Associations between blood eosinophils and decline in lung function adults with and without asthma

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Online data supplement

Online Table S1. Characteristics of participants and comparison of those with and without missing blood counts

	Complete data	Missing	p
Male sex (n/N)	366/691 (53%)	151/316 (48%)	0.127
Smoker at 38 years (n/N)	162/685 (24%)	90/263 (34%)	0.001
Median pack-years smoking by age 38 (n=423)*	12.2	14.6	0.009
Asthma at 38 years (n/N)	118/685 (17%)	41/254 (16%)	0.694
Wheeze at age 38 years (n/N)	177/685 (26%)	70/254 (28%)	0.595
Atopy at 21 or 32 years (n/N)	479/684 (70%)	179/268 (67%)	0.331
Pre-bronchodilator spirometry at age 38 years:			
n	681	246	
FEV_1 (% predicted)	97.9%	96.0	0.044
FEV_1/FVC ratio (%)	76.7%	76.0%	0.179
Post-bronchodilator spirometry at age 38 years:			
n	677	233	
FEV_1 (% predicted)	102.2%	99.5%	0.003
FEV_1/FVC ratio (%)	80.3%	79.8%	0.346

Participants with complete data had eosinophil counts measured at ages 21, 26, 32, and 38 years. Pregnant women and participants who had deceased by age 38 are excluded. *Excludes never smokers. P values are from chi-squared tests, t-tests, or Wilcoxon rank-sum tests.

Online Table S2. Correlations between ages for participants with and without adult asthma

a) No adult asthma

Age	n	Eosinophil counts at each age			Spearman correlations between ages (rho)		
		Geometric Mean	95% CI		21	26	32
21	546	0.18	0.17, 0.19				
26	608	0.16	0.16, 0.17		0.520		
32	622	0.18	0.17, 0.19		0.492	0.634	
38	649	0.18	0.17, 0.19		0.477	0.524	0.617

a) Asthma reported between ages 21 and 38

Age	n	Eosinophil counts at each age			Spearman correlations between ages (rho)		
		Geometric Mean	95% CI		21	26	32
21	227	0.28	0.26, 0.30				
26	241	0.25	0.23, 0.28		0.591		
32	244	0.24	0.22, 0.26		0.553	0.657	
38	249	0.24	0.22, 0.26		0.406	0.510	0.669

Excludes pregnant women. Correlations between ages are all statistically significant (all p values <0.0001)

Online Table S3. Predictors of percent blood eosinophil counts

	Coeff	95% CI	P
Male Sex	0.052	0.005, 0.099	0.029
Age (years)	0.001	-0.001, 0.003	0.358
Current Smoker	0.026	-0.012, 0.064	0.186
Atopic sensitisation	0.094	0.101, 0.146	<0.001
Adult asthma (21 to 38)	0.168	0.101, 0.235	<0.001
Childhood asthma (9 to 13)	0.082	0.001, 0.141	0.024
Inhaled corticosteroid use	0.081	0.013, 0.143	0.020

Analyses by a random effects linear regression model using 2888 observations from 815 individuals. Coefficients represent the difference in log-percent eosinophil counts associated with each independent predictor.