

From the author:

As stated in our manuscript [1], we aimed to determine the prognostic value of a number of chronic obstructive pulmonary disease (COPD) multicomponent indices to predict death in the short term and very long term, not to create or modify other indices. For decades, we physicians who treat patients with COPD have expressed the deterioration of their lung function in relation to how it should be in individuals with unaffected physiological function, *i.e.* as per cent predicted. We must do this because lung function is different to glucose, creatinine, cholesterol and other variables that have an absolute range of normality for all adults whether they be aged 3 or 95 years, or be of either sex, and whatever their height or race/ethnic origin. Absolute values of forced airflow during expiration or vital capacity vary by subject, according to these demographic variables [2]. No wonder, therefore, that predictors of all-cause mortality rates or those from cardiovascular events are based on pathological changes expressed in absolute values. Therefore, we did not transform any lung function variables, a matter of recurrent debate.

We are happy that M.R. Miller concurs that age, as for many other nonmodifiable factors, should have limited value in the clinical stratification of COPD. However, we fear that the comparison of COPD with cystic fibrosis (CF) is inappropriate. The deterioration of lung function in COPD and CF has different origins (acquired *versus* genetic) and their main causes of death are also utterly different, malignancies and cardiovascular diseases in COPD *versus* infections in CF, respectively. Indeed, the impairment of lung function in smokers compared with its expected value is associated with an increased risk of cancer [3] and cardiovascular death [4], while in CF such information is unavailable. Currently, the usual age of CF patients when they die (towards the end of somatic growth or later) and their cumulative growth deficit, actually reflects similar absolute values of lung function between patients.

To our knowledge, whether forced expiratory volume in 1 s (FEV₁)/height [2] or FEV₁ quotient are better predictors of survival than FEV₁ expressed as a percentage of the predicted value has yet to be demonstrated. We indeed agree that available COPD indices are far from “ideal” and that we need better tools to predict the health outcomes of our patients. Thus far, we already have some simple and useful clinical tools, like BODE (body mass index, airflow obstruction, dyspnoea and exercise capacity) and its variants, that allow us to approach each patient individually and customise their treatment.



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Available COPD indices are far from “ideal”, we need better tools to predict the health outcomes of our patients <http://ow.ly/qypoF>

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References

- 1 Marin JM, Alfageme I, Almagro P, *et al.* Multicomponent indices to predict survival in COPD: the COCOMICS study. *Eur Respir J* 2013; 42: 323–332.
- 2 Quanjer PH, Stanojevic S, Cole TJ, *et al.* Multi-ethnic reference values for spirometry for the 3–95-yr age range: the global lung function 2012 equations. *Eur Respir J* 2012; 40: 1324–1343.
- 3 de Torres JP, Marin JM, Casanova C, *et al.* Lung cancer in patients with chronic obstructive pulmonary disease – incidence and predicting factors. *Am J Respir Crit Care Med* 2011; 184: 913–919.
- 4 Washko GR, Hunninghake GM, Fernandez IE, *et al.* Lung volumes and emphysema in smokers with interstitial lung abnormalities. *N Engl J Med* 2011; 364: 897–906.

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