

EDITORIAL

Early detection: introduction

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The present Supplement of the *European Respiratory Journal* assembles a number of reviews on "Early detection" and it is the product of a symposium held in Barcelona on June 22 2002. The symposium was organised by the European Institute of Healthcare, which was set up by AstraZeneca. It was the fourth symposium of this kind organised by this Institute. The goals of the Institute were extensively discussed in Supplement nos. 34, 35 and 36 [1–3].

The programme of this symposium was designed by an independent programme committee. The core of this committee comprises the two editors of the present Supplement and other members of the committee include: C. Brambilla (Grenoble, France), R. Loddenkemper (Berlin, Germany), R. Rodriguez-Roisin (Barcelona, Spain), O. Van Schayck (Maastricht, the Netherlands) and M. Woodhead (Manchester, UK). The cornerstones of the commitment of AstraZeneca to these symposia are basically fourfold: 1) the symposia are not product related; 2) the company has no influence on the scientific programme; 3) scientific excellence is the goal; 4) the symposia consist of a mixture of basic science and clinical medicine. They are primarily directed at chest physicians who are able to cascade down the information distributed at the symposia in their respective countries. They carry the interest of the *European Respiratory Journal* because of the clear commitment to scientific excellence and independence.

Early detection is without question a significant issue in respiratory disease. There is now overwhelming evidence that many cases of airflow obstruction are undiagnosed in the general population [4–6]. Office spirometry in general practice may contribute to a better detection of airflow obstruction [7]. Earlier detection is likely to improve outcome in asthma [8], as postponing treatment with inhaled corticosteroids may cause deterioration in airway inflammation [9]. Whether this is also associated with irreversible effects on lung function is not yet clear. At present, it is not clear whether early detection and treatment will improve outcome in chronic obstructive pulmonary disease (COPD). Indeed, the only treatment at present that has been shown to affect the progression

of COPD is smoking cessation [10]. Smoking cessation is indicated even if not for COPD, for the risk of lung cancer or ischaemic heart disease. Although several treatments affect the health status of COPD patients [11–13] or the occurrence of exacerbations [11], a hard core demonstration of a better outcome after early treatment is still missing. Although, on average, respiratory scientists still tend to be sceptical, indirect evidence indicates that COPD treatment has resulted in improved survival over the last 20 yrs [14]. Strictly, however, a demonstration of the usefulness of early therapeutic intervention is not available at present. It is likely that this question will be an important area of research in years to come.

Likewise, early detection of lung cancer appears an attractive strategy. Indeed, the prognosis of stage III lung cancer remains poor despite the clear progress that has been made with chemotherapy. Earlier detection appears a logical approach to improving the overall outcome of treatment. Early detection could be achieved through spiral computed tomography (CT) for peripheral lesions or sputum cytology for central lesions [15]. The latter technique unfortunately has a low sensitivity and is time consuming. Fluorescent bronchoscopy may increase the detection rate of microinvasive lesions. Biomarkers in blood and sputum appear interesting, but still lack validation [15]. Differentiation from benign lesions remains a serious problem and limits the current clinical usefulness of spiral CT [16]. Progress in imaging techniques and processing may be of help in this differentiation. They may be some important evolutions in this field in the years to come. Further development of new techniques, such as endobronchial ultrasonography, optical coherence tomography, confocal micro-endoscopy, positron emission tomography in combination with video-assisted thoracic surgery and intraluminal bronchoscopic treatments, is also expected to play an important role [17].

The present supplement covers several aspects of early detection. It begins with an overview of the general principles of screening and early detection by BOYLE [18]. Early detection of asthma and COPD in general practice is then addressed by VAN SCHAYCK and CHAVANNES [8]. As asthma and COPD are often first diagnosed in general practice, an improvement in treatment largely depends upon whether or not general practitioners follow asthma and COPD guidelines. PARTRIDGE [19] discusses the general principles involved in adherence to guidelines and the general obstacles for general practitioners with guidelines.

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Here, it is important to note that physicians, on average, do not appear to follow guidelines [20, 21] and that publication of a guideline alone is not enough for implementation [22]. BUIST [23] then puts early treatment into the perspective of the current treatment of COPD and asthma.

Next, the early detection of lung cancer is addressed. BRAMBILLA *et al.* [15] discuss the use of biomarkers in the early detection of lung cancer. HENSCHKE *et al.* [24] discuss the use of low-dose computed tomography and new imaging procession methods in the early detection of lung cancer. SPIRO [25] discusses the current treatment of lung cancer with emphasis on early treatment and finally SUTEDJA [17] discusses new techniques, primarily endoscopic in nature, for the detection and treatment of lung cancer.

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