Cumulative probability for all subjects from all countries that have at least 100 subjects

Cumulative probability for subjects in the UK

Studies FLTB3054, HZC102871, HZC102970, SCO100470, SCO40036 and SFCB3024 contribute to the cumulative probability for subjects in the UK.

Studies FLTA3025, FLTB3003, FLTB3054, HZC102871, HZC102970, HZC112206, HZC112207, SFCA3006, SFCA3007, SCO100470, SCO30002, SCO40036 and SFCB3024 contribute to the cumulative probability for subjects from all countries that have at least 100 subjects.
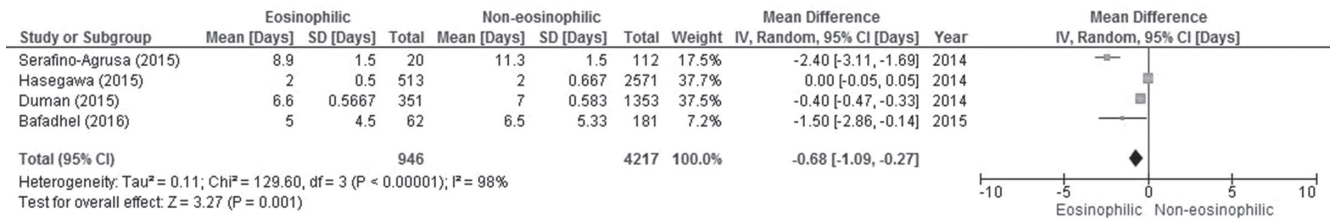
Abstract P142 Figure 1 Blood eosinophil count in COPD patients in the UK and Worldwide

Results The blood eosinophil count in COPD patients included in these trials in the UK is very similar to that worldwide (Figure).

Conclusions This suggests that blood eosinophil count could be used in the UK to help predict response to inhaled corticosteroids in COPD.

REFERENCES

1 Pavord. *Lancet Respir Med* 2016, in press.
2 Pascoe. *Lancet Respir Med* 2015.

P143 | **BLOOD EOSINOPHILIA AS PREDICTOR FOR PATIENT OUTCOMES IN COPD EXACERBATIONS: A SYSTEMATIC REVIEW AND META-ANALYSIS**

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Background and significance COPD exacerbations are associated with significant morbidity, mortality, and substantial healthcare cost. The eosinophilic phenotype of COPD has been demonstrated to respond better to corticosteroids thus providing better clinical outcomes. This review aims to elucidate further the correlation between blood eosinophilia and outcomes in hospitalised patients with COPD exacerbations.

Methods We systematically searched published and unpublished literature for potential studies that fulfilled our eligibility criteria. Inclusion criteria include any cohort (prospective or retrospective), case-control or randomised trials that looked into the association of blood eosinophilia and outcomes in hospitalised COPD exacerbation patients. The primary study outcome was length of hospitalisation; other outcomes include readmission and mortality rate within 1 year, in-patient mortality, and need for mechanical ventilation. An extensive eligibility, methodological and risk of bias assessments were performed independently by two authors adhering to the MOOSE and Cochrane standards.

Results Six studies, with a total of 7293 patients, were included in the review. Five are retrospective cohorts and one is a retrospective analysis of a subgroup of a randomised trial. Patients with blood eosinophilia had significantly shorter hospital stay compared to non-eosinophilic patients (mean difference 0.68 days [95% CI: 1.09, 0.27]). Eosinophilic patients had significantly less frequent readmissions (odds ratio/OR 0.69 [95% CI: 0.55, 0.87]) but there was no statistically significant difference in the 1-year mortality rate (OR 0.88 [95% CI: 0.73, 1.06]). Analysis showed a trend toward lower in-patient mortality among eosinophilic patients, although this difference is not statistically significant (OR 0.53 [95% CI: 0.27, 1.05]). Furthermore, COPD patients with eosinophilia had significantly less need for mechanical ventilation during an exacerbation (OR 0.56 [95% CI: 0.35, 0.89]). Only the primary outcome was significantly heterogenous.

Conclusions COPD patients with blood eosinophilia had significantly shorter hospital stay, less frequent readmissions, and are less likely to require mchanical ventilation compared to the non-eosinophilic phenotype.

Study or Subgroup	Eosinophilic Mean [Days]	SD [Days]	Total	Non-eosinophilic Mean [Days]	SD [Days]	Total	Weight	Mean Difference IV, Random, 95% CI [Days]	Year
Serafino-Agrusa (2015)	8.9	1.5	20	11.3	1.5	112	17.5%	-2.40 [-3.11, -1.69]	2014
Hasegawa (2015)	2	0.5	513	2	0.667	2571	37.7%	0.00 [-0.05, 0.05]	2014
Duman (2015)	6.6	0.5667	351	7	0.583	1353	37.5%	-0.40 [-0.47, -0.33]	2014
Bafadhel (2016)	5	4.5	62	6.5	5.33	181	7.2%	-1.50 [-2.86, -0.14]	2015
Total (95% CI)			**946**			**4217**	**100.0%**	**-0.68 [-1.09, -0.27]**	

Heterogeneity: Tau² = 0.11; Chi² = 129.60, df = 3 (P < 0.00001); I² = 98%
Test for overall effect: Z = 3.27 (P = 0.001)

Abstract P143 Figure 1