

Case series of long-term macrolide therapy effect on eosinophil counts in COPD

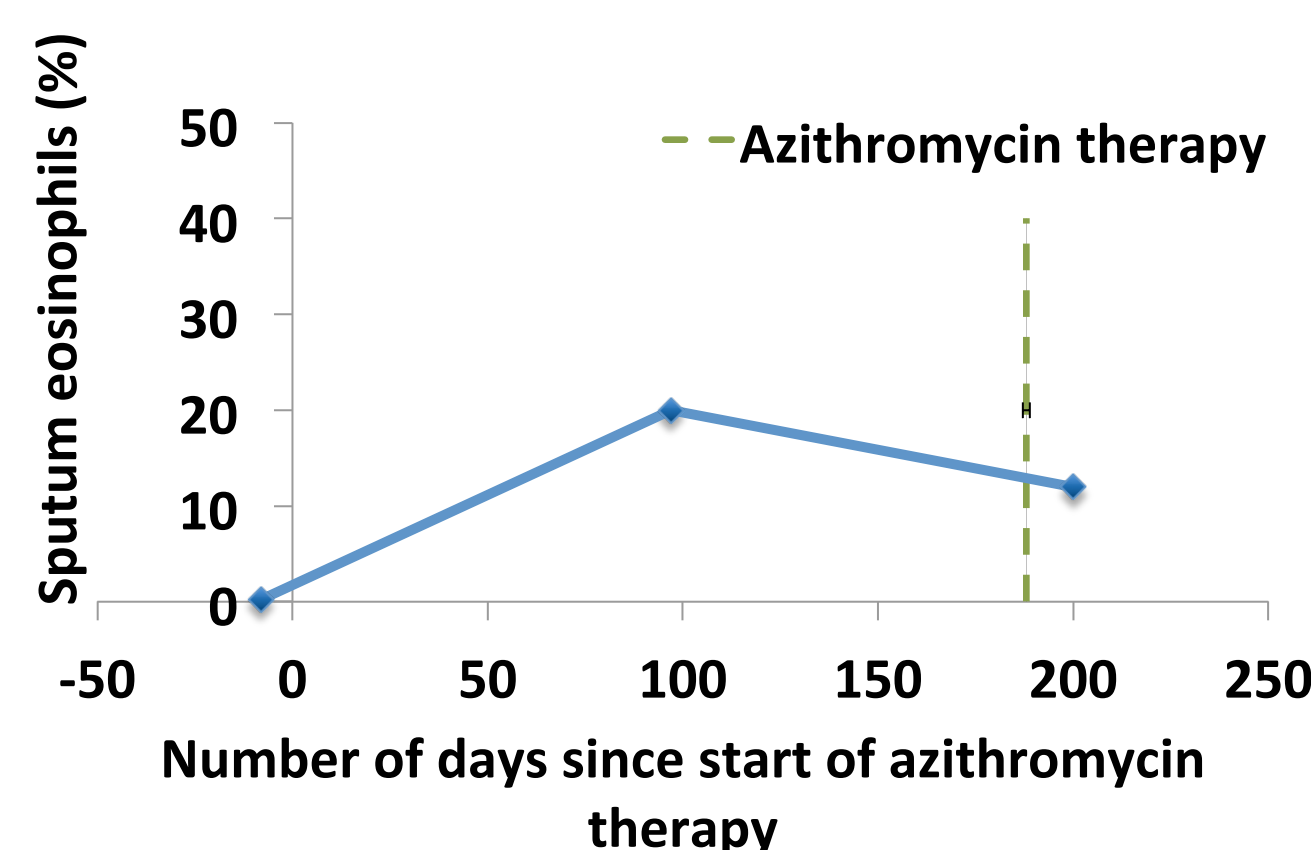
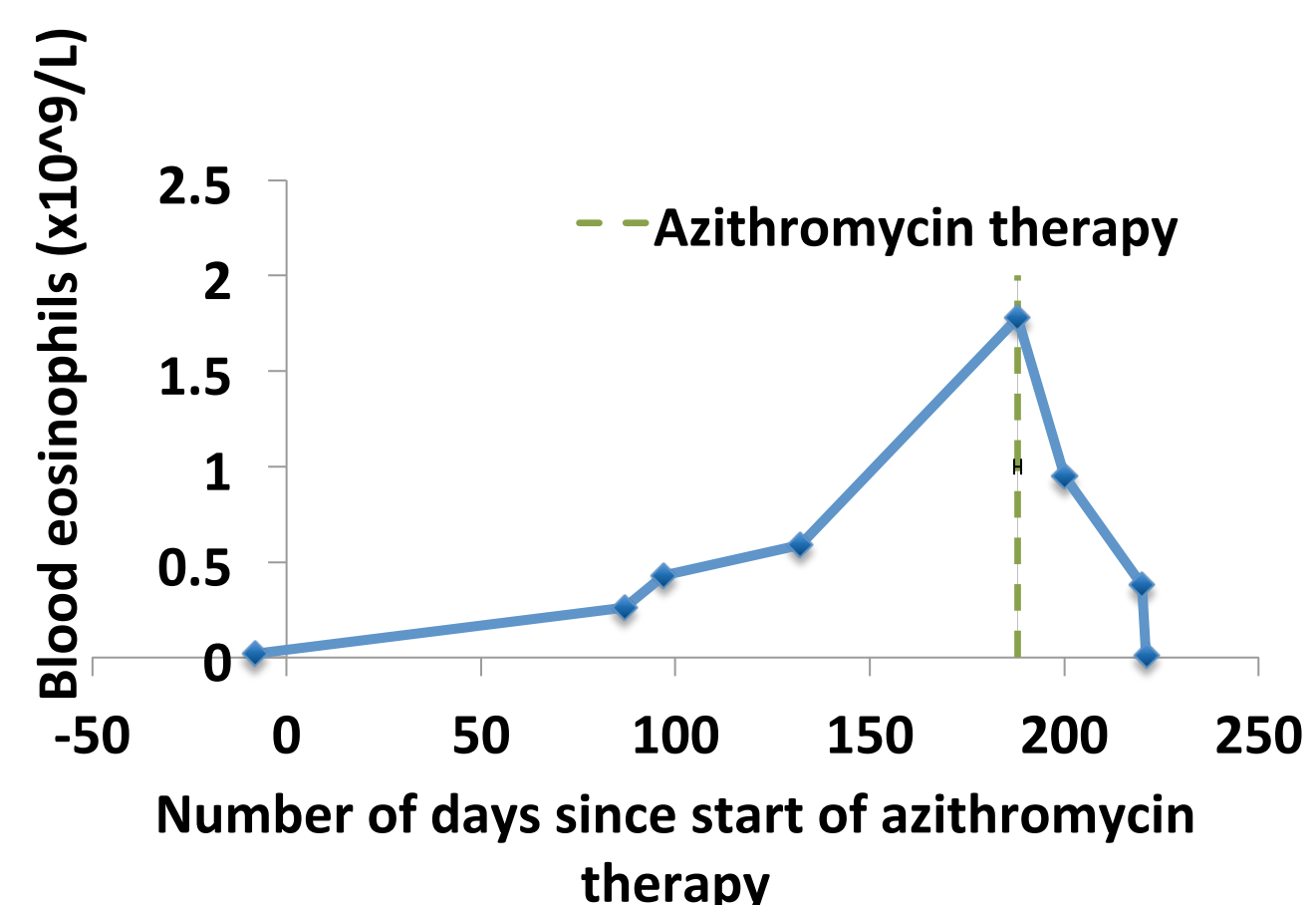
R Asciak¹, SJ Thulborn², M Bafadhel²

¹Oxford Centre for Respiratory Medicine, Oxford University Hospitals NHS Foundation Trust, Oxford, UK; ²Nuffield Dept Medicine, University of Oxford



Background

- Long-term macrolide therapy is a treatment option in COPD patients with frequent exacerbations, but treatment response is heterogenous. The modulation of inflammation by macrolides is not fully understood.
- Interestingly after an exceptional response to macrolide therapy in a patient with COPD at our centre, we noted that the peripheral blood eosinophil (PBE) count increased steadily while on macrolide therapy [Figure 1].
- The same patient's sputum eosinophils before, during and after azithromycin therapy were measured [Figure 2].



Figures 1 and 2 show the peripheral blood eosinophil count and sputum eosinophils from the start of azithromycin therapy (day 0), during and after azithromycin therapy

- Sputum mediator analysis using Luminex platforms was performed on the same patient's sputum samples from before, during and after azithromycin therapy [Figures 3 and 4].

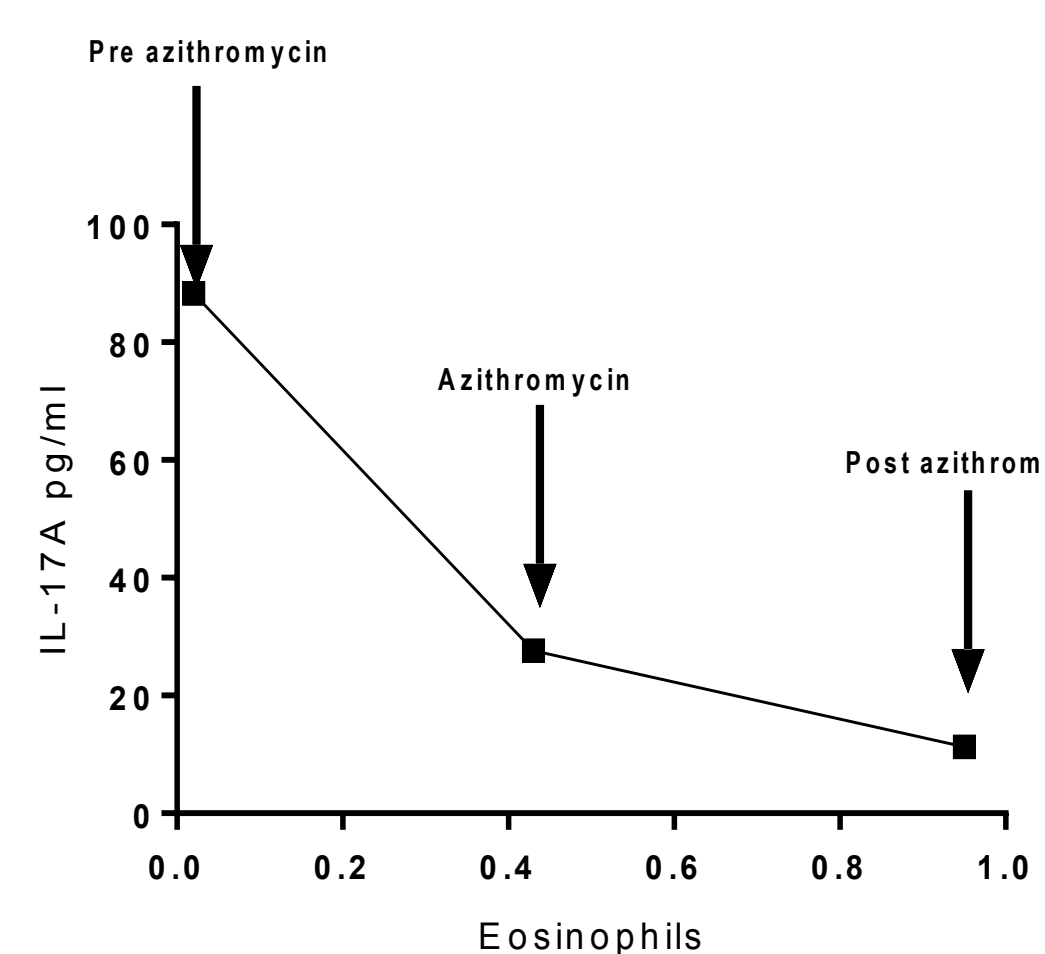
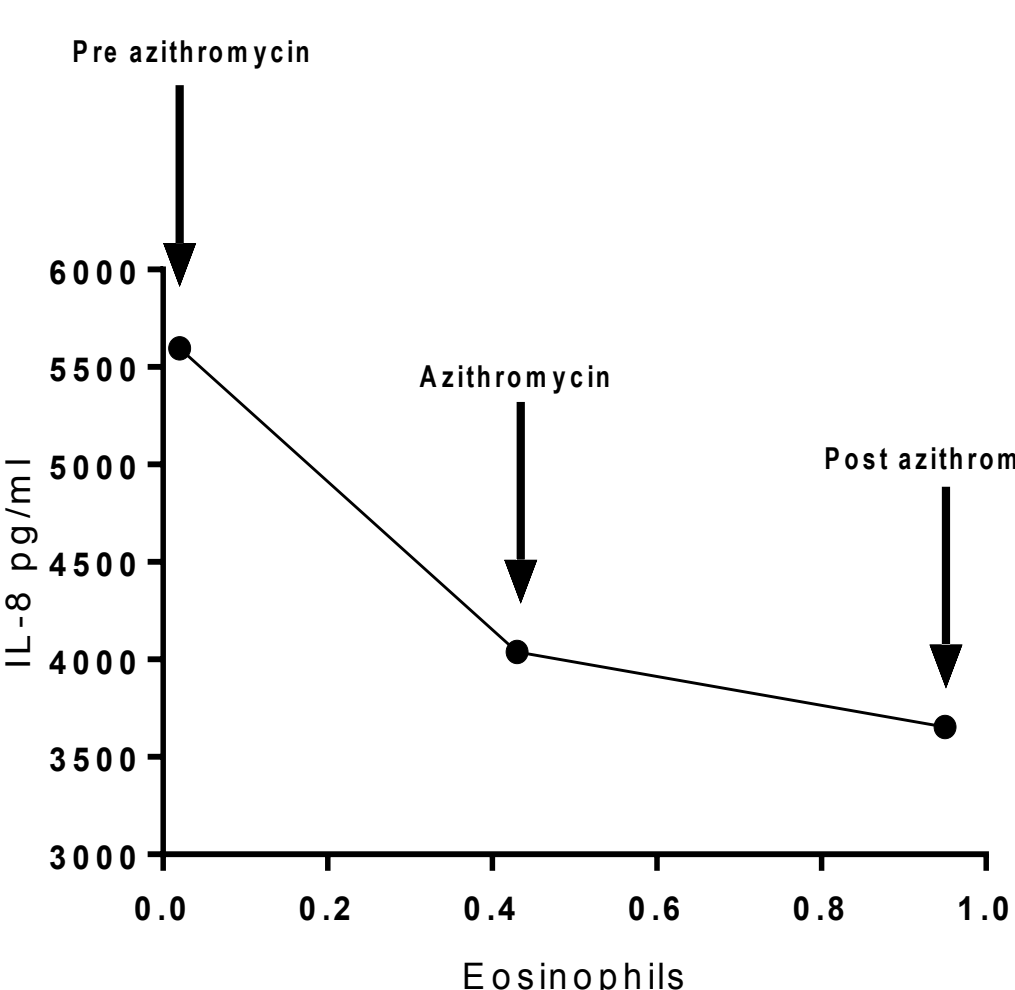


Figure 3 shows the results of the sputum mediator analysis using Luminex platforms on the same patient's sputum samples before during and after azithromycin therapy: IL-8, IL-17A.

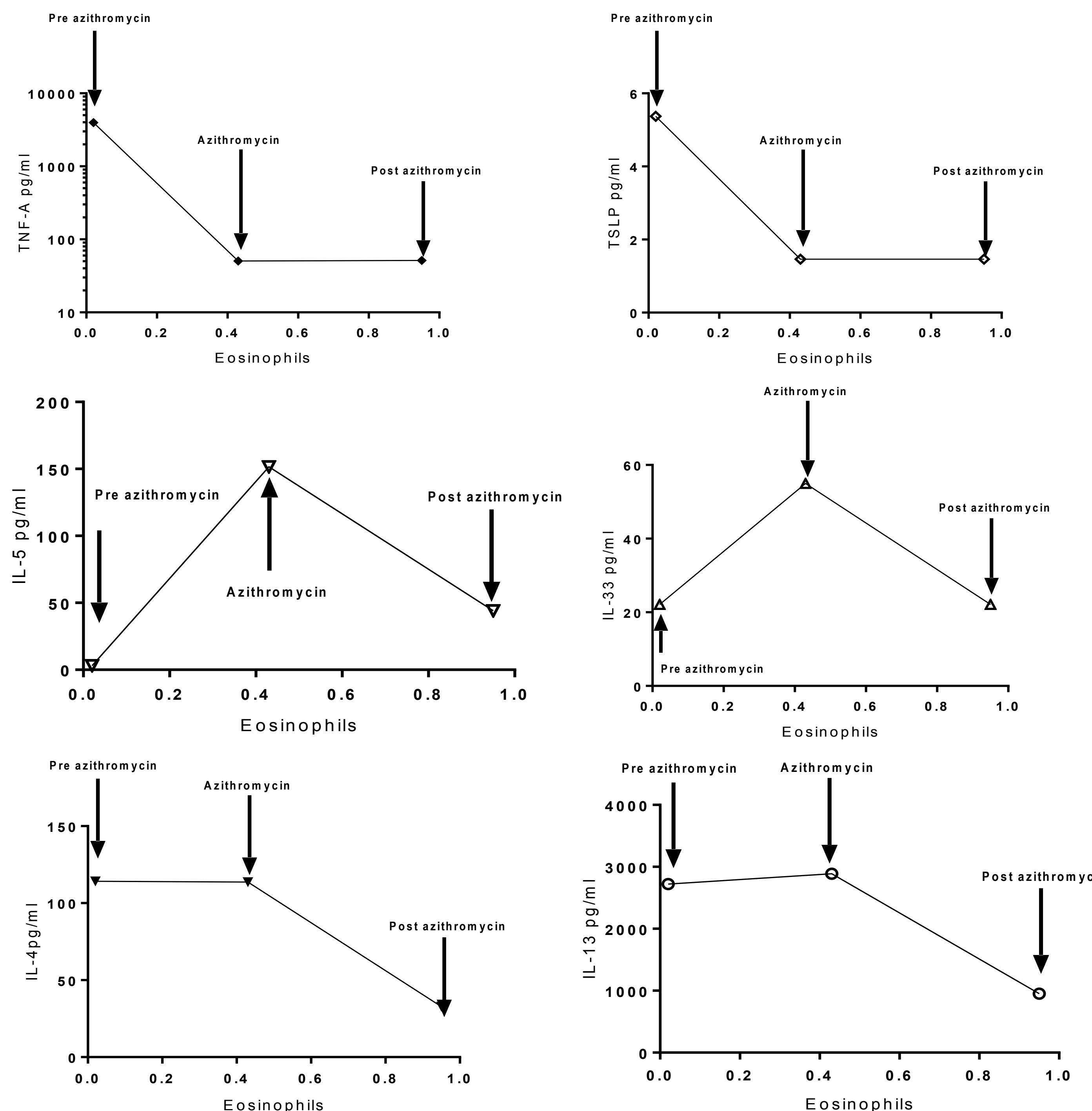


Figure 4: results of the sputum mediator analysis using Luminex platforms on the same patient's sputum samples before during and after azithromycin therapy: TNF-A, TSLP, IL-5, IL-33, IL-4, IL-13.

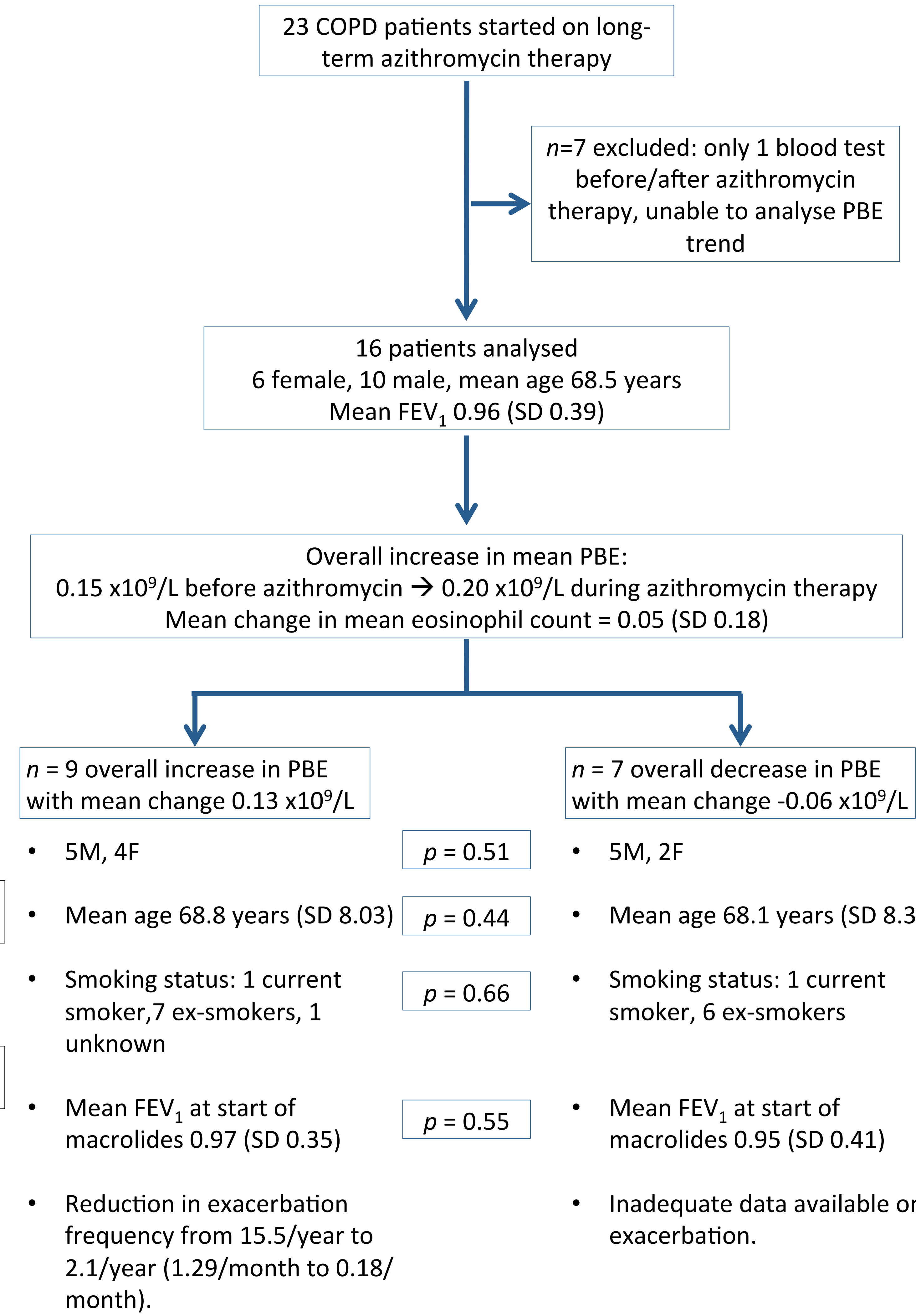
Aim

- To review the effect of long-term macrolide therapy on peripheral blood eosinophil levels in COPD patients.

Method

- A retrospective case series review of the effect of long-term macrolide therapy on PBE levels in COPD patients was performed.
- All COPD patients attending COPD clinic at our Trust who were started on long-term macrolide therapy (azithromycin) in 2016 were included, and data was collected from electronic patient records and clinic notes.

Results



Discussion

- Long-term Azithromycin may affect underlying inflammatory COPD phenotypes. Larger studies are required to further investigate this.



A PDF copy of this poster can be accessed using the QR code