Competing interests None.

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

Accepted 24 August 2010
Published Online First 22 October 2010

Thorax 2011;**66**:351–352.
doi:10.1136/thx.2010.149690

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Is investigation of patients with haemoptysis and normal chest radiograph justified?

We read with interest the article by Thirumaran *et al*.[1] They described their experience of 270 consecutive patients referred with haemoptysis and a normal chest radiograph. In their study they found the incidence of respiratory malignancy within this group was 9.6% (26 individuals) and of these 22 were primary lung malignancies. This is slightly higher than the 3–6% incidence previously reported in the literature.[2–4]

We have delivered a nurse-led clinic for patients referred via the 2 week wait system with haemoptysis and a normal, or non-localising, chest x-ray. Patients were stratified into high risk or low risk groups according to age and smoking history. An algorithm was then devised to guide further investigation (available as figure 1 online).

A total of 348 patients were seen in this clinic (215 male, 133 female) between 2003 and 2008. Leicester has a large ethnic minority population and 41 (11.8%) of the 348 patients were of South Asian origin.

Thirty-four patients referred, on detailed history taking, did not have haemoptysis at all. The presenting problems reported by these patients included bleeding gums, ill-fitting dentures and epistaxis.

The investigation modality of choice was CT scanning of the thorax and upper abdomen. A total of 163 patients were referred for CT scan at their initial consultation with the nurse. Fibreoptic bronchoscopy (FOB) was only utilised to confirm tissue diagnosis in patients diagnosed with a thoracic malignancy.

Twenty-three patients (6.6%) were diagnosed with a lung malignancy in our clinic.

The other common diagnostic causes of haemoptysis are shown in table 1.

Median age was 69 years (range 54–80).

In the 23 patients with lung cancer, only 6 (1.7%) had a chest x-ray that was reported as entirely normal. Seventeen patients had chest x-rays that were either not entirely normal or had not been screened appropriately prior to admission to the clinic. Reasons for this included not having a chest x-ray prior to clinic, and the chest x-ray performed in clinic was then found to be abnormal. Review in clinic of all reported normal chest x-rays also identified abnormalities in several patients. One patient had been CT scanned prior to his appointment in the haemoptysis clinic. Variables within the non-localising x-rays included increased cardiothoracic ratio, bullae and hyperinflated lung fields. One chest x-ray report suggested that the 'bulky' mediastinal appearance was likely to be due to rotation.

Persistent haemoptysis (duration of >1 week) was seen in 15 of the 23 lung cancer patients but was also seen in 145 of the 325 patients with a benign diagnosis. Duration of haemoptysis is therefore not a good predictive factor of risk for malignancy and this further supports the work of the previous authors.

Haemoptysis is a fairly common, usually self-limiting symptom which is accounted for mostly by infection or an idiopathic cause. Approximately 10% of people referred with this symptom will not actually have haemoptysis.

We reviewed our lung cancer patients retrospectively, and found that a previous history of any malignancy was important and should be added to the risk stratification algorithm.

The clinic ceased to run in January 2009 and, to date, no patients have been re-referred or appeared on the cancer database. This would also suggest that our model is a safe, efficient method of screening patients with a possible thoracic malignancy and freeing up resources in the urgent 2 week wait clinic.

Table 1 common diagnostic causes of haemoptysis

Diagnosis	Number of patients
Cancer	23
Bronchiectasis	52
Infection	107
Idiopathic	70
ENT	24
Cardiac	6
Pulmonary embolism	5
Not haemoptysis	34
Anticoagulation therapy	8
Vasculitis	4
DNA follow-up	13
Died	2

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► An additional figure is published online only. To view this file please visit the journal online (http://thorax.bmj.com).

Competing interests None.

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

Accepted 9 June 2010
Published Online First 30 August 2010

Thorax 2011;**66**:352. doi:10.1136/thx.2010.136788

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The learning curve for EBUS-TBNA

We read with interest the paper by Kemp and colleagues[1] which utilises cumulative sum (CUSUM) to analyse the learning curves associated with endobronchial ultrasound-guided transbronchial needle aspiration (EBUS-TBNA). The retrospective study from five centres demonstrated that variable learning periods are required to attain proficiency in the procedure, and a pooled sensitivity of 67.4% was observed.

The authors are to be commended on using CUSUM to calculate the learning curves for EBUS-TBNA; however, several points deserve comment. First the study only includes patients undergoing EBUS-TBNA for the diagnosis or staging of lung cancer. In clinical practice, the procedure is also commonly employed for the diagnosis of isolated mediastinal lymphadenopathy, and these procedures should be incorporated in the learning process. Secondly, the authors included non-malignant nodes in the CUSUM analysis. Therefore, it may be possible to inadequately sample a benign node and for the result to be assigned as a true negative. This highlights the importance of reporting the disease prevalence for each cohort. Thirdly, utilising the criteria employed in this paper, there is potential to