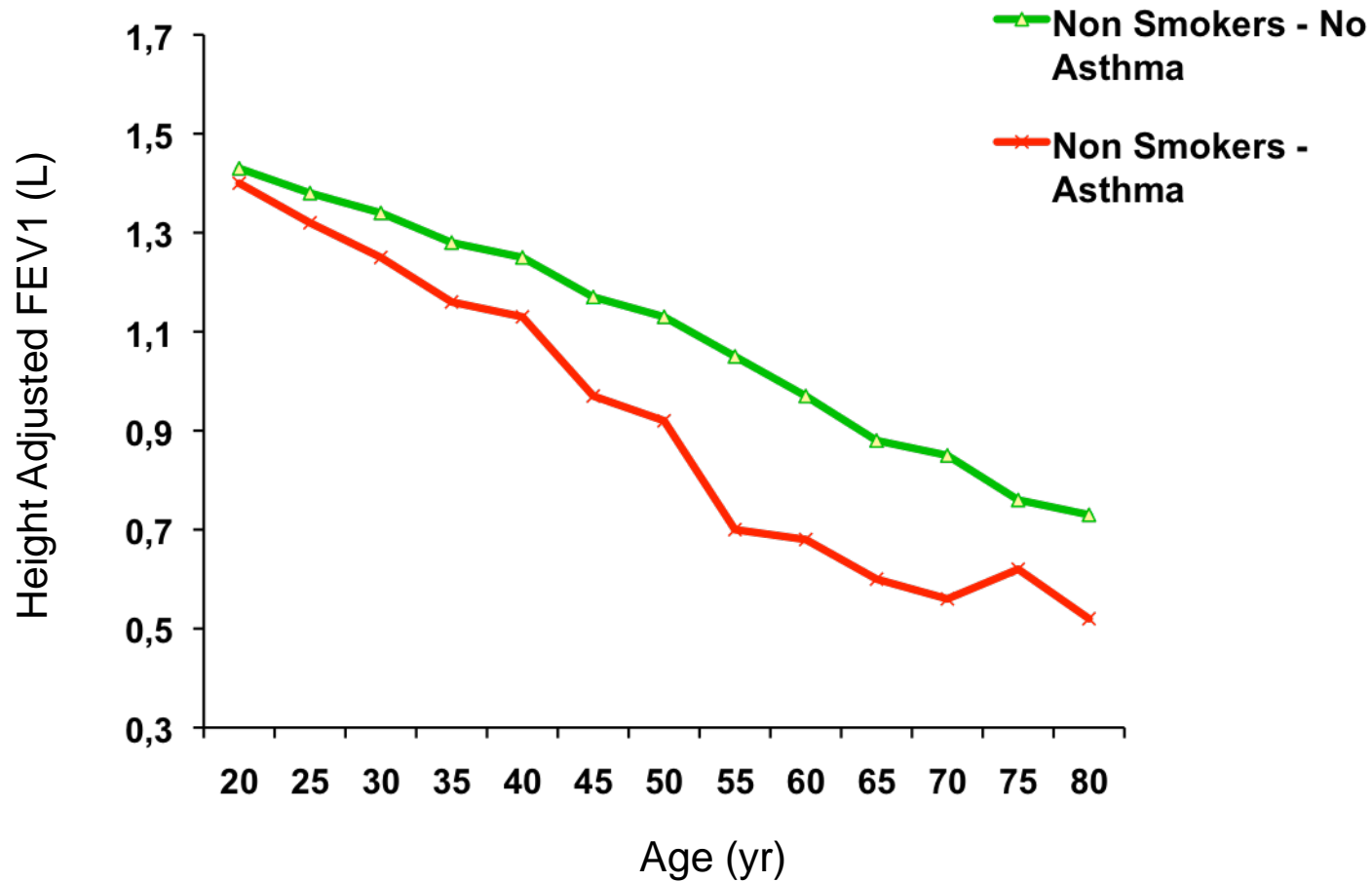


Asthma:

An allergic disease that develops in childhood
Reversible airflow obstruction
Episodic course with a generally favourable prognosis
CD4+ T lymphocytes and eosinophils
Responding well to anti-inflammatory treatment

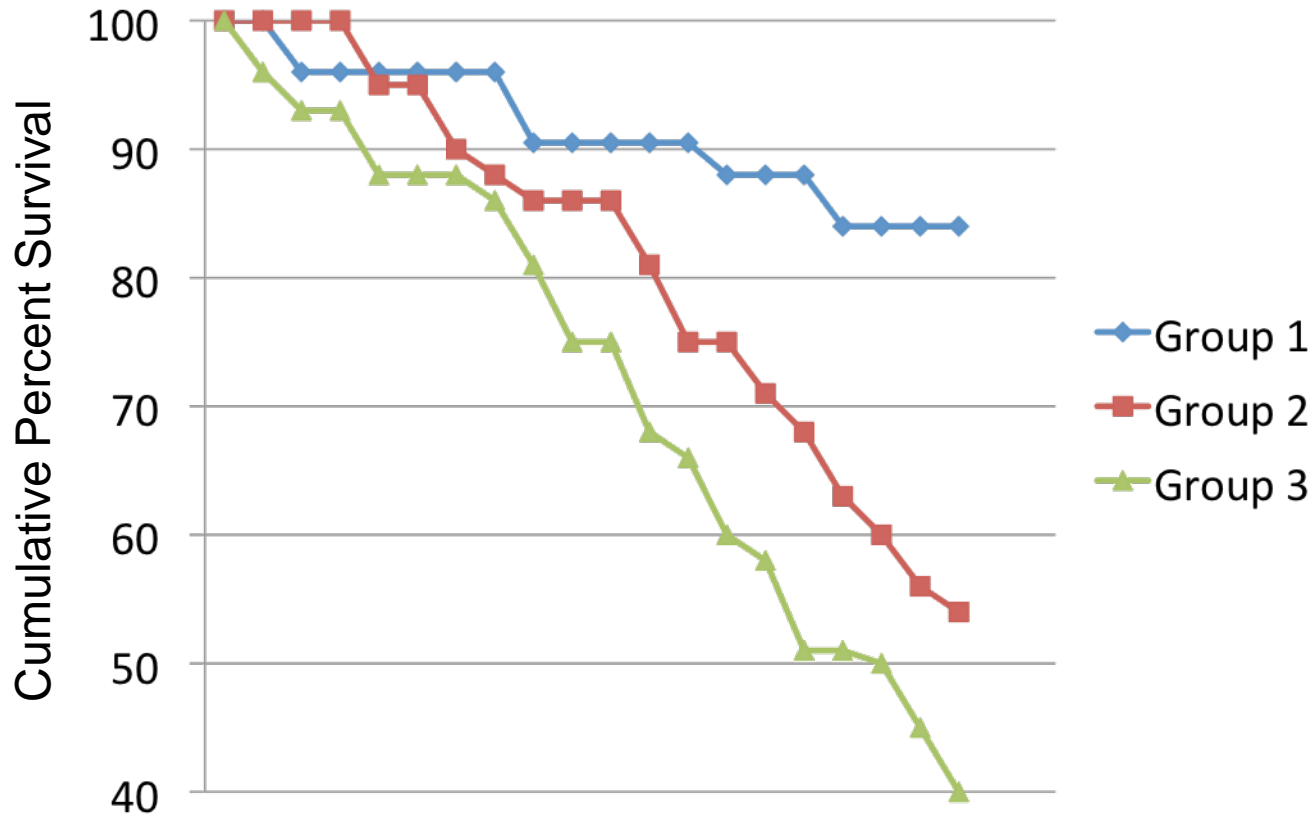
(GOLD, GINA)

A 15-year follow-up study of ventilatory function in adults with asthma



(Lange et al, N Engl J Med 1998)

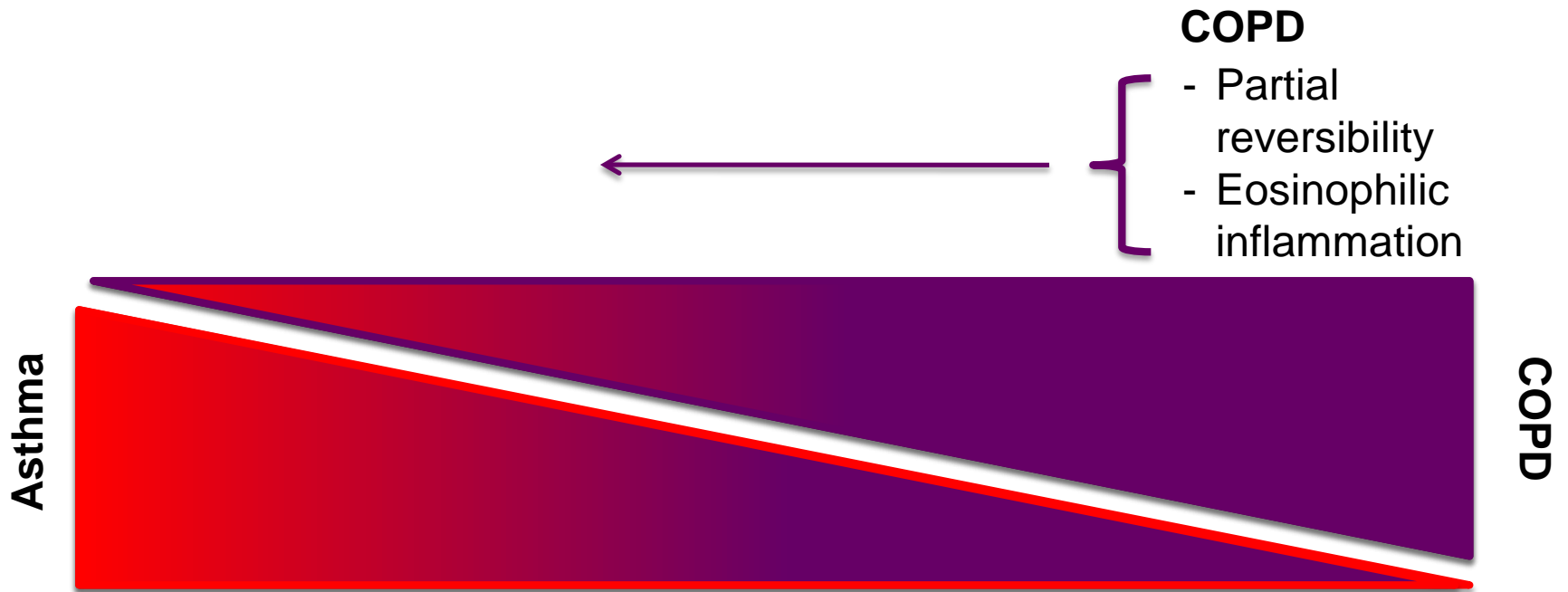
The course and prognosis of different forms of chronic airways obstruction in a sample from the general population.



10-year follow up

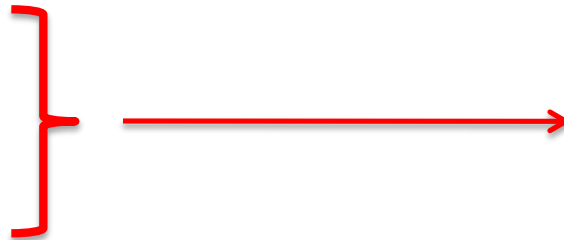
(Burrows B et al, N Engl J Med 1987)

Asthma and COPD



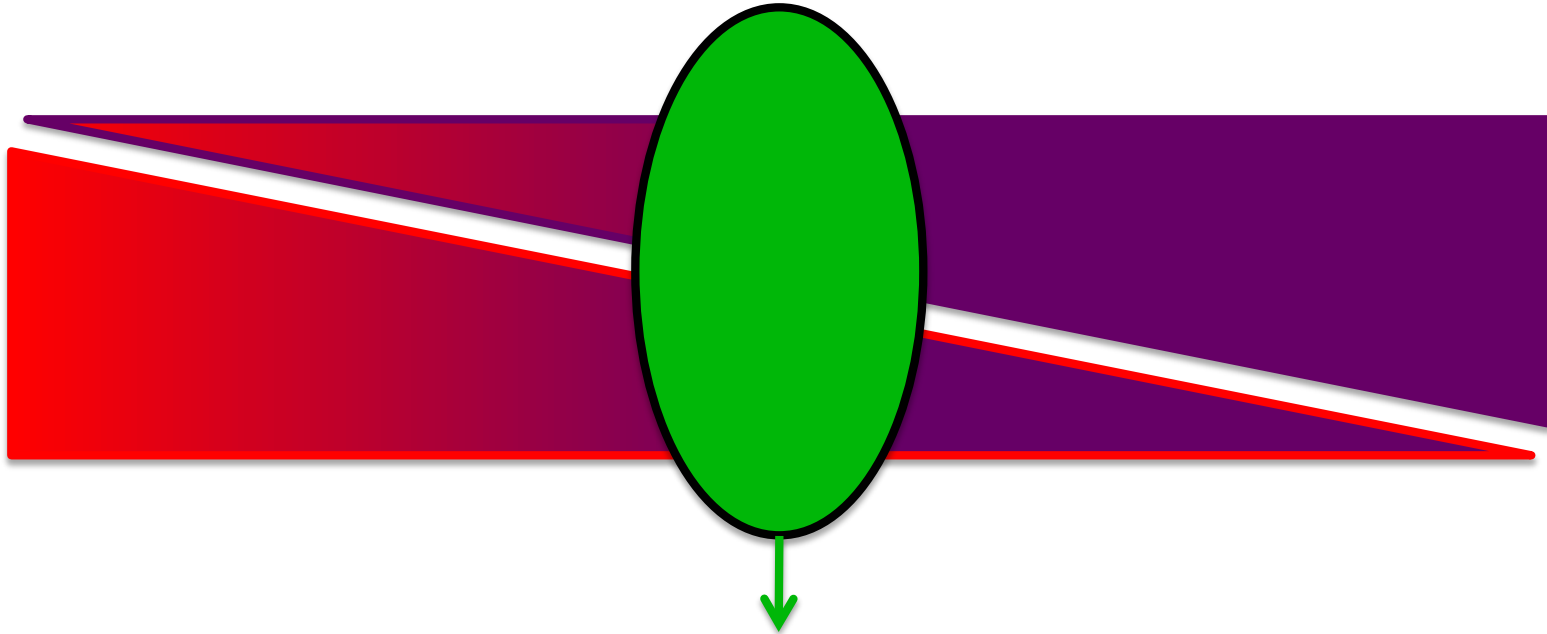
Asthma

- Aging
- Adult onset
- Smoking
- Not fully reversible



Asthma and COPD

Overlap syndrome

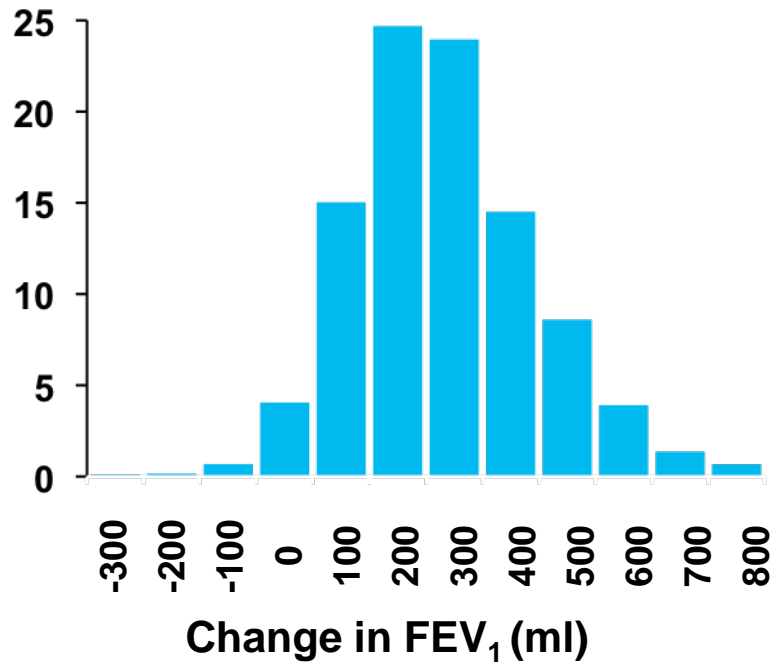


- Excluded from clinical trials of treatment
- Uncertainties in the diagnosis
- Model for identify mechanistic pathways leading to the development of COPD

- BPCO
 - BPCO con componente reversibile
- ASMA + BPCO
- ASMA
 - Asma con ostruzione fissa

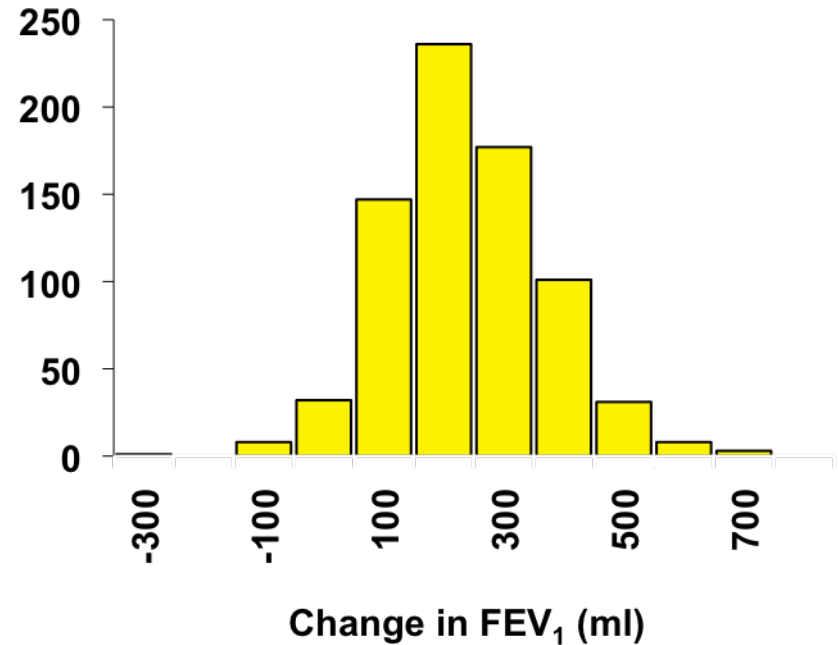
Distribution of Change in FEV₁ Following Inhalation of 400 µg Salbutamol & 80 µg Ipratropium

Patient (%)



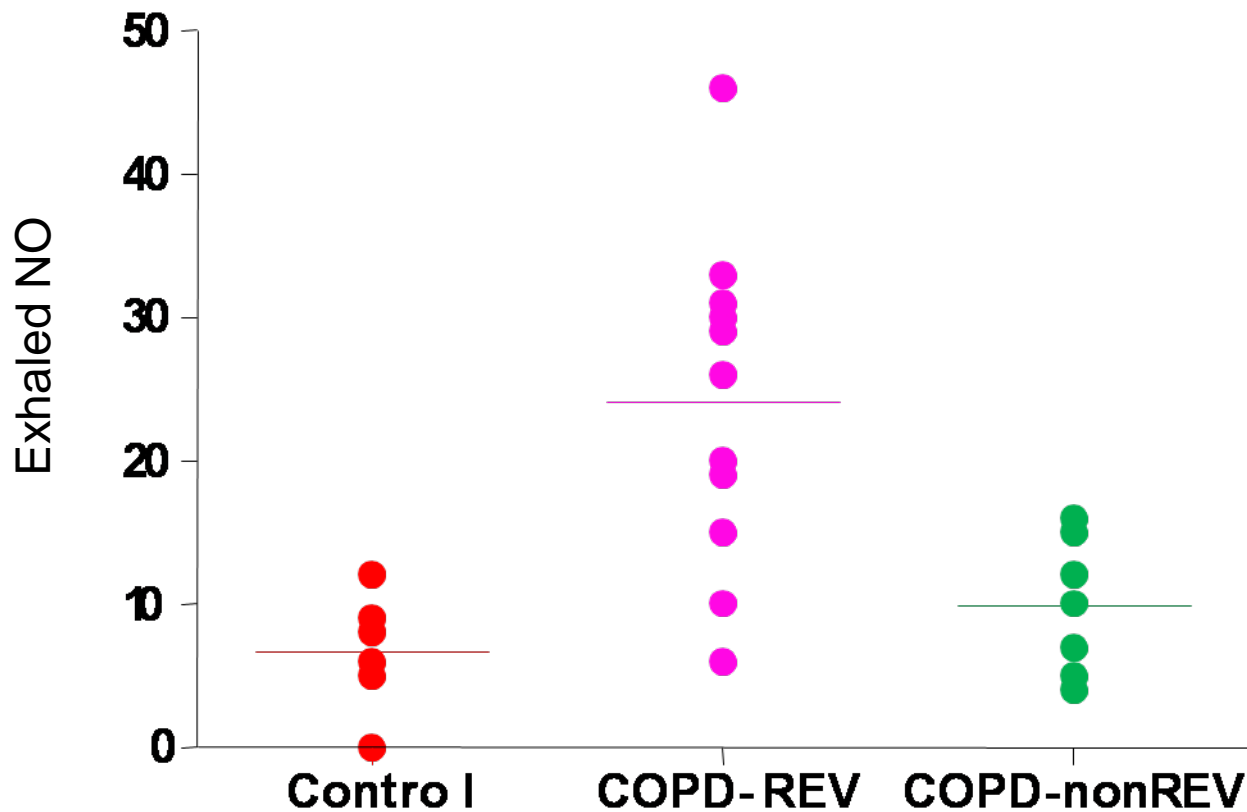
UPLIFT

Number

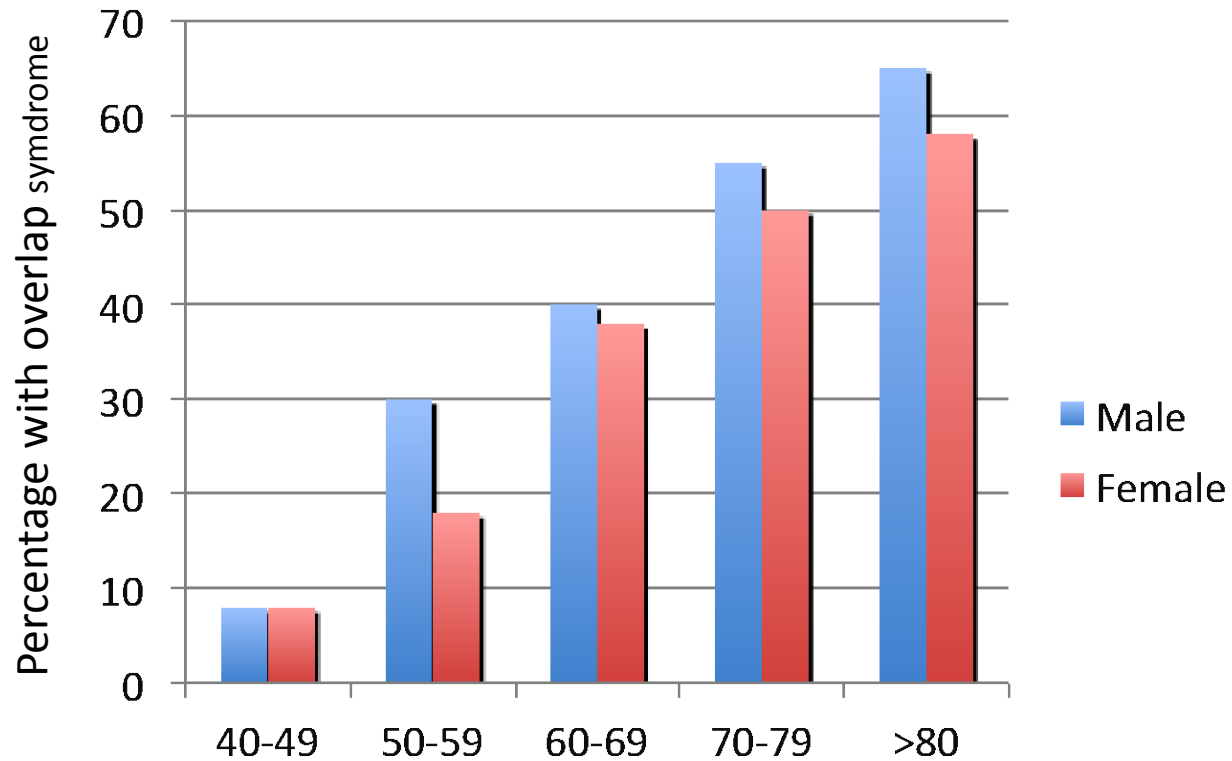


Isolde

Partial Reversibility of Airflow Limitation and Increased Exhaled NO and Sputum Eosinophilia in Chronic Obstructive Pulmonary Disease



Overlap Asthma and COPD in the elderly



Soriano JB et al, Chest 2003



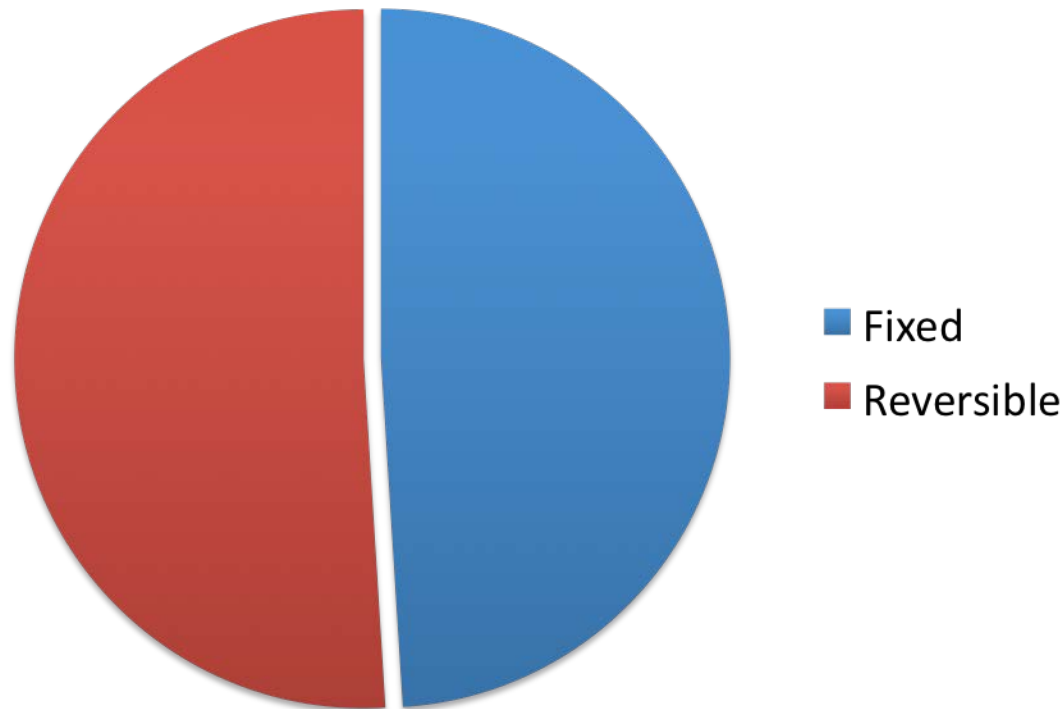
Combination Long-Acting β -Agonists and Inhaled Corticosteroids Compared With Long-Acting β -Agonists Alone in Older Adults With Chronic Obstructive Pulmonary Disease

Stratifying Characteristics	No. With Outcome/Total (%)		P Value for Interaction	Difference in Outcome at 5 y, % (95% CI)	Propensity Score-Matched Regression	
	New LABA and ICS Users	New LABA Alone Users			Hazard Ratio (95% CI) ^a	P Value
Asthma						
No diagnosis of asthma	4098/6237 (65.7)	1532/2266 (67.6)	<.001	-2.5 (-4.8 to -0.2)	0.96 (0.90-1.01)	.13
Diagnosis of asthma	1496/2475 (60.4)	597/894 (66.8)		-6.5 (-10.3 to -2.7)	0.84 (0.77-0.91)	<.001
Receipt of LAAs						
No receipt	1695/2850 (59.5)	733/1072 (68.4)	<.001	-8.4 (-11.9 to -4.9)	0.79 (0.73-0.86)	<.001
Receipt	3616/5536 (65.3)	1347/2030 (66.4)		-0.9 (-3.4 to 1.6)	1.01 (0.95-1.07)	.76

(Gershon et al. JAMA 2014)

Airways obstruction with incomplete reversibility in asthma

Severe asthmatic patients: cross-sectional study



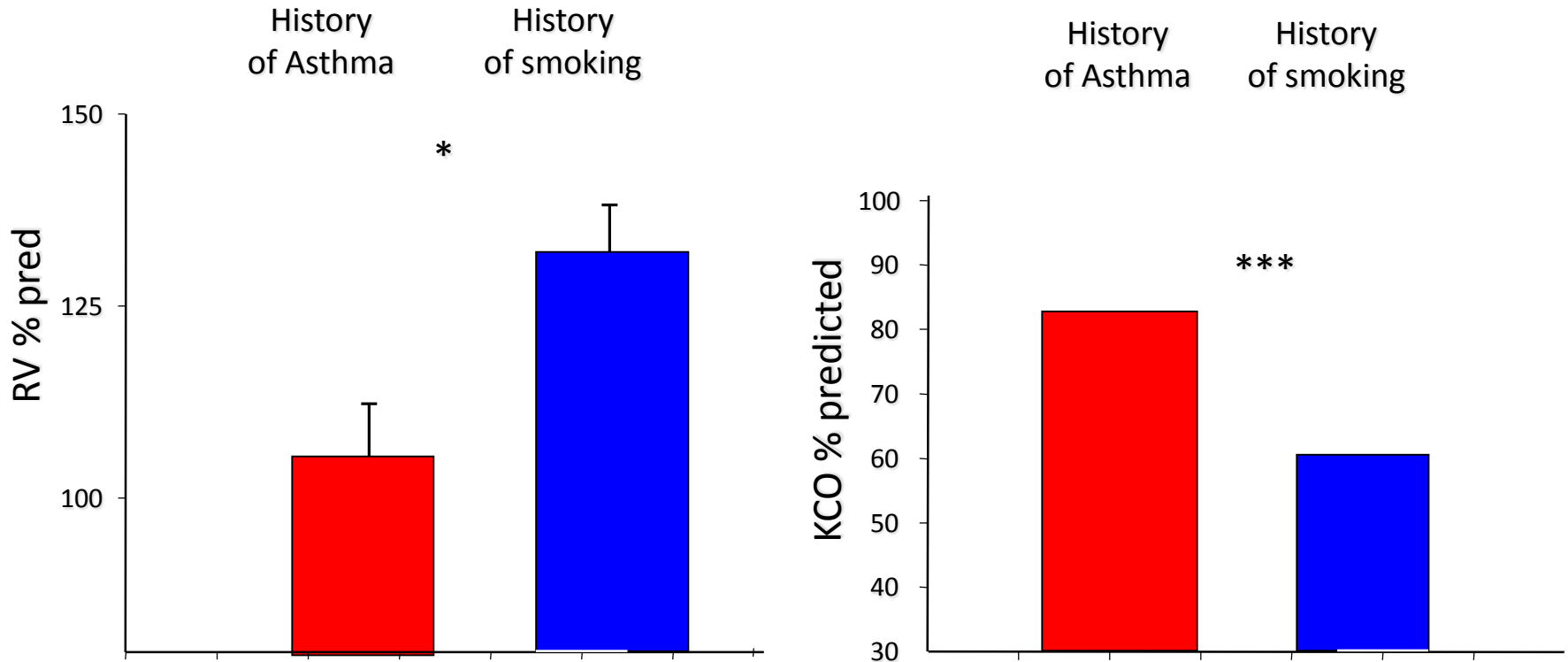
(ten Brinke et al AJRCCM 2001)

...Asthma with fixed airflow obstruction...

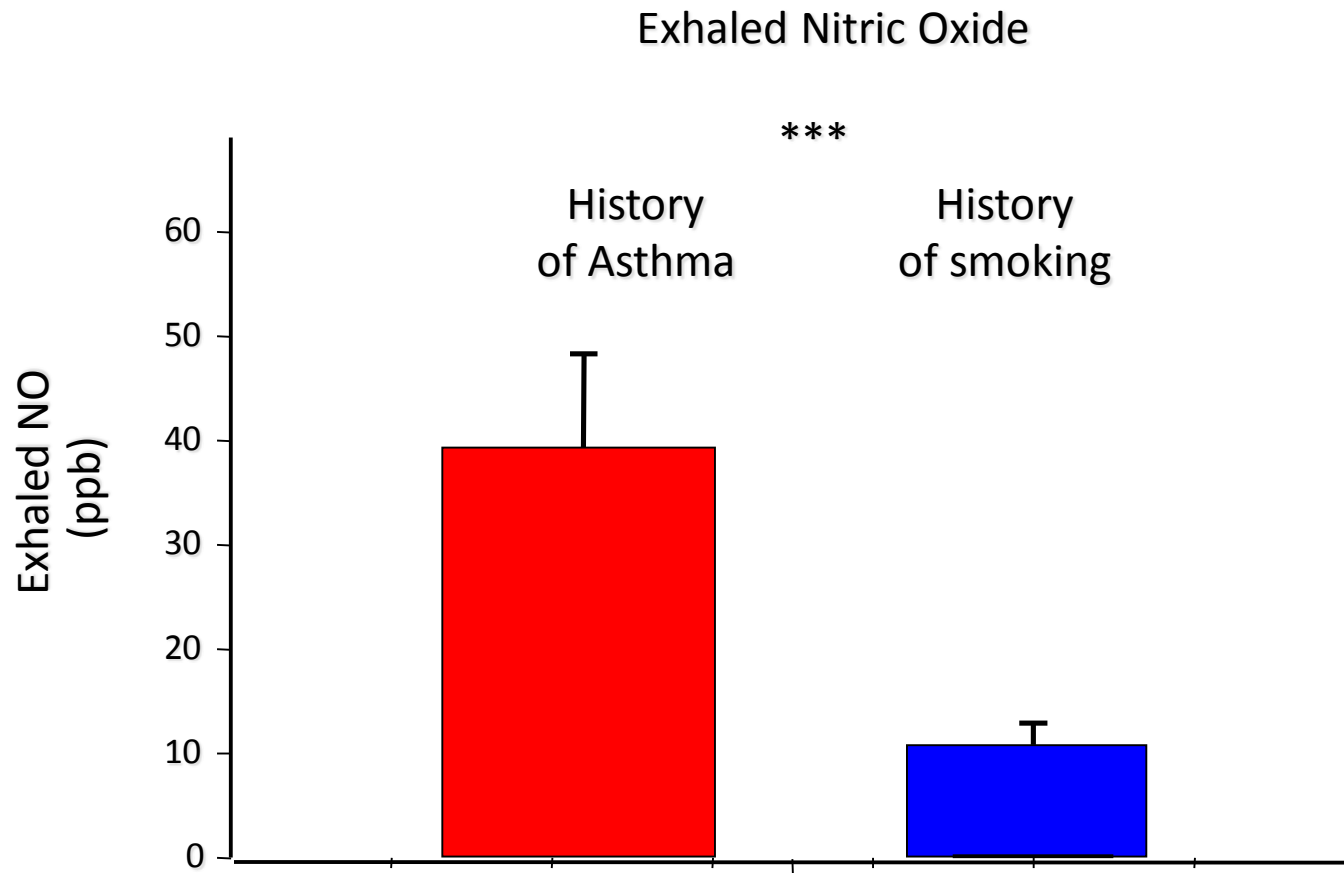
Is it asthma or COPD?

Clinical history and prognosis?

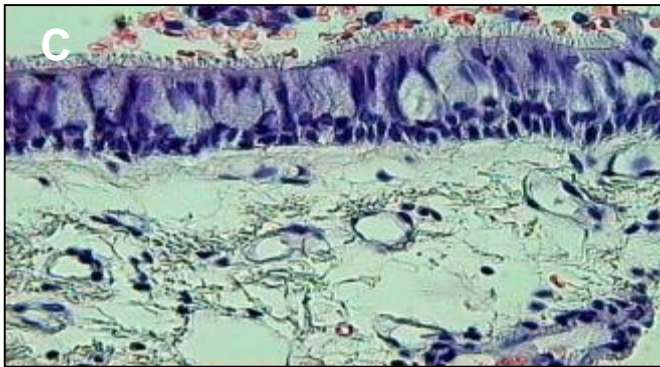
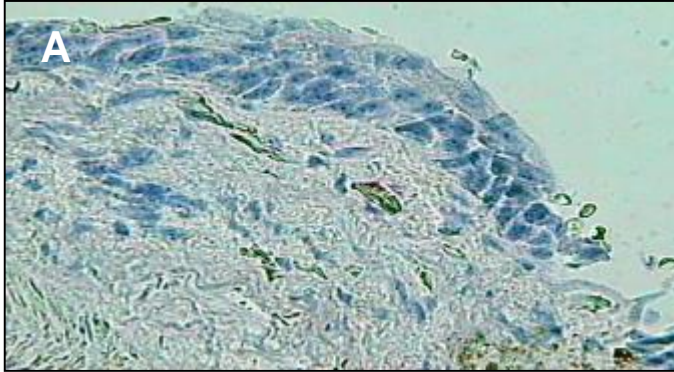
Fixed airflow limitation in Asthma and COPD



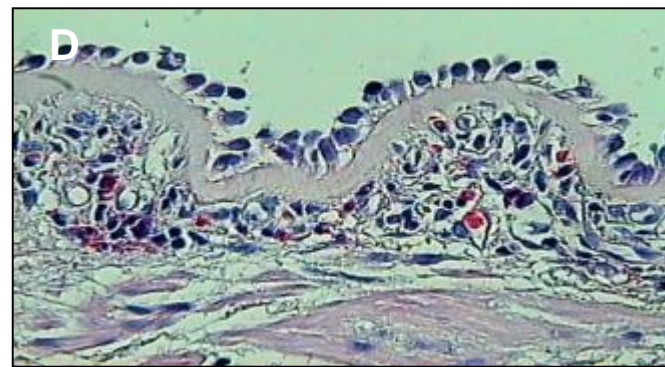
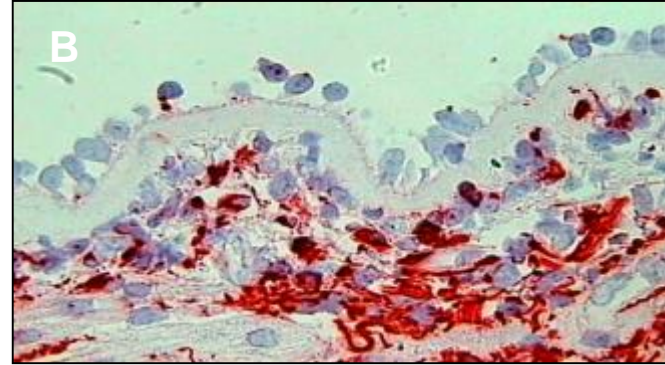
Fixed airflow limitation in Asthma and COPD



COPD

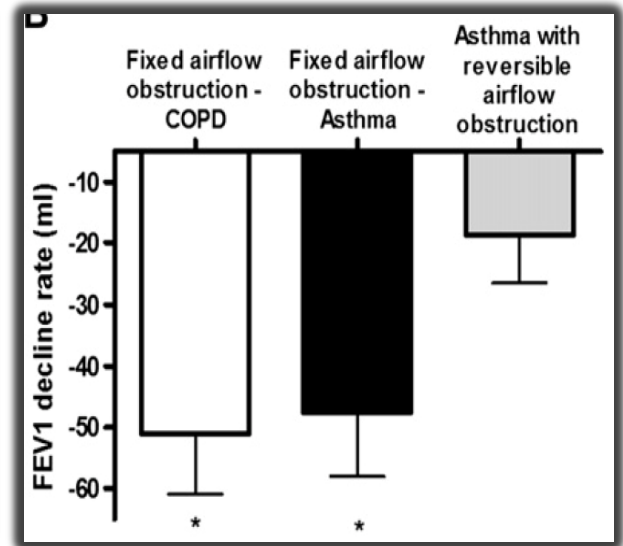
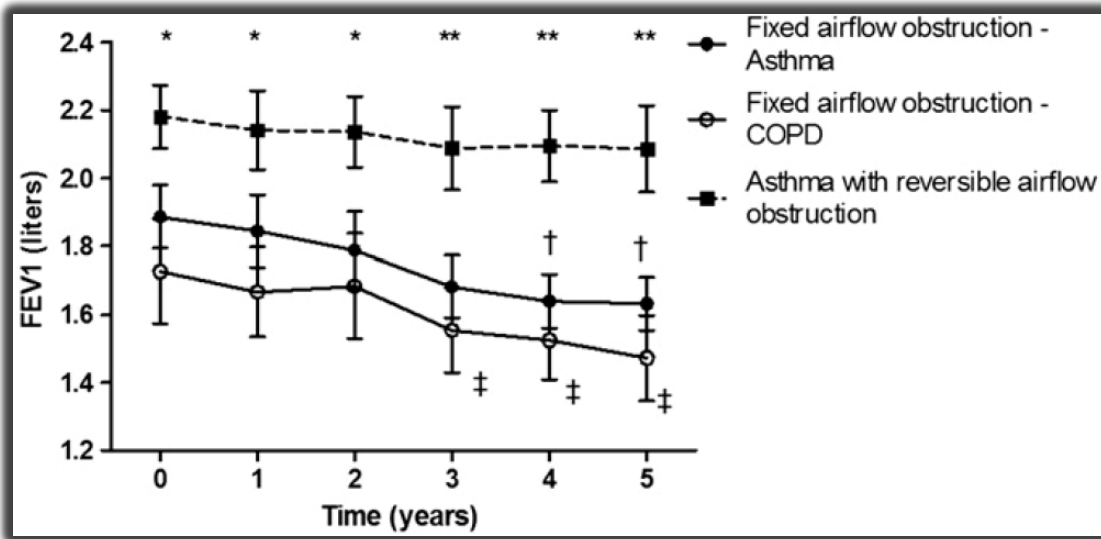


Asthma



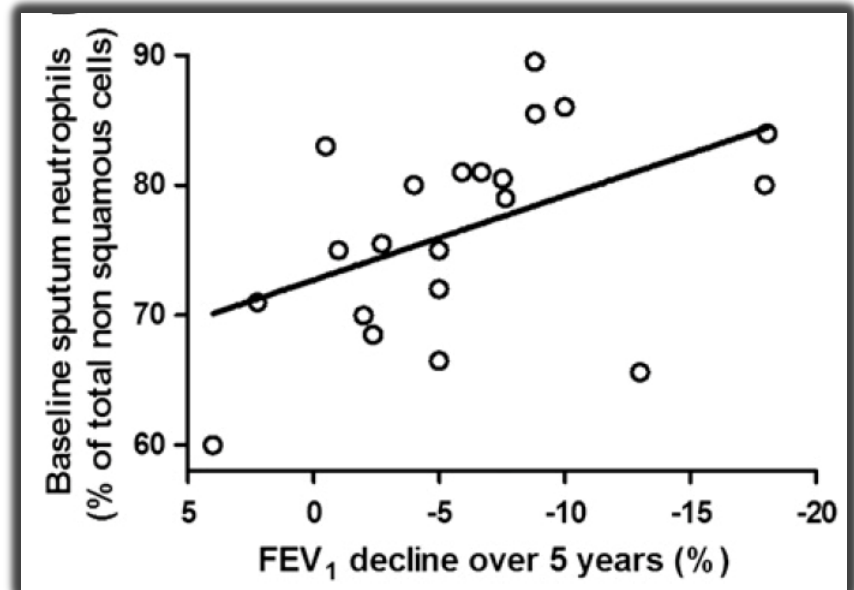
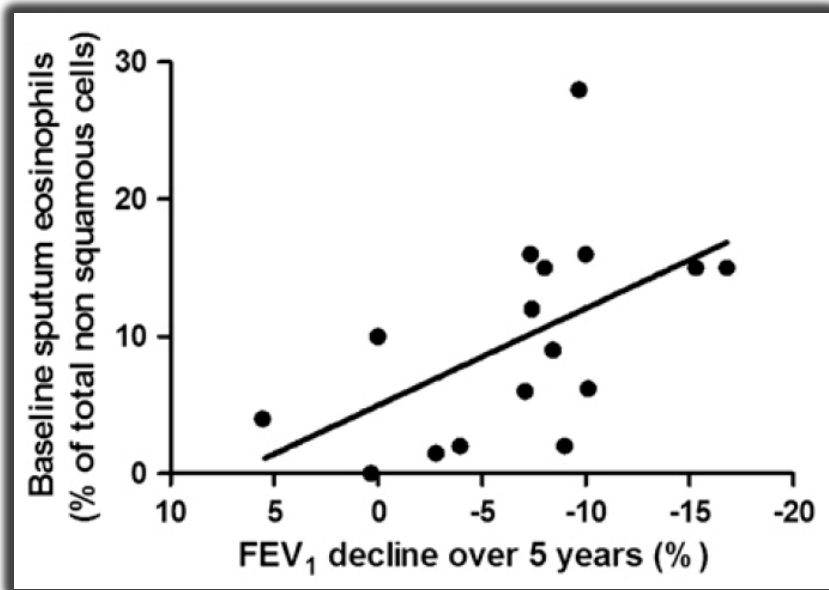
Fabbri LM, Papi A, Saetta M, et al Am J Respir Crit Care Med 2003

Fixed Airflow Obstruction due to Asthma or Chronic Obstructive Pulmonary Disease: 5-year follow-up



(Contoli M., Saetta M., Fabbri L.M., Papi A. et al. JACI 2010)

Fixed Airflow Obstruction due to Asthma or Chronic Obstructive Pulmonary Disease: 5-year follow-up



(Contoli M., Saetta M., Fabbri L.M., Papi A. et al. JACI 2010)

Fixed Airflow Obstruction due to Asthma or Chronic Obstructive Pulmonary Disease: 5-year follow-up

	Patients with fixed airflow obstruction due to COPD		Patients with fixed airflow obstruction due to asthma		Asthma with reversible airflow obstruction	
	Baseline	End of study	Baseline	End of study	Baseline	End of study
Charlson index	2.23±0.4*		0.81±0.20		0.73±0.22	
Number of coexistent illnesses		1.95±0.26*		0.85±0.16		0.70±0.16

(Contoli M., Saetta M., Fabbri L.M., Papi A. et al. JACI 2010)

Fixed Airflow Obstruction due to Asthma or Chronic Obstructive Pulmonary Disease: 5-year follow-up

	Patients with fixed airflow obstruction - Asthma	Patients with fixed airflow obstruction - COPD	Asthma with reversible airflow obstruction
Mean number of severe exacerbations per patient-year	1.98 ± 0.3*	1.41 ± 0.26*	0.53 ± 0.11
Percentage of exacerbations requiring hospitalization	1.7%*	6.2% *^	0%

^ (p=0.07 vs asthma with fixed airflow obstruction)

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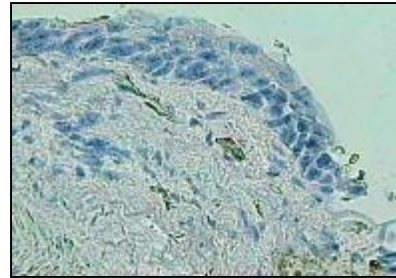


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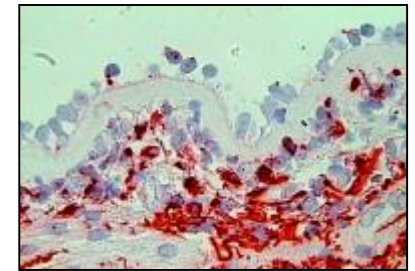
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Conclusioni

COPD



Asthma



VS

- BPCO
 - BPCO con componente reversibile
- ASMA
 - Asma con ostruzione fissa
- ASMA + BPCO