

Abstract S75 Table 1

MRC Grade	Mean change (SD) ISWT (m)	95% C.I	Sig. (2 tailed)	FEV1 (litres) (SD)	FVC (SD) (litres) (SD)	BMI (SD)
1 n=8	11.25 (45.49)	-26.78 to 49.28	507	1.38 (0.41)	2.39 (0.57)	27.90 (6.05)
2 n=88	29.54 (46.11)	19.77 to 39.31	<0.0001	1.43 (0.57)	2.62 (0.67)	26.30 (5.50)
3 n=142	23.88 (44.98)	15.91 to 30.84	<0.0001	1.39 (0.56)	2.46 (0.74)	28.60 (5.90)
4 n=128	14.37 (34.70)	8.30 to 20.44	<0.0001	1.15 (0.55)	2.34 (0.94)	27.61 (6.69)
5 n=75	8.54 (29.75)	1.70 to 15.39	0.015	0.99 (0.44)	2.08 (0.58)	27.90 (7.83)
Overall change n=441	19.25 (40.65)	15.44 to 23.05	<0.0001	0	0	0

Conclusion Overall, there was a statistical significant increase in distance walked in all patients. These data confirm the need for a PISWT to be conducted within the COPD population. Patients in MRC grades 2 and 3 show a larger variance in walking distance between both shuttle walk tests.

S76 THE COPD ASSESSMENT TEST SCORE (CAT): A MULTICENTRE, PROSPECTIVE STUDY OF RESPONSE TO PULMONARY REHABILITATION

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Background The COPD assessment test (CAT) was introduced last year.¹ It is a questionnaire that contains eight questions covering domains relating to the impact of COPD symptoms. It is a self completion questionnaire and does not require scoring software. Scores of 0–10, 11–20, 21–30, 31–40 represent mild, moderate, severe or very severe clinical impact. In cross-sectional studies it has similar scaling properties to the SGRQ, so that 1 point in the CAT is equivalent to approximately 2.5 points on the SGRQ. It is not known how the CAT score performs in the context of pulmonary rehabilitation (PR).

Methods We prospectively studied the introduction of the CAT score as an assessment tool in several pulmonary rehabilitation programs across London, where it was used alongside a range of other outcome measures in different programs including the SGRQ, CCQ, HAD score, MRC dyspnoea score and several different walking tests. Primary outcome was a comparison of change in CAT score against an anchor question used to assess overall response, scored 1 "I feel much better" 2 "I feel a little better", 3 "I feel no different", 4 "I feel a little worse", 5 "I feel much worse".

Results Data were available for 172 COPD patients, mean(SD) age 69.6(9.3) years, FEV₁ 51.9(18.9)% predicted, MRC dyspnoea score 3.0(0.9), CAT score 20.0(7.5) who attended five different programs. Mean improvement in CAT score after PR was 2.8(5.8) points. In those scoring "much better" (n=108) CAT fell by 3.7(6.1) points and by 1.2(4.8) in those who felt "a little better" (n=56) (p=0.01). In those scoring 3 or 4 on the anchor question (grouped together as n=8) change in CAT was -0.6(3.5).

Conclusion The CAT score improves in response to pulmonary rehabilitation and more so in those who report a greater overall improvement. Further accrual is underway to allow comparison of changes in CAT to other outcome measures.

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REFERENCE

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Mechanisms of lung infection in the community and hospital setting

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COMPARTMENTALISATION OF SURFACE TRIGGERING RECEPTOR EXPRESSED ON MYELOID CELLS-1 (TREM-1) IN VENTILATOR-ASSOCIATED PNEUMONIA (VAP)

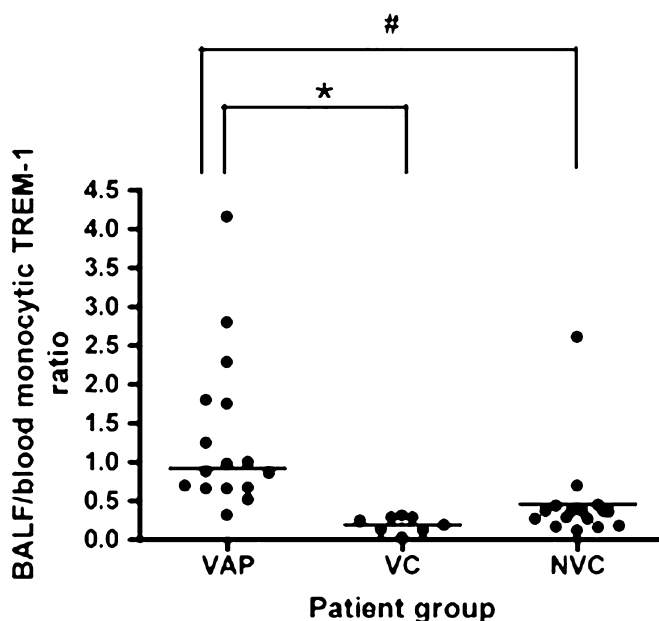
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Introduction Biomarkers have been investigated in order to speed up diagnosis of VAP, a common condition in ICU patients. TREM-1 is a protein involved in amplification of immune responses to bacterial and fungal infection and exists as soluble and surface forms.^{1,2} The diagnostic value of soluble TREM-1 in broncho-alveolar lavage fluid (BALF) in VAP is controversial.³ Therefore the utility of surface TREM-1 for diagnosing VAP in a two-compartment model (BALF and blood) was investigated.

Methodology Paired blood and BALF were obtained in consenting patients in the following groups: (1) Ventilated patients with VAP diagnosed on semi-quantitative microbiology and Clinical Pulmonary Infection Score (CPIS); (2) Ventilated patients without sepsis; (3) Day-case bronchoscopy patients without evidence of infection. Flow cytometry was performed on cell pellets derived from simultaneous BALF and blood samples. Surface TREM-1, CD11b (immune cell activation marker) and L-selectin (immune cell migration marker) levels were measured on monocytes and neutrophils. At the same time an inflammatory cytokine panel (comprising IL-1 β , IL-6, IL-8 and soluble TREM-1) was measured by ELISA in the paired blood and BALF samples.

Results Expression of TREM-1 and CD11b on monocytes were significantly elevated in BALF samples obtained from the VAP patient group. There was no change in blood surface TREM-1 and CD11b levels between the different patient groups. The BALF/blood ratio of monocytic TREM-1 increased the discrimination between



Abstract S77 Figure 1 The ratio monocytic surface TREM-1 between BALF and blood (flow cytometry). 16 patients with VAP are compared with 8 ventilated non-septic control (VC) and 17 non-ventilated non-infected control patients (NVC). The median levels and IQRs are: VAP (0.92, 0.66–1.77), VC (0.21, 0.12–0.28) and NVC (0.36, 0.22–0.41). * and # p=0.0001.