Results 16.2% of patients at UHSM did not show response to omalizumab at 16 weeks. Baseline serum IgE levels in the non-response group were on average 77.28 kU/L lower than those in the response group, statistical analysis of the two groups show that this difference was significant (P = 0.04). Mean eosinophils in the true non-responder group were actually higher than those in the true responder group, however this difference was not statistically significant. No other demographic or disease specific measures predicted a lack of response to omalizumab.

Discussion The results from the study indicate that a lower baseline serum IgE may predict non-response to treatment with omalizumab. The results also show that non-response rates at the NWLC were lower than those demonstrated in clinical trials (INNOVATE), were consistent with other real life studies (PER-SIST/APEX I and APEX II) but markedly lower than those quoted in the eXpeRience registry.

EOSINOPHIL APOPTOSIS IS NEGATIVELY ASSOCIATED WITH BODY MASS INDEX IN ASTHMA

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Background Obese asthmatics are known to have reduced eosinophils in sputum, as well as poor control of asthma symptoms.1 We have shown that, compared to non-obese patients, there is an elevated number of eosinophils in the airway submucosa of obese asthmatic patients.2 This study aims to determine whether a differential susceptibility to apoptosis, between obese and non-obese patients, could contribute to these clinical observations.

Method Patients with a clinical diagnosis of asthma were recruited (n = 28) and consented at Glenfield Hospital for blood donation to study eosinophil apoptosis; the patients recruited had varying severities of asthma and BMI. Eosinophils were isolated from whole blood by negative immunomagnetic selection (Miltenyi Biotec) and harvested at 17 and 21 hours later to measure apoptosis by flow cytometry using Annexin V and Propidium Iodide (Becton Dickinson). Cells were considered apoptotic if they were Annexin V positive/PI negative and reported as a percentage of total eosinophils.

Results At 0 hours, the mean% of annexin V positive cells was 0.47% and there was no significant association with BMI (r = -0.0247, p value = 0.245). At 17 and 21 hours there were 12.68% and 21.0% annexin V positive cells, respectively, and we noted a significant negative Pearson’s correlation between eosinophil apoptosis and BMI at time 17 (r = -0.449; p = 0.028) and time 21 (r = -0.448; p = 0.028). These correlations were independent of lung function, steroid medication and percentage eosinophil purity. Further studies are needed to confirm these findings and explore the roles of Prevotella spp. and Neisseria spp. in exacerbating airway inflammation.

Conclusion Further studies are needed to confirm these findings and explore the roles of Prevotella spp. and Neisseria spp. in exacerbating airway inflammation.
SPECIFIC ANTIBODY DEFICIENCY TO STREPTOCOCCUS PNEUMONIAE AND HAEMOPHILUS INFLUENZAE IN ASTHMA AND FUNGAL DISEASE

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Introduction
Recurrent exacerbations are a characteristic feature of uncontrolled asthma, often due to viral or bacterial infections. We have reported in a retrospective study that immune deficiency is common in asthma and correlates with reduced lung function. We set up a prospective study to determine if this predisposes to a more severe disease.

Aim
Our aim is to ascertain if immune deficiency is associated with a more severe disease potentially with radiological changes and clinically with low lung function and frequent exacerbations.

Methods
We prospectively collected data from new patients attending the regional asthma and fungal clinics. Demographics, markers of disease severity and specific antibody levels to Haemophilus influenzae (HI), and Streptococcus pneumoniae (SP), were recorded. Patients with specific antibody deficiency (HI: ≤0.15 iu and SP: ≤0.35 iu to 6+ of 12 strains tested) received appropriate vaccination(s) in primary care (Pneumovax®).