direction of transfer of bacteria between the upper and lower airways". We therefore concluded in the abstract of our publication that "further longitudinal analyses and comparison with invasive methods are required". Such a longitudinal study is on the way with the first results being published at the recent European Cystic Fibrosis Conference.[1]

However, we consider Dr Daniels' assumption that "in any patient with a 'colonised' lower airway, fomites from the lower airway will lodge within the nasopharynx" to be too simplistic. As shown in table 2 of our publication, numerous microbes preferentially resided in either the upper or the lower airways. In other words, the microbiota in these two compartments are distinct. The retrograde contamination of the nasal turbinates by expectorated bronchial secretions is not an ongoing regular process, as Dr Daniels makes us believe in his letter, but heavily depends on the capacity of the microbe to colonise and persist in the habitat. *Pseudomonas aeruginosa*, for example, is recovered with only low efficacy from nasal swabs because the organism resides in the distal parts of the nasal turbinate that is not reached by the swab. Correspondingly, expectorated sputum will typically not contaminate the niche in the upper airways where *P aeruginosa* is preferentially thriving.

In summary, Dr Daniels' commonsense argument does not give consideration to the complex microbial ecology of the upper airways.

J G Mainz,[1] B Tümmler[2]

[1]Department of Pediatrics, CF Center, University Hospital of Jena, Germany; [2]Klinische Forschergruppe, Pediatric Pneumology, Medizinische Hochschule Hannover, Germany

Correspondence to Dr J G Mainz, Cystic Fibrosis Center, Department of Pediatrics, University of Jena, Kochstrasse 2, D-07740 Jena, Germany; jochen.mainz@med.uni-jena.de

Competing interests None.

Provenance and peer review Not commissioned; not externally peer reviewed.

Accepted 14 August 2009

Thorax 2010;**65**:278–279. doi:10.1136/thx.2009.125526

REFERENCE

1. **Mainz JG,** Lindig J, Schien M, *et al*. Dynamics of upper and lower airway colonisation with P aeruginosa and S aureus in CF-patients within 3.5 years. *J Cystic Fibrosis* 2009;**8S**:64.

Lung alert

Routine PET for early lung cancer

The optimal treatment for early stage non-small cell lung cancer (stage I–IIIA) is surgical resection. This requires accurate staging to prevent inappropriate surgery. Despite conventional staging (CS) with CT chest and abdomen, bone isotope scan and brain imaging, the 5-year survival is only 50%, with the majority of the deaths being due to lung cancer recurrence.

This randomised, adequately powered, study compares CS (n=162) with the use of positron emission tomography (PET)-CT and brain imaging (PET) (n=167) to determine the proportion of patients in whom disease was correctly upstaged (as confirmed by biopsy or other tests) prior to surgery (mediastinoscopy followed by resection).

PET was superior to CS; it led to confirmed upstaging of disease in 13.8% of cases compared with 6.8% in the CS group. However, eight patients in the PET group were incorrectly upstaged and could have been denied surgery compared with only one in the CS group. The majority were due to false-positive mediastinal nodes. PET led to less understaging in 14.9% compared with 29.6% in CS, as confirmed by findings at mediastinoscopy, node sampling at resection or recurrence within 1 year. There was no difference in death rate over 3 years, with almost a third dying mainly from lung cancer recurrence.

This study adds to other open studies and two randomised studies that suggest that a PET-CT strategy can identify advanced disease and reduce futile thoracotomy. It highlights that resection should only be excluded after sampling of suspect PET hot mediastinal nodes, as a failure to do this would have denied 5% the chance of surgical cure. This study did not assess cost-effectiveness, but PET-CT did reduce the need for other tests, 51 compared with 81 tests, to confirm the preoperative staging. This study supports the UK strategy of providing adequate PET-CT resources to ensure optimal staging prior to surgical resection.

► **Maziak DE,** Darling GE, Inculet RI, *et al*. Positron emission tomography in staging early lung cancer. *Ann Intern Med* 2009;**151**:221–8.

Alaisdair G Stewart

Correspondence to Dr Alaisdair G Stewart, Consultant Chest Physician, Medway Maritime Hospital, UK; alaisdair.stewart@medway.nhs.uk

Thorax 2010;**65**:279. doi:10.1136/thx.2009.132902