Abstract S128 Figure 1 Receiver operating characteristic (ROC) analysis for hydrogen cyanide and isoprene. Analysis of hydrogen cyanide and isoprene was performed in the exhaled breath of 21 patients with suspected community acquired pneumonia (CAP). A diagnosis of pneumonia was confirmed in 14 patients who met pre-defined criteria for this condition. For patients with suspected CAP and breath hydrogen cyanide <6.2 ppb sensitivity and specificity were 0.71 and 0.62 respectively (area under ROC curve, 0.71). For patients with suspected CAP and breath isoprene <89 ppb sensitivity and specificity were 0.86 and 0.77 respectively (area under ROC curve, 0.77).

Conclusions Results provide evidence that the levels of several prominent breath metabolites, which are potentially related to bacterial activity and lung injury, are significantly altered in patients with this disease. Breath analysis may therefore provide a novel, non-invasive and reliable strategy for the diagnosis of pneumonia.

S129 PREDICTING OUTCOME FROM HIV-ASSOCIATED PNEUMOCYSTIS PNEUMONIA

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Background The presentation of *Pneumocystis jirovecii* pneumonia (PCP) ranges from mild to severe. The former responds to antimicrobial therapy, the latter has a high mortality rate despite treatment. Several studies have described clinical and laboratory factors that are predictive of death from PCP. Our objectives were to create a prognostic scoring model to aid the clinician in predicting outcome from HIV-associated PCP.

Methods A prognostic scoring model was built using risk factors identifiable at/soon after hospitalisation, that is, 'by the bedside'—which have previously been identified as being associated with mortality from PCP (a repeat episode of PCP, the patient's age, their haemoglobin (Hb), PaO₂ (breathing room air), both on admission, the presence of co-morbidity (Comorb), such as lymphoma or pregnancy, and the presence of pulmonary Kaposi sarcoma (PKS) (Walzer PD, *et al* CID 2008;46:625–33). The model was built from data concerning 592 consecutive episodes of PCP that had occurred among 540 patients presenting to a specialist inpatient HIV treatment centre.

Results The prognostic scoring model was: $[25.5 + (\text{age in years}/10) + 2 \text{ (if a repeat episode of PCP)} + 4 \text{ (if PKS detected)} + 4 \text{ (if Comorb present)} - \text{PaO}_2 - \text{Hb}]$. The prognostic model produced scores ranging from 0 to 20; median (IQR)=9 (7–11). Testing interactions between risk factors and time showed the model to be applicable across all time periods. Patients were divided into five groups according to prognostic score: 0–3.9=group 1, 4–7.9=group 2, 8–11.9=group 3, 12–15.9=group 4, 16 or greater =group 5. Abstract S129 Table 1 shows mortality rates among the 540 patients with PCP, grouped according to their prognostic scores.

Abstract S129 Table 1

Group	Mortality (%)
1	0
2	3
3	13
4	29
5	59

Conclusions While this prognostic scoring model requires further validation in patient cohorts from other healthcare institutions, it is potentially a simple 'by the bedside' method of identifying patients early in their hospital admission who are at high and low risk of in-hospital death from PCP and so may aid the clinician in assessing the severity of illness and in deciding on treatment strategies.

S130 OUTCOMES OF PSEUDOMONAS ERADICATION THERAPY IN PATIENTS WITH NON-CYSTIC FIBROSIS BRONCHIECTASIS

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Introduction and objectives In patients with non-cystic fibrosis (CF) bronchiectasis, *Pseudomonas aeruginosa* infection is associated with increased hospital admissions, poorer quality of life and accelerated lung function decline. The BTS guidelines recommend early *Pseudomonas* eradication therapy. However, despite clear evidence in CF, there is little evidence in non-CF bronchiectasis. Since 2004, we have initiated eradication therapy following initial *Pseudomonas* infection in non-CF bronchiectasis patients. This retrospective study assessed clinical and microbiological outcomes.

Methods All patients undergoing *Pseudomonas* eradication therapy from 2004 to 2010 were identified from our electronic database. Therapy included intravenous, oral and nebulised antibiotics. Patients were assessed for microbiological eradication, exacerbation frequency (measured by number of antibiotic courses), hospital admissions, clinical symptoms and lung function.

Results 30 patients were identified. 21 (67.7%) were females and mean age was 62.2 years. Median follow-up time was 26.4 months. Eradication therapy involved 2 weeks of intravenous antibiotics (12 patients), intravenous antibiotics followed by oral ciprofloxacin (13 patients) or oral ciprofloxacin alone (five patients), combined with 1–4 months of nebulised colomycin in 26 patients. *Pseudomonas* was initially eradicated from sputum in 24 patients (80.0%). 13 patients (43.3%) remained *Pseudomonas*-free at latest follow-up. 11 patients (36.7%) were subsequently reinfected with median time to reinfection of 6.2 months (Abstract S130 Figure 1). 17 patients with chronic infection were maintained on regular nebulised antibiotics. Exacerbation frequency was significantly reduced, with mean number of antibiotic courses per year 3.93 pre-eradication, and 2.09 post-