were conducted to determine the correlation between in vitro CS sensitivity and different clinical parameters.

Results There was no difference in baseline or LPS-induced cytokine release from PBMCs between the two groups. The inhibition of TNF-α release by DEX was significantly diminished in children with asthma compared to healthy controls at 10^{-6} M concentration (p = 0.018) but no differences were noticed at 10^{-7} M concentration, or on LPS-induced IL-8 production. A significant inverse correlation between% inhibition of TNF-α and body mass index (BMI) at 10^{-6} M (r = -0.84, p = 0.02) and 10^{-7} M DEX (r = -0.82, p = 0.02) was found.

Conclusions Our results show the existence of an impaired CS sensitivity in PBMCs from children with severe asthma, suggesting that these cells can be used for mechanistic investigations. Interestingly, we observed a negative correlation between CS sensitivity and BMI, a novel in vitro finding which supports the association between overweight/obese asthmatic children and a decreased clinical response to CS therapy. Together, these results merit further studies with a larger sample size.

REFERENCES
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Abstract S132 Figure 1 Scatter plots of A) Sputum 8-oxodG in health vs. asthma; B) Epithelial 8-oxodG in health and asthma; C) Sputum 8-oxoG vs. sputum neutrophils and D) Epithelial 8-oxoG vs. the number of exacerbations in the previous year.

The upper 95th confidence interval of sputum 8-oxoG and epithelium 8-oxoG reaching threshold in healthy controls was used to split asthma patients into 8-oxoG high and low groups. The sputum 8-oxoG high group (n = 13) had significantly higher sputum total cells 8.08 [8.41] x10^6 g^{-1} vs. 2.25 [2.91] x10^6 g^{-1}, p < 0.01, higher sputum neutrophils [82.25 [32.75]% vs. 55.50 [29.75]%], p < 0.01 and lower serum IgE [30 [76.50] KUL^{-1} vs. 157 [212.90] KUL^{-1}], p < 0.01). The epithelial 8-oxoG high group (n = 8) had significantly more exacerbations 3.9 (0.3) vs. 0.5 (0.3) p < 0.01 and a lower ACQ 6 score 1.4 (0.3) vs. 2.4 (0.3) p = 0.04.

In the asthmatic group, the intra-class correlation coefficient of sputum 8-oxoG between the 2 visits was 0.51 (p < 0.01). Conclusions 8-oxoG expression in sputum and bronchial biopsies was not different between asthma and health, although we did identify an 8-oxoG high group in asthma. Interestingly, expression in asthma was associated with neutrophilic inflammation and poor asthma control.