Respiratory Medicine Unit

# Clinical and inflammatory characteristics of patients with COPD in primary care

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## Introduction/Aim

The majority of COPD patients are seen in primary care, where approximately 1.4 million acute exacerbations of COPD are treated, but little is known about the inflammatory phenotype or the response to treatment at the time of an exacerbation.

We conducted a prospective observational study in patients with COPD in the Thames Valley region to understand inflammatory characteristics in COPD (**S**tratified **T**re**A**tment to **R**educe **R**isk in COPD: The **STARR** study).

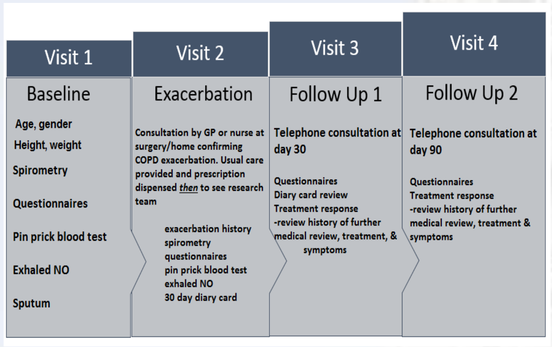


Figure 1: STARR study schedule

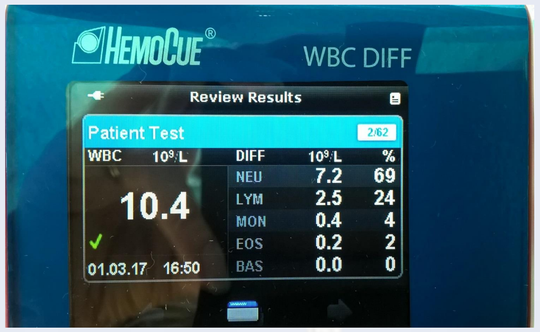


Figure 2: HemoCue® displaying results

## Methods

Subjects with COPD, defined according to clinical history and spirometry, were consented on to the STARR study at 8 GP practices in Oxfordshire. Questionnaires included EuroQoL 5D, Visual Analogue Scale (VAS), COPD Assessment Tool (CAT) score, Hospital Anxiety and Depression Scale (HADS). Near-patient blood testing was performed in 2 mins using the HemoCue ® (LLD 50 cells/µL) and the QuikRead go®.

A PDF of this poster can be accessed by scanning QR code

## Results

243 COPD subjects were recruited (156 male). A relative eosinophil count of >2% occurred in 60%. In 20 exacerbations, 35% had a treatment failure within 30 days and 53% reported feeling worse after treatment.




Figure 3: Percent predicted FEV1 and FEV

| Metric | Mean | Range |
|---|---|---|
| Age in years | 70.5 | 47-95 |
| BMI* kg/m$^2$ | 28.3 | 17.1-49.7 |
| Post bronchodilator FEV1, L | 1.73 | 0.48-3.58 |
| FEV1, % predicted | 66.2 | 23.6-112.2 |
| Blood eosinophils, x10^9/L | 0.22 | 0.05-1.1 |
| Blood eosinophils, % | 2.9 | 0.3-14.3 |
| CAT score | 15 | 1 -38 |

Table 1:Clinical characteristics of participants

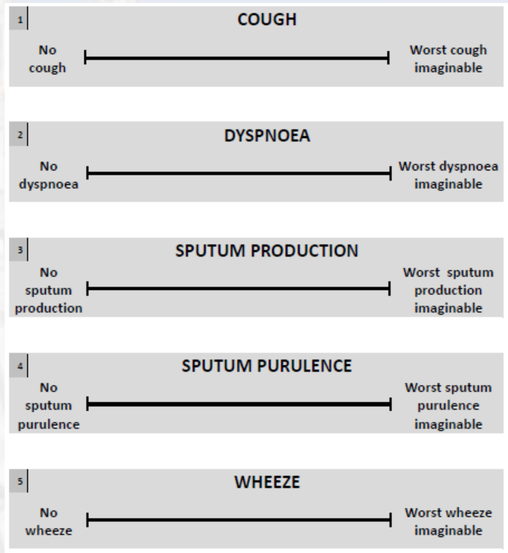


Figure 4: VAS for rating COPD symptoms

HADS scores:
Anxiety – 22% participants borderline or abnormal
Depression – 16%

## Conclusion

Measurement of cell counts in patients with COPD is possible in primary care and may have utility in understanding treatment responses.

STARR2, a randomised clinical trial, is starting in autumn 2017.

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