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In response to both

We would like to thank Drs Chua, Groth and Jolobe for their letters concerning our article on respiratory investigations in pleural effusion, highlighting the use of pleural fluid adenosine deaminase (ADA) as a potential diagnostic test for suspected TB pleuritis. We agree that pleural fluid ADA is an important, useful and inexpensive diagnostic test for the investigation of patients with a moderate to high probability of TB pleuritis, on the basis of the evidence quoted. Pleural fluid ADA was not included in our article due to varying availability in the UK of this test, and constraints on the article length. The majority of chest physicians practise in low prevalence areas in the UK, although there are some areas where this is not the case. Pleural fluid ADA is associated with false positive results (eg pleural infection, rheumatoid pleuritis and malignancy) and in areas of low prevalence such as much of the UK, this limits ADA to being a 'rule out' test. We would suggest ADA is restricted to use in lymphocytic effusions in which there is at least a reasonable pretest probability of TB pleuritis. In addition, the diagnosis of TB pleuritis using markers of immune cell activation (ie ADA or interferon-gamma releasing assays) do not achieve specimens on which microbiological sensitivity may be tested. Although data from the USA suggest that the pattern of resistance in TB pleuritis reflects that seen in local pulmonary TB, this may not be helpful in the assessment of resistance in immigrants or recently returned travellers.[1] In these circumstances, we would suggest pleural biopsy for histology and culture remains the gold standard diagnostic test, conducted either using Abram's needles or under image/thoracoscopic guidance. We would like to thank the authors for their interest in our article.

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Non-cystic fibrosis bronchiectasis

Editor – In their excellent review of non-cystic fibrosis bronchiectasis Murray and Hill (*Clin Med* April 2009 pp 164–9) failed to mention an important and increasingly prevalent variety of bronchiectasis in older adults. Bronchiectasis associated with nontuberculous mycobacterial (NTM) infection, notably *Mycobacterium avium complex* (MAC) and *Mycobacterium abscessus*, is now frequently seen in older patients, notably women who give no history of respiratory disease earlier in life and are often non-smokers. The disease is characterised by bronchiectasis which most often involves the right middle lobe and the lingular segment of the left upper lobe in association with nodules – small nodules in the 'tree-in-bud' configuration and larger nodules which are often peripheral in their distribution and may occasionally cavitate although cavitation is not a characteristic feature of this disorder. This disorder which has been labelled nodular bronchiectasis may be detected when investigating an older patient with a history of cough and sputum production associated with recurrent infectious exacerbations and, later in the illness, with progressive weight loss. The chest radiograph is usually characterised by large lungs which may be surprisingly unremarkable although in the later stages peripheral nodules and features of bronchiectasis may become apparent. In the earlier stages of the disease a computed tomography chest X-ray is usually striking for its abnormalities, an example of which is included (Fig 1).

Although the study by Jenkins *et al* suggested poor results when treating NTM lung disease, the majority of their patients with MAC disease had cavitary disease which is recognised to be poorly responsive to treatment.[1] Their study may thus not be generalisable to patients with nodular bronchiectasis who do seem in case series to respond to treatment.[2] In our clinic, treatment regimens with azithromycin, ethambutol and clofazimine have been well tolerated and often result in sputum culture conversion and improvement of symptoms. Treatment is also given in the belief that it will arrest the progression of the disease. Azithromycin and clarithromycin are thought to be the only medications which are effective against MAC and it would thus be important not to give one of these antibiotics, as suggested by Murray and Hill, without concurrent medication to patients who might have MAC nodular bronchiectasis for fear of

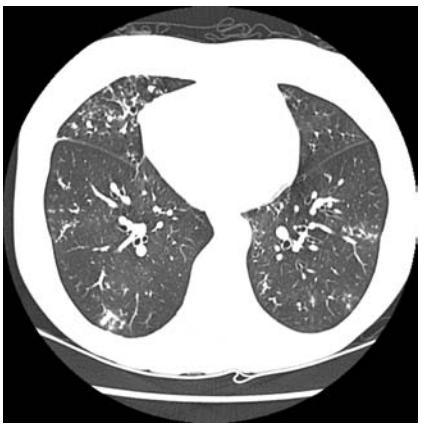

Fig 1. Example of nodular bronchiectasis in a patient with repeatedly positive sputum smear and culture for *Mycobacterium avium* complex.

creating an untreatable macrolide resistant organism.

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In response

We thank Drs Cowie and Field for highlighting nontuberculous mycobacterial (NTM) infection as an important entity associated with non-cystic fibrosis bronchiectasis. We did not include this originally due to the constraints of the review article. Drs Cowie and Field comment on NTM infection which has been recognised in the 2007 American Thoracic Society/Infectious Diseases Society of America statement on the diagnosis, treatment and prevention of NTM as both an important cause and complication of bronchiectasis.[1] In 2005, Wickremasinghe *et al* conducted a prospective study of 100 patients with non cystic-fibrosis bronchiectasis and found the prevalence of NTM to be 2%, with 1% requiring treatment.[2] Similarly in 2006, Fowler *et al*'s study found a 9% prevalence of NTM (7 out of 80 patients with non-cystic fibrosis bronchiectasis) with 2.5% requiring treatment according to ATS guidelines.[3] The actual prevalence of NTM infection in non-cystic fibrosis bronchiectasis needs further study.

Drs Cowie and Field also raised caution to the use of macrolide therapy in nodular bronchiectasis. At present, randomised controlled trials are needed to decide both whether there is a role for macrolides as a long-term prophylactic therapy in non-cystic fibrosis bronchiectasis, and whether they could affect the resistance pattern if there is concomitant mycobacterial infection. There is currently no evidence that acute usage of macrolide therapy has such an effect and in our opinion it is an important second line treatment for acute exacerbations of non-cystic fibrosis bronchiectasis (see Table 2 of our CME article, *Clin Med* April 2009 pp 164–9).

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