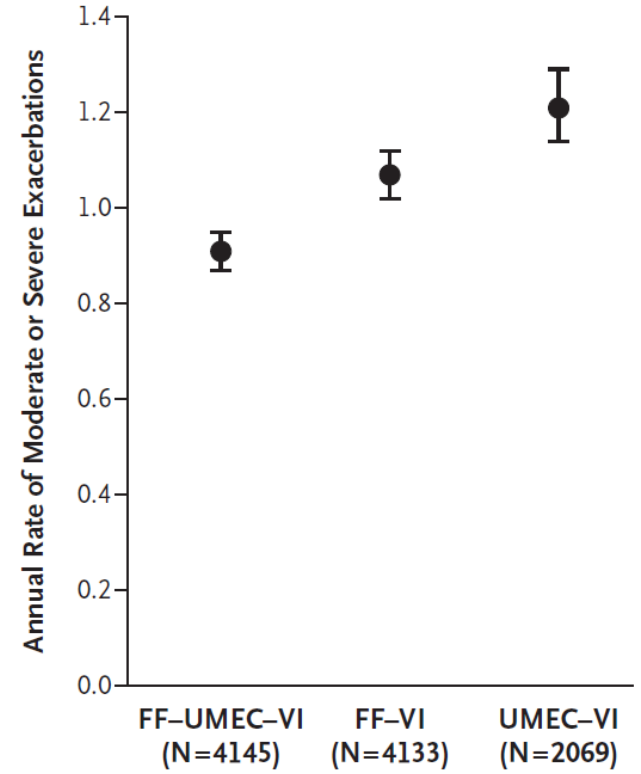
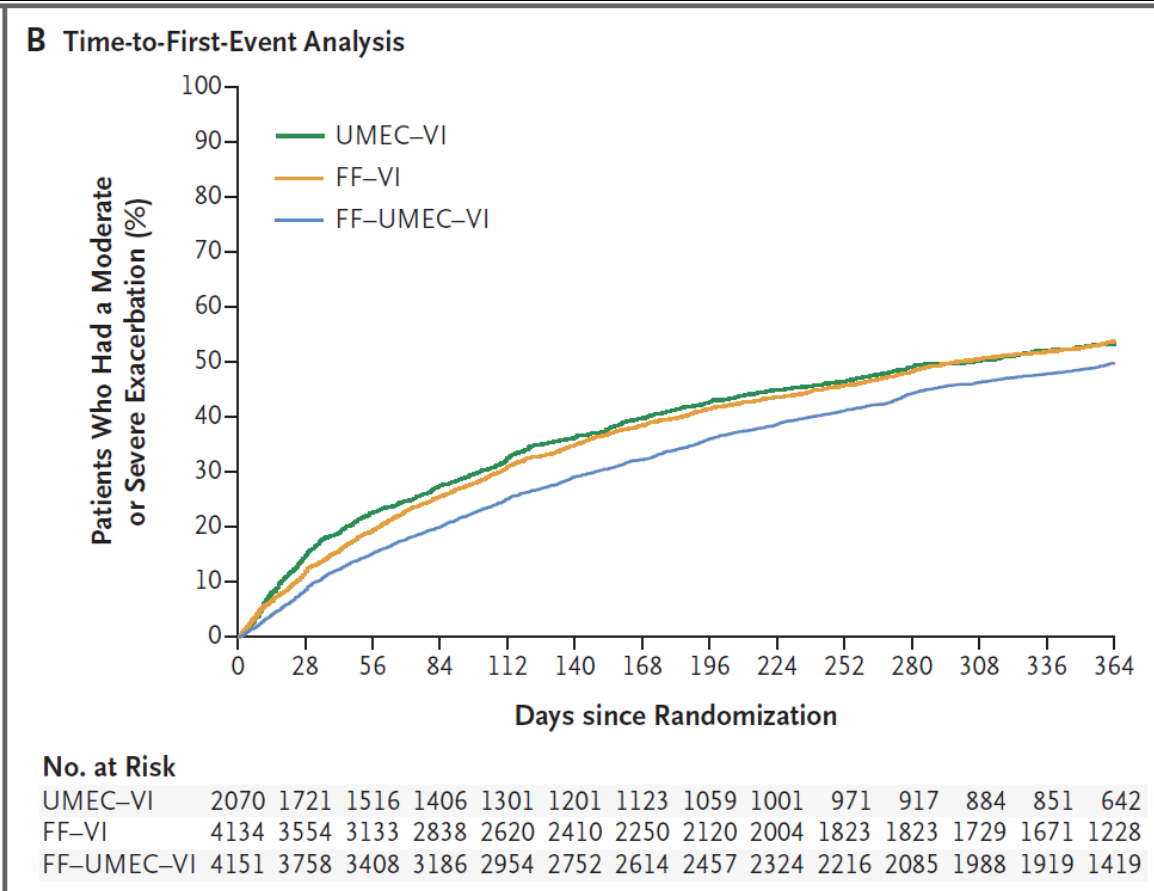
Debate on the Positioning of ICS as the First Combination Option in Group D of COPD?

-Con

Chin Kook Rhee, MD, PhD

Professor
Division of Pulmonary, Allergy and Critical Care Medicine
Department of Internal Medicine
Seoul St. Mary's Hospital
The Catholic University of Korea





No. at Risk

UMEC–VI	2070	1721	1516	1406	1301	1201	1123	1059	1001	971	917	884	851	642
FF–VI	4134	3554	3133	2838	2620	2410	2250	2120	2004	1823	1823	1729	1671	1228
FF–UMEC–VI	4151	3758	3408	3186	2954	2752	2614	2457	2324	2216	2085	1988	1919	1419

Lipson DA. N Engl J Med 2018.

The NEW ENGLAND JOURNAL of MEDICINE

EDITORIAL

Making Sense of Triple Inhaled Therapy for COPD

Samy Suissa, Ph.D., and Jeffrey M. Drazen, M.D.

Suissa S. N Engl J Med 2018.

4.3. Exclusion Criteria

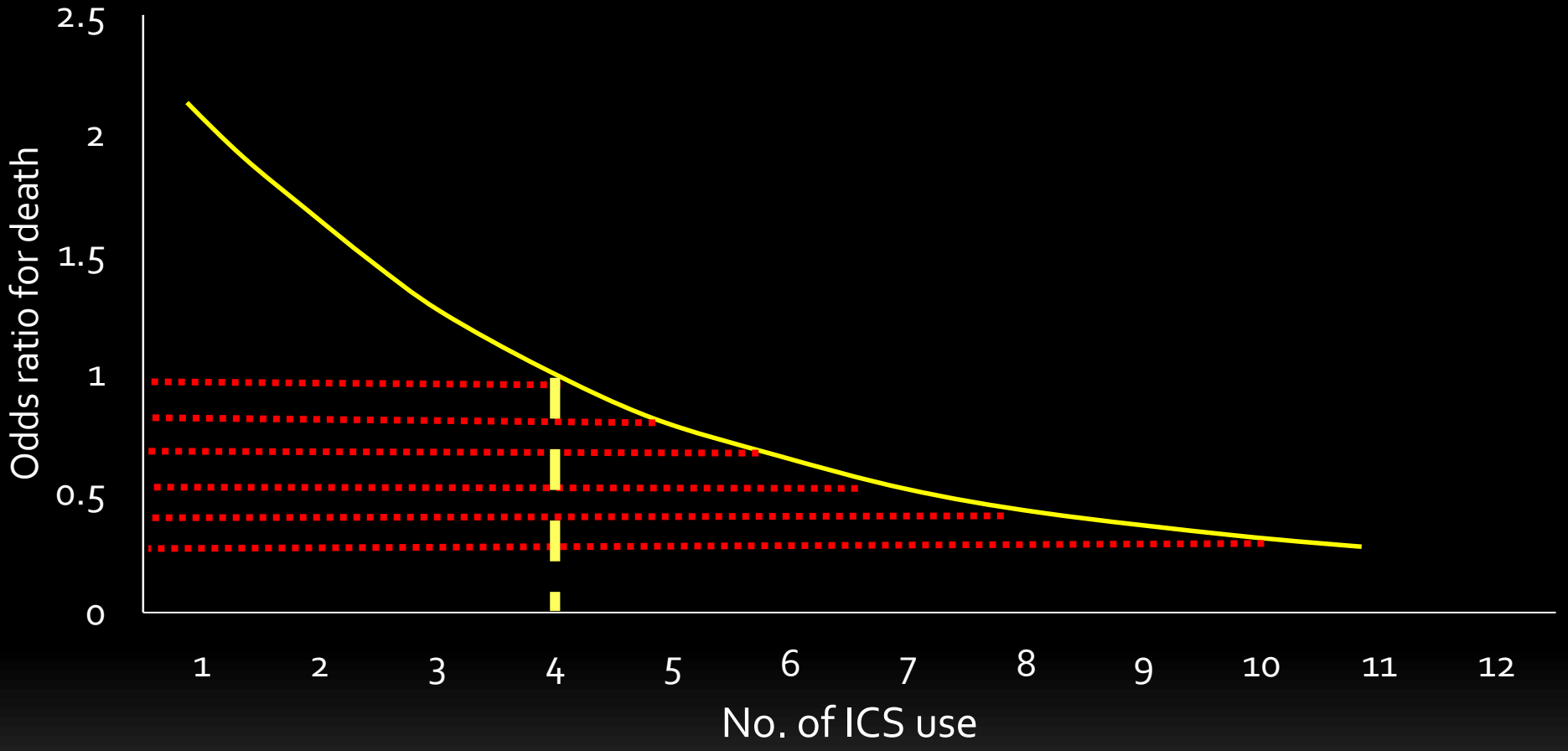
Deviations from exclusion criteria are not allowed because they can potentially jeopardise the scientific integrity of the study, regulatory acceptability or subject safety. Therefore, adherence to the criteria as specified in the protocol is essential.

Subjects meeting any of the following criteria must not be enrolled in the study:

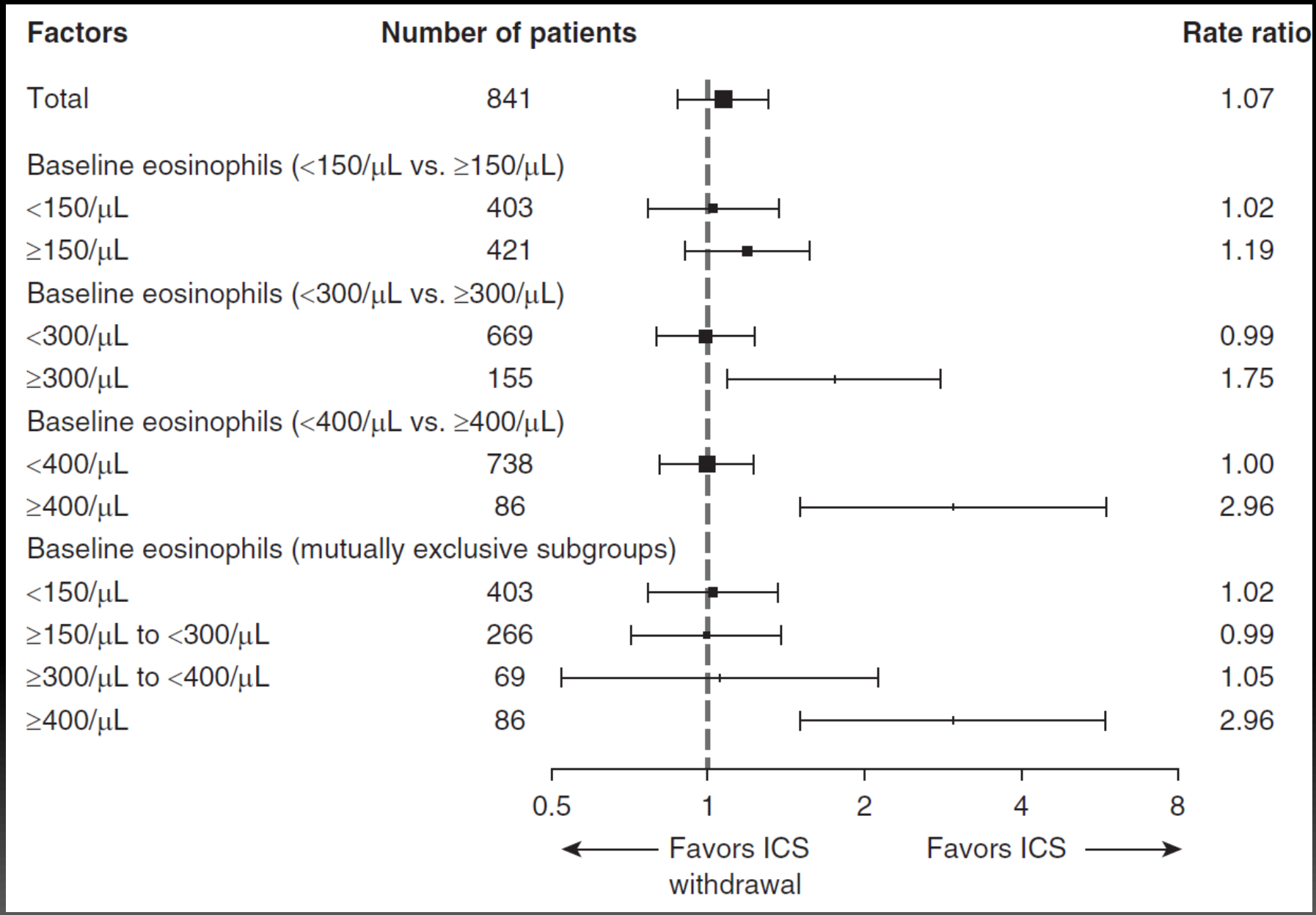
1. **Pregnancy**: Women who are pregnant or lactating or are planning on becoming pregnant during the study.
2. **Asthma**: Subjects with a current diagnosis of asthma. (Subjects with a prior history of asthma are eligible if they have a current diagnosis of COPD).

Lipson DA. N Engl J Med 2018.

ICS ↑ & Death ↓



Spitzer WO, et al.N Engl J Med. 1992;326(8):501-6.

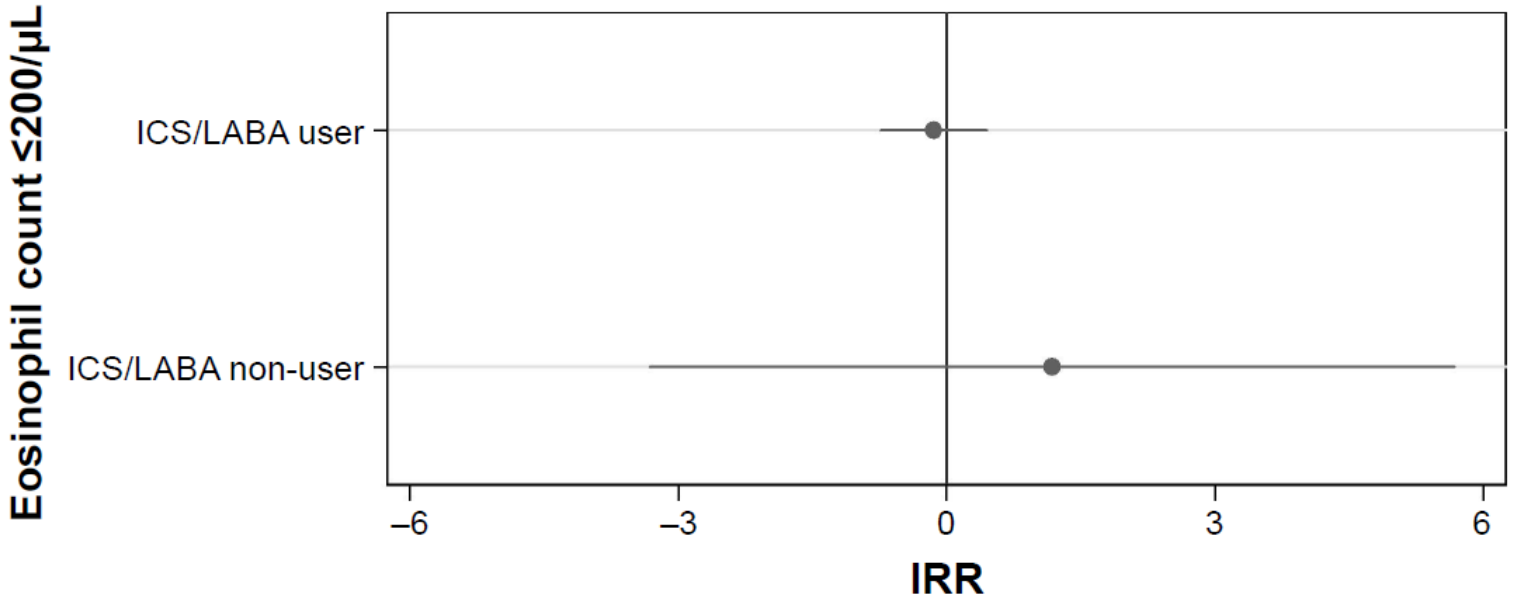


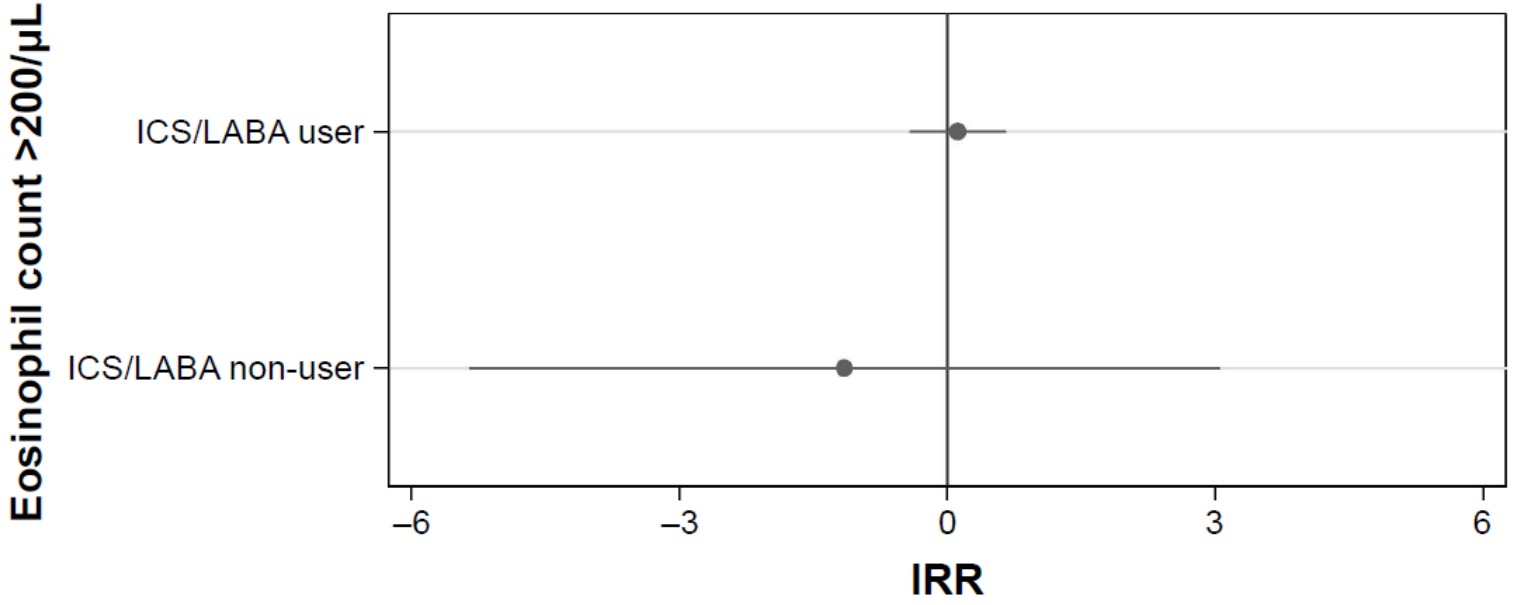
Calverley PMA. Am J Respir Crit Care Med 2017; 196: 1219-1221.

Table 6 Impact of eosinophil count on moderate-to-severe acute exacerbation rates in COPD patients according to the exposure to ICS/LABA

	IRR (95% CI)[a]	*P*-value for interaction
Eosinophil count ≤200/μL		
ICS/LABA use (n=60)	1.12 (0.66–1.91)	0.657
No use of ICS/LABA (n=39)	0.32 (0.00–20.88)	
Eosinophil count >200/μL		
ICS/LABA use (n=34)	0.86 (0.48–1.56)	0.623
No use of ICS/LABA (n=35)	3.26 (0.36–290.9)	

Song JH. Int J Chron Obstruct Pulmon Dis 2017; 12: 2455-2464.





Song JH. Int J Chron Obstruct Pulmon Dis 2017; 12: 2455-2464.

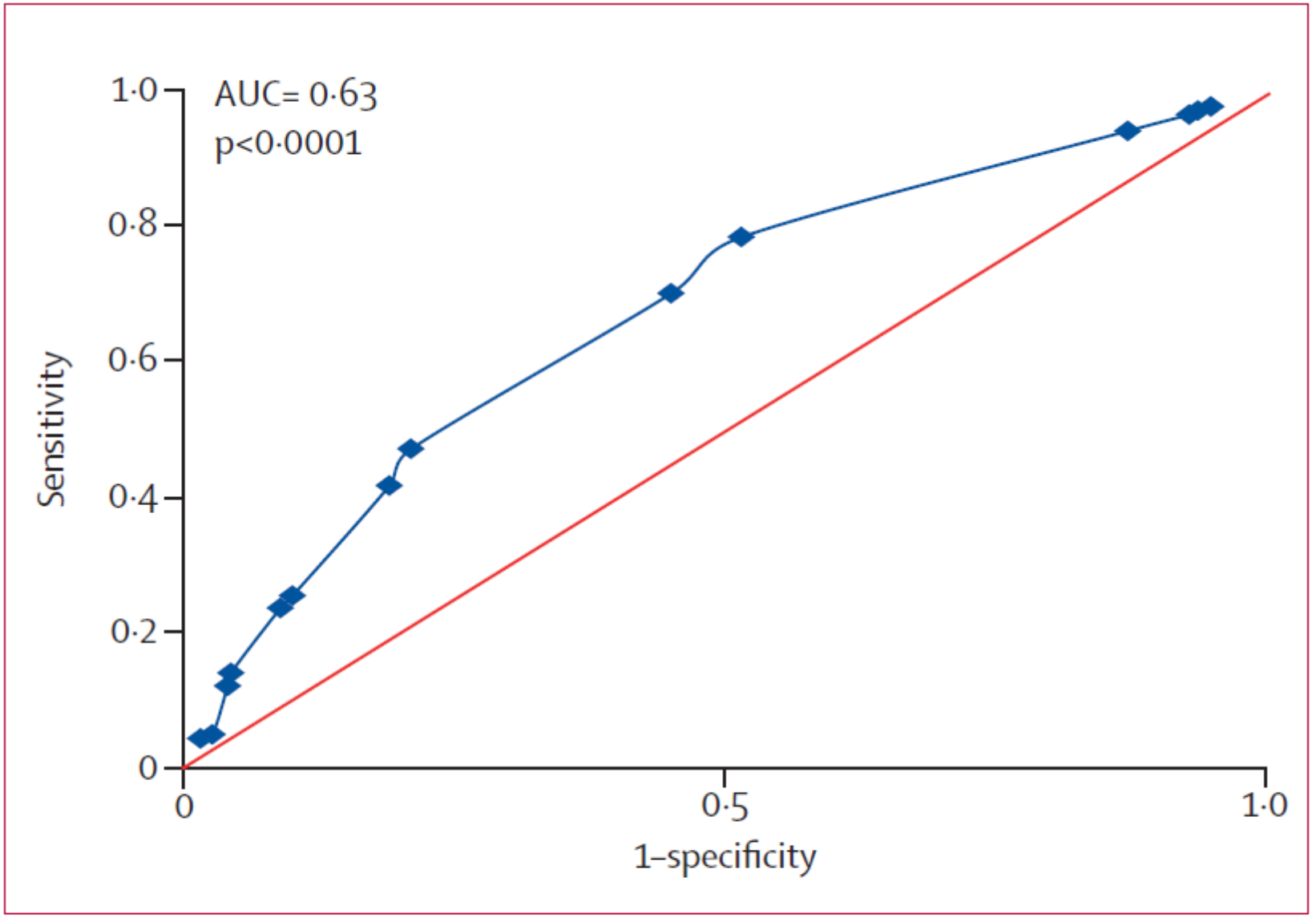
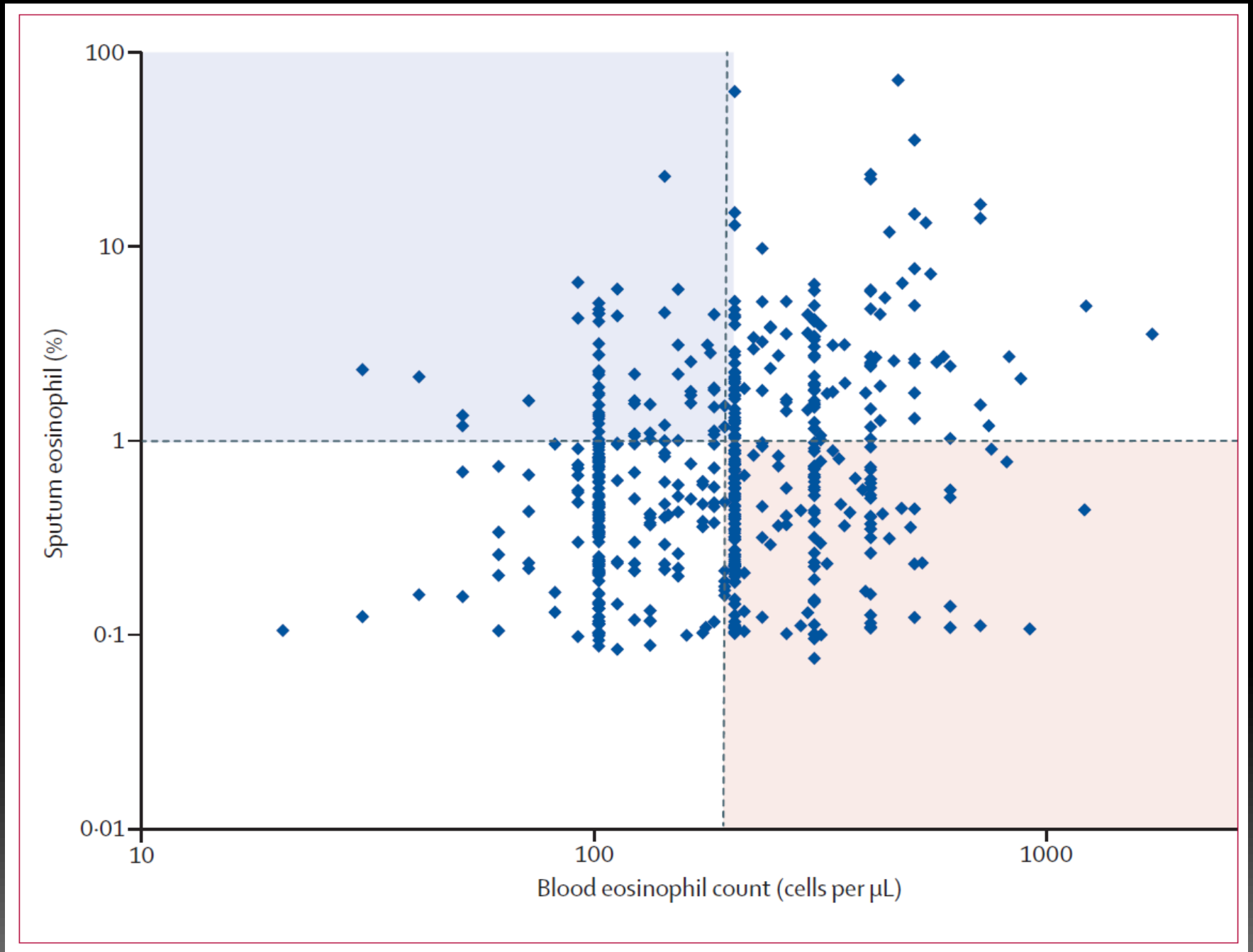


Figure 2: Receiver operating characteristic analysis for blood eosinophil prediction of sputum eosinophils

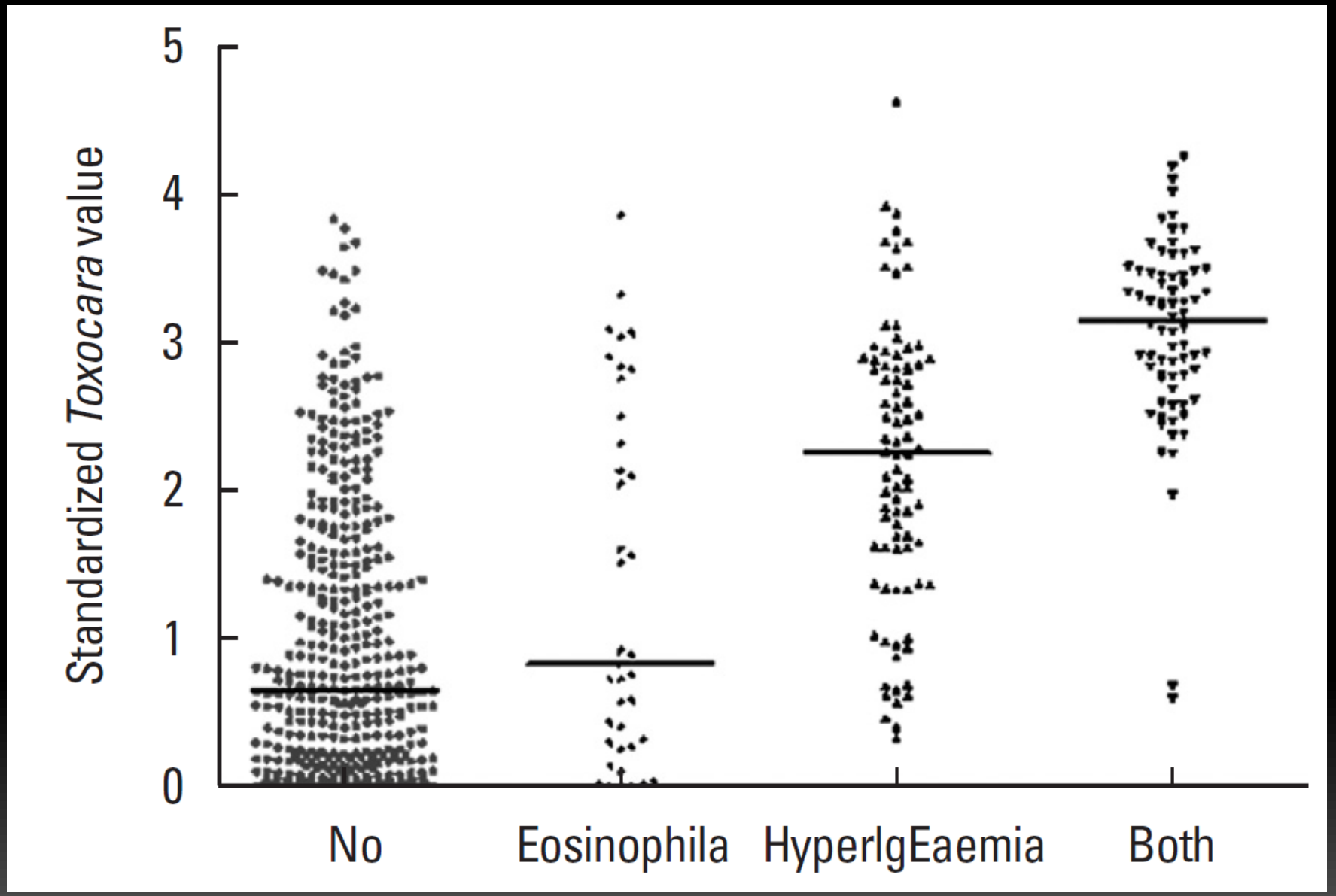
Hastie AT. The Lancet Respiratory Medicine 2017; 5: 956-967.



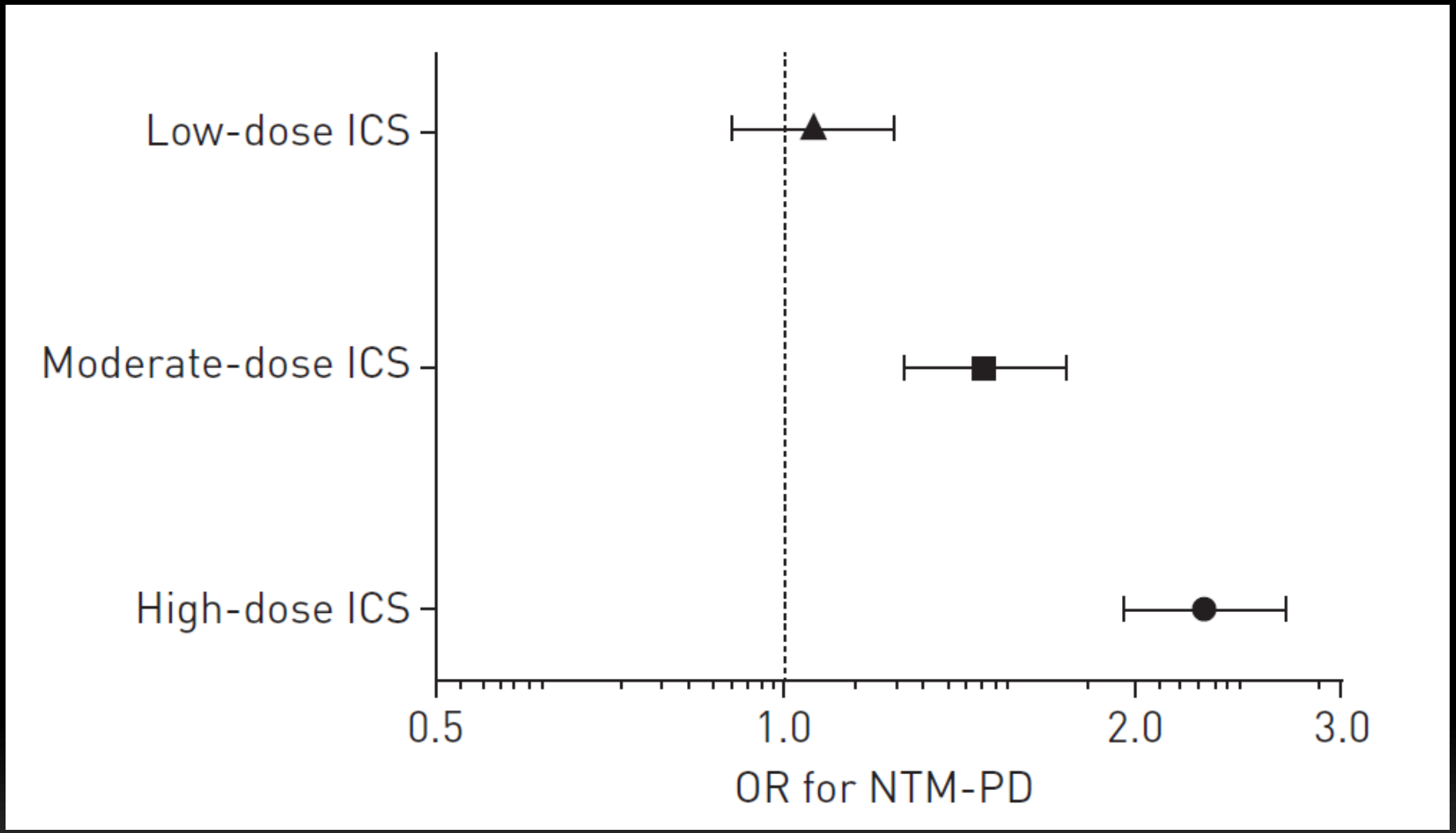
Hastie AT. The Lancet Respiratory Medicine 2017; 5: 956-967.

	Proportion with Stable Eosinophil Counts at Time Point (%)						
	6 mo	9 mo	1 yr	2 yr	4 yr	6 yr	8 yr
Patients with COPD	85	82	75	62	49	42	35
Absolute blood eosinophil count							
$<0.34 \times 10^9$, cells/L	95	93	90	86	80	77	75
$\geq 0.34 \times 10^9$, cells/L	80	70	63	45	30	23	18

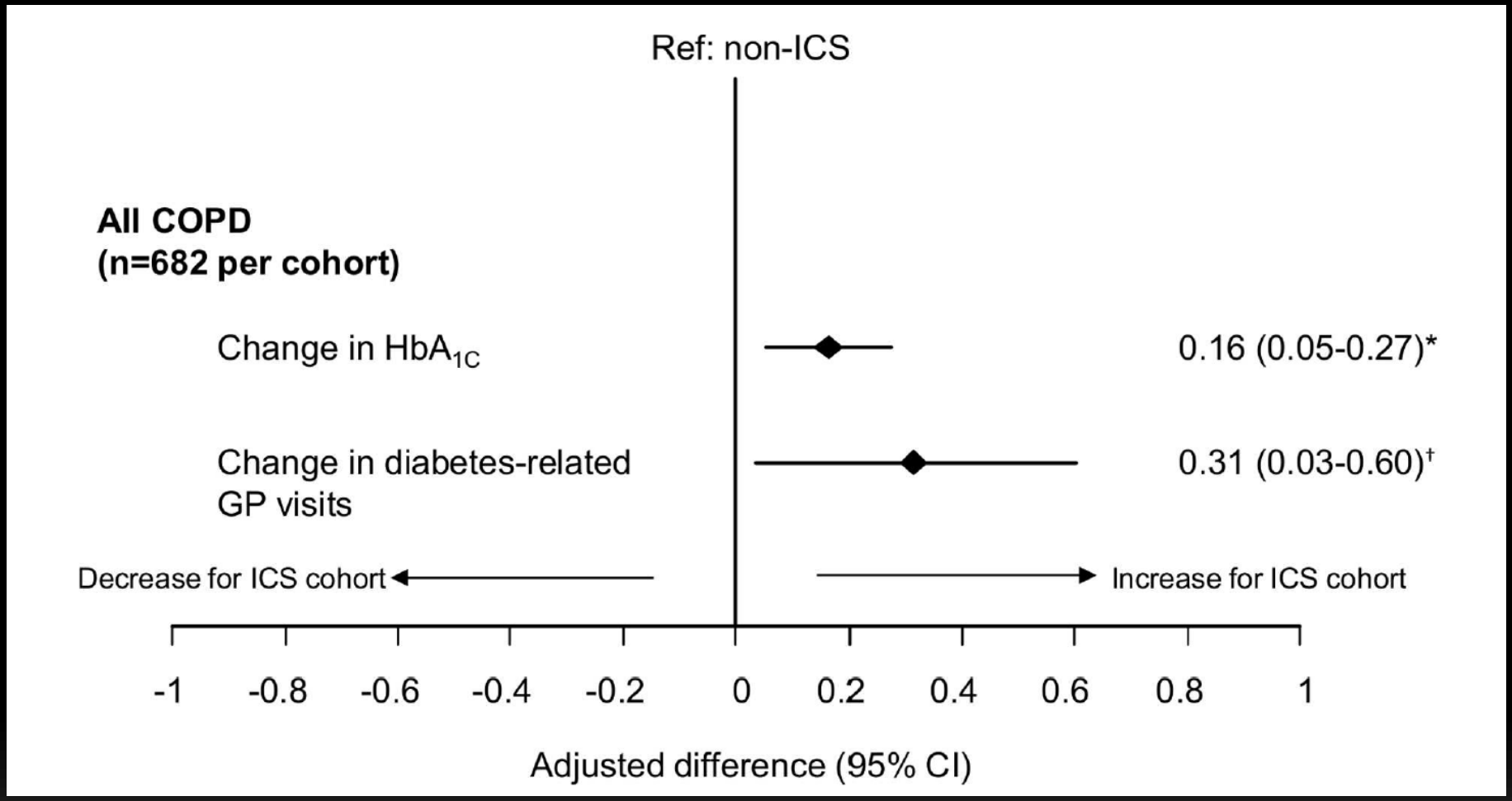
Oshagbemi OA. Am J Respir Crit Care Med 2017; 195: 1402-1404.



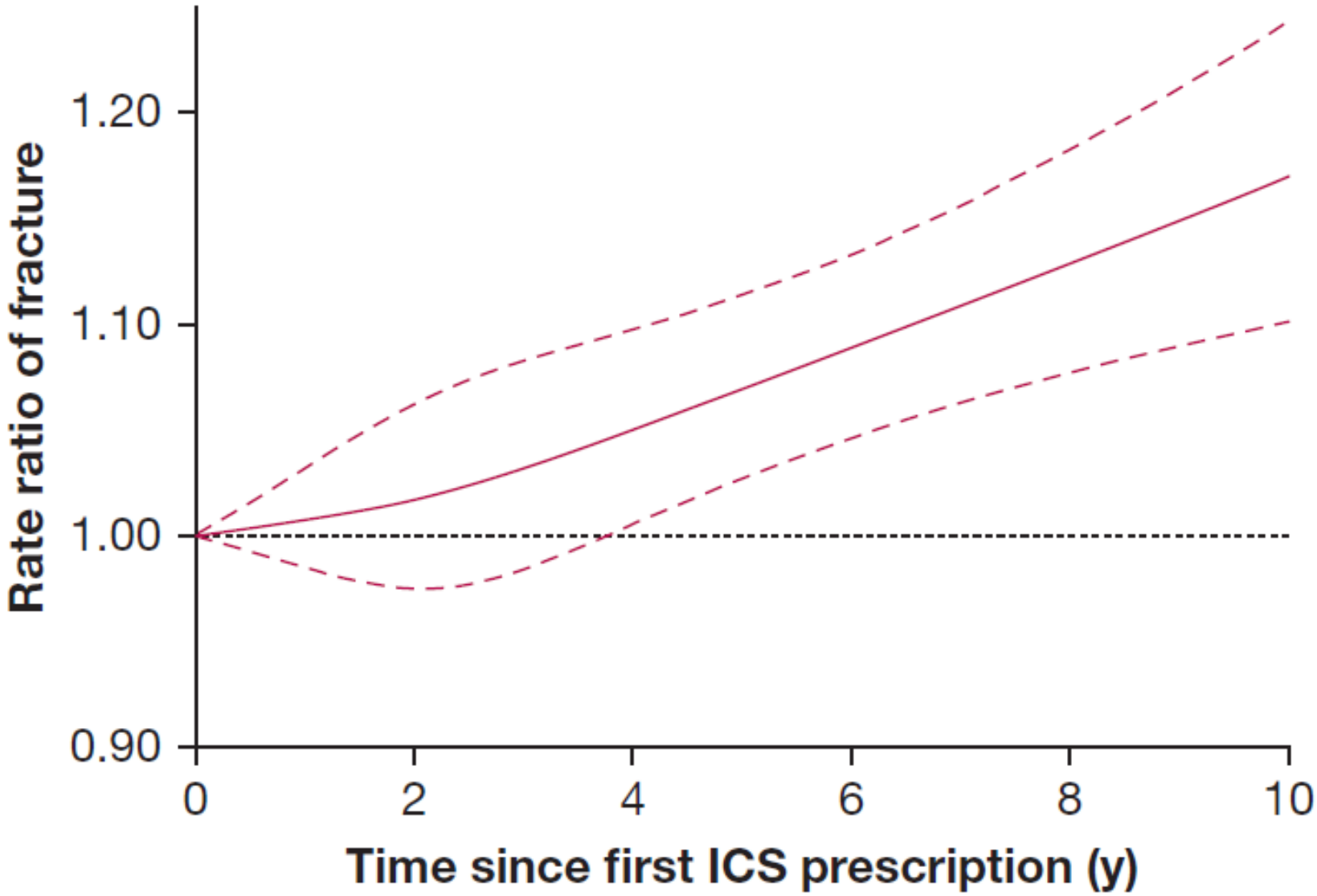
Lee JY. Allergy Asthma Immunol Res 2015; 7: 467-475.



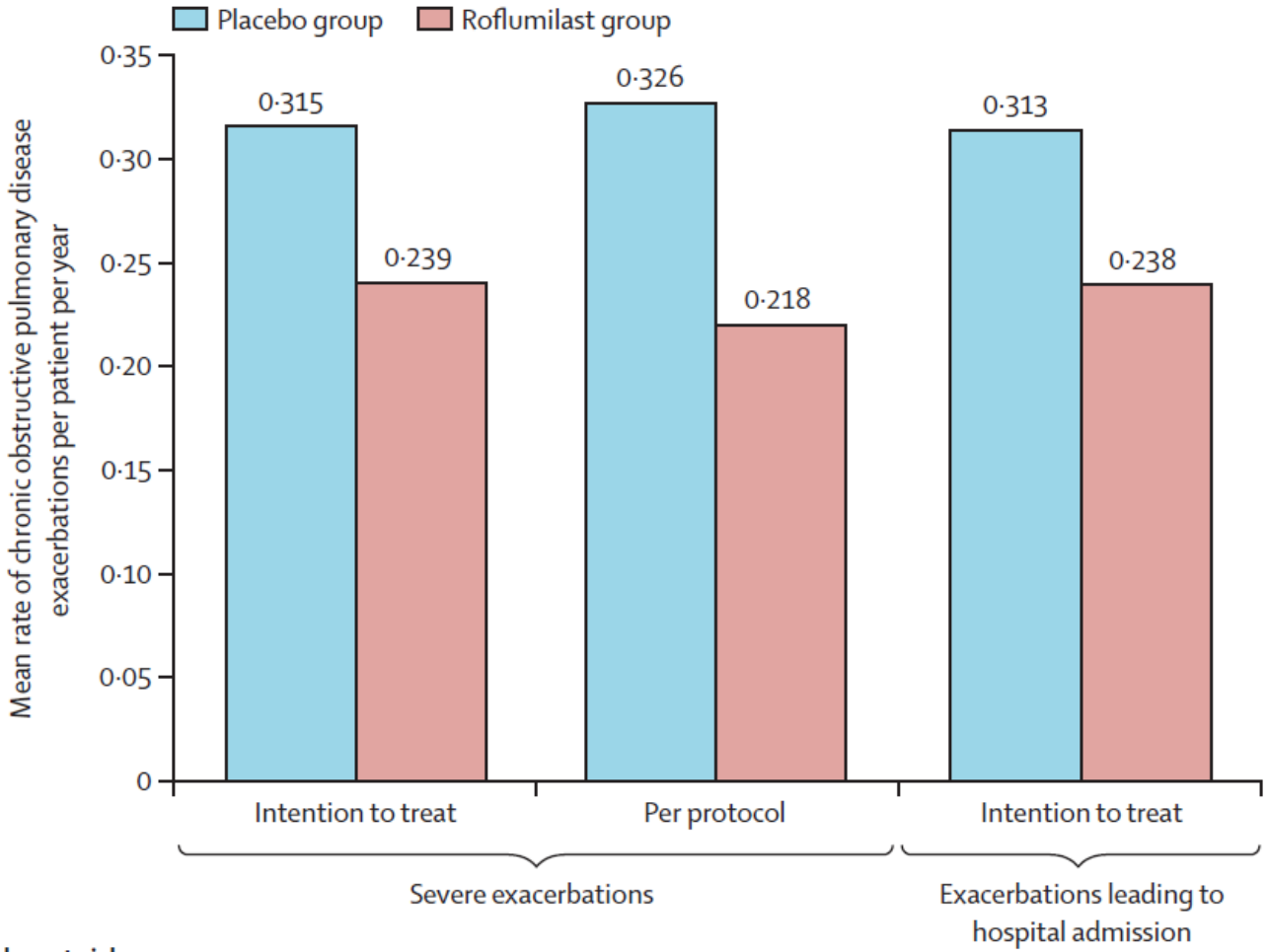
Brode SK. Eur Respir J 2017; 50.



Price DB. PLoS One 2016; 11: e0162903.



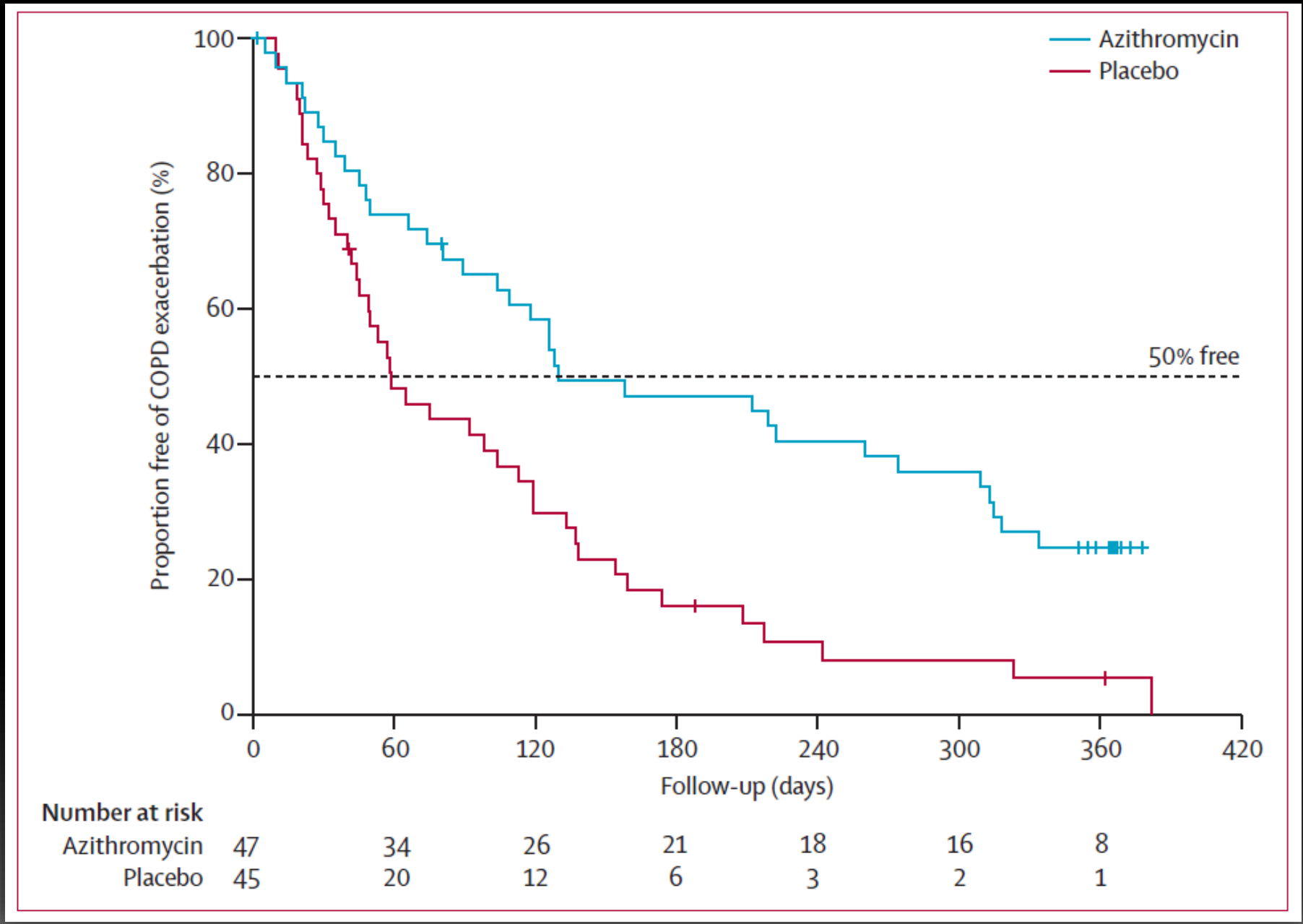
Gonzalez AV. Chest 2018; 153: 321-328.



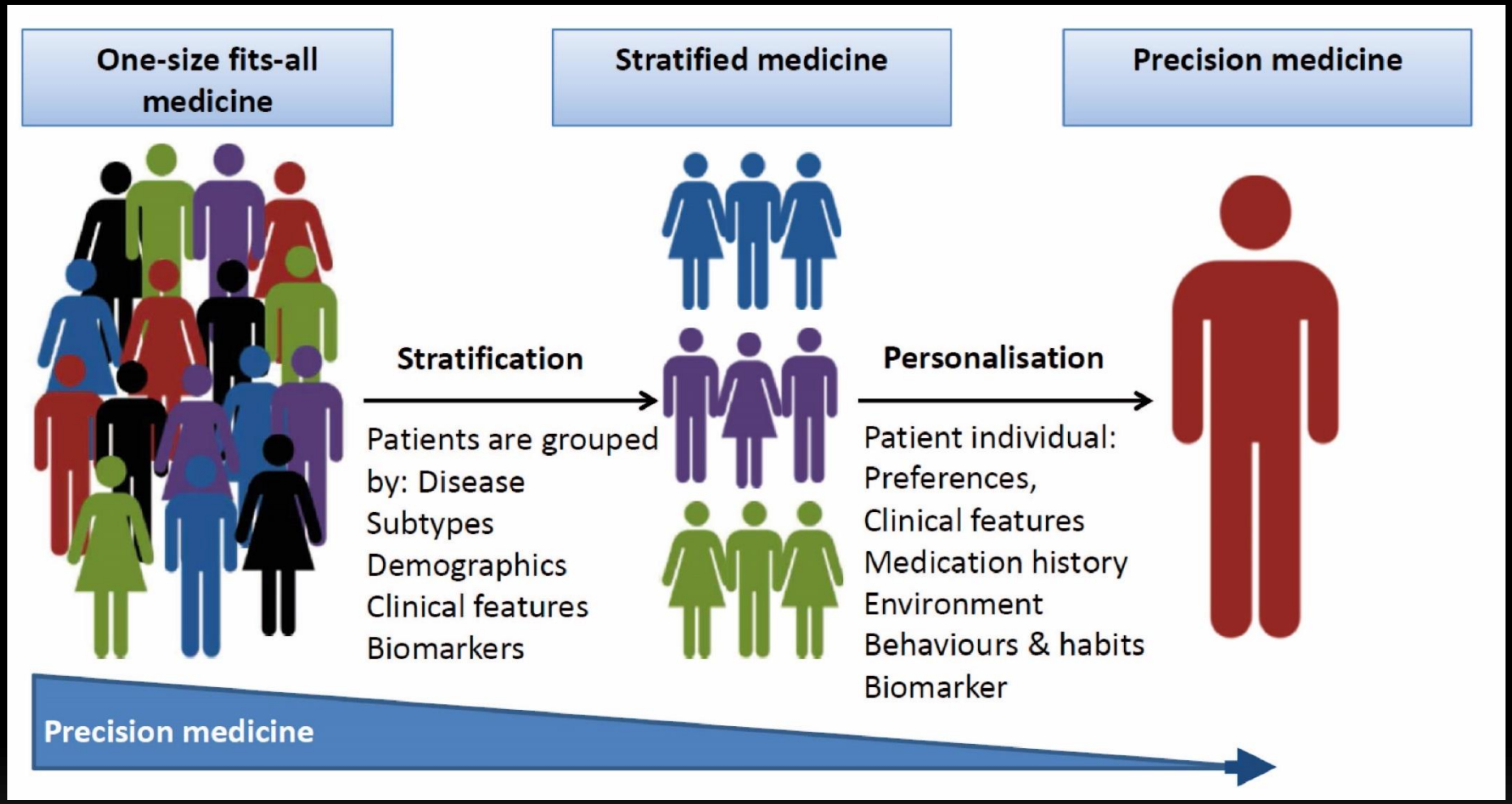
Number at risk			
Patients with at least one exacerbation (n)	Placebo 192; roflumilast 151	Placebo 167; roflumilast 120	Placebo 190; roflumilast 150
Rate ratio (95% CI)	0·757 (0·601–0·952)	0·668 (0·518–0·861)	0·761 (0·604–0·960)
Two-sided p value	0·0175	0·0018	0·0209

Figure 3: **Mean rate of severe exacerbations or exacerbations leading to hospital admission per patient per year**
Rate ratios, 95% CIs, and p values are based on a negative binomial regression model excluding a correction for overdispersion.

Lancet. 2015;385(9971):857-866.



Uzun S. Lancet Respir Med. 2014;2(5):361-368.


One-size fits-all medicine
Stratified medicine
Precision medicine
Stratification
Patients are grouped by: Disease Subtypes Demographics Clinical features Biomarkers
Personalisation
Patient individual: Preferences, Clinical features Medication history Environment Behaviours & habits Biomarker
Precision medicine