the results of the score, patients will be integrated in validated diagnostic and therapeutic algorithms. Inappropriate management has been found to be related to poor outcomes [6], and chronic lung diseases (including COPD) were independent risk factors for inappropriate management [6]. Thus, a management study comparing outcomes in patients in whom PE was suspected and who were randomised among two groups (Wells or Geneva rules) would be the only way to compare these scores, either with a superiority design or a noninferiority design.

In their paper, GUNEN *et al.* [1] discussed grouping patients with an intermediate and a high clinical probability. Algorithms for patients with intermediate or high may differ markedly. In particular, some centres still propose to perform an additional test in the presence of a high clinical probability and a negative computed tomography scan. Thus, putting together these two groups does not seem to be adviseable.

In conclusion, we believe that the necessary required qualities for a CPR are to be easy to compute and well validated in management outcome studies. Both the Wells and the Geneva score reached this level of validation. However, the Geneva rule as been derived and validated only in outpatients and its use should be restricted to this population. The study of GUNEN *et al.* [1] raised an interesting question: do we need specific scores for specific situations? Despite the fact that it may be intellectually appealing, we think that too many declinations of a score may render that score unusable.

L. Bertoletti*,# and M. Righini*

*Division of Angiology and Haemostasis, Dept of Internal Medicine, Faculty of Medicine, University of Geneva, Geneva, Switzerland, and #Groupe de Recherche sur la Thrombose, Université de Saint-Etienne Jean Monnet, Saint-Etienne, France.

Correspondence: L. Bertoletti, Groupe de Recherche sur la Thrombose, EA3065, Université de Saint-Etienne Jean Monnet, 42000 Saint-Etienne, France. E-mail: laurent.bertoletti@gmail.com

Statement of Interest: None declared.

REFERENCES

1 Gunen H, Gulbas G, In E, *et al.* Venous thromboemboli and exacerbations of COPD. *Eur Respir J* 2010; 35: 1243–1248.
2 Ceriani E, Combescure C, Le Gal G, *et al.* Clinical prediction rules for pulmonary embolism: a systematic review and meta-analysis. *J Thromb Haemost* 2010; 8: 957–970.
3 Torbicki A, Perrier A, Konstantinides S, *et al.* Guidelines on the diagnosis and management of acute pulmonary embolism: the Task Force for the Diagnosis and Management of Acute Pulmonary Embolism of the European Society of Cardiology (ESC). *Eur Heart J* 2008; 29: 2276–2315.
4 Le Gal G, Righini M, Roy PM, *et al.* Prediction of pulmonary embolism in the emergency department: the revised Geneva score. *Ann Intern Med* 2006; 144: 165–171.
5 Klok FA, Mos IC, Nijkeuter M, *et al.* Simplification of the revised Geneva score for assessing clinical probability of pulmonary embolism. *Arch Intern Med 2008; 27*, 168: 2131–2136.
6 Roy PM, Meyer G, Vielle B, *et al.* Appropriateness of diagnostic management and outcomes of suspected pulmonary embolism. *Ann Intern Med* 2006; 144: 157–164.

DOI: 10.1183/09031936.00128410

From the authors:

We deeply appreciate L. Bertoletti and M. Righini's interest and important comments about our paper published in the June issue of the *European Respiratory Journal* [1].

L. Bertoletti and his colleague stated in their letter that application of the Geneva clinical prediction rule for pulmonary emboli (PE) is not appropriate in hospitalised patients because it was originally derived from a database of emergency ward patients. We completely agree with this comment that probability of PE development after hospitalisation should not be assessed using the Geneva criteria. In our study population, in the majority of patients, evaluation of prediction rules for PE was done within a few hours of admission to the hospital, either in the emergency department or in outpatient clinics, before transferring the patients to the intensive care unit or respiratory ward. In other words, all necessary data for the Geneva and the Wells clinical prediction rules had already been obtained during their initial evaluation at the emergency department or outpatient clinics, and the probability scoring for each patient was based upon that admission data, not later data. So we do not think that our approach was a clear violation of application of the Geneva model in this study. As mentioned in our article [1], every chronic obstructive pulmonary disease (COPD) patient on an apparently severe exacerbation could be considered as an at-risk patient for venous thromboemboli (VTE) due to the presence of some strong common risk factors, such as being elderly, immobile or having cardiac problems, or infection of varying severity. Hence, application of the Geneva prediction rule should not yet be denied in this specific group of patients, unless new data from further studies will suggest otherwise.

An item in the Wells scoring system requires the clinician's judgment of whether an alternative diagnosis is less likely than PE or not. As mentioned by L. Bertoletti and M. Righini, as well as other authors [2, 3], several times, inclusion of this item in the Wells model seems to increase the subjectivity of the scoring and to decrease the external validity and reproducibility of any study related to PE prediction. Although the relevant item has long been considered as the weak point of this Canadian scoring system, findings from the available studies did not support this opinion clearly. In general terms, the Wells criteria were found to have moderate to substantial interobserver agreement [4–6].

Our study was designed and initiated in 2005 and 2006. At that time, the revised version of the Geneva criteria was neither available nor tested in an outcome study. Moreover, the main advantage of the new version of the Geneva model is its simplicity, by exclusion of arterial blood gas analysis and chest radiography. Although we also agree that the revised version suggests an easier alternative tool, it does not mean that it is superior to the original one regarding their PE prediction

powers. No doubt, new studies will utilise the revised version of the Geneva model. As for the Wells score used in our study, we think that neither dichotomised nor trichotomised scores make too much sense if they are combined with a D-dimer test. It must be noted that positive D-dimer test allows the shifting of some patients from the ''unlikely'' PE arm of the dichotomised Wells score back to the ''likely'' arm. Since only few COPD studies related to the Wells scoring system exist in the literature, we preferred including all COPD patients for evaluation who are considered naturally at risk for PE, as mentioned above, to excluding some unlikely PE patients with negative D-dimer test results. We believe this approach would be necessary for the further validation of the Wells system in this specific group of patients.

As a complicating or triggering factor, presence of VTE in COPD patients on exacerbation is an important issue. 1-yr mortality was found doubled in VTE cases in our study. We believe that clinical prediction rules developed for PE will help us to manage COPD. As L. Bertoletti and M. Righini also underline, in order to have better prediction powers in cases with severe underlying specific diseases, we might need some modifications in the current prediction models, or some new disease-specific models should be developed in future.

H. Gunen*, G. Gulbas#, E. In¶, O. Yetkin# and S.S. Hacievliyagil#

*Division of Pulmonary Medicine, Umraniye Research and Training Hospital, Istanbul, #Division of Pulmonary Medicine, Turgut Ozal Research Center, Inonu University, and ¶Division of Pulmonary Medicine, Sevgi Private Hospital, Malatya, Turkey.

Correspondence: G. Gulbas, Division of Pulmonary Medicine, Turgut Ozal Research Center, Inonu University, Malatya 44069, Turkey. E-mail: gazigulbas@yahoo.com

Statement of Interest: None declared.

REFERENCES

1 Gunen H, Gulbas G, In E, *et al.* Venous thromboemboli and exacerbations of COPD. *Eur Respir J* 2010; 35: 1243–1248.
2 LR Gregoire, Righini M, Roy PM, *et al.* Prediction of the pulmonary embolism in the emergency department: the revised Geneva score. *Ann Intern Med* 2006; 144: 165–171.
3 Torbicki A, Perrier A, Konstantinides S, *et al.* Guidelines on the diagnosis and management of acute pulmonary embolism: the Task Force for the Diagnosis and Management of Acute Pulmonary Embolism of the European Society of Cardiology (ESC). *Eur Heart J* 2008; 29: 2276–2315.
4 Wolf SJ, McCubbin TR, Feldhaus KM, *et al.* Prospective validation of Wells criteria in the evaluation of patients with suspected pulmonary embolism. *Ann Emerg Med* 2004; 44: 503–510.
5 Runyon MS, Webb WB, Jones AE, *et al.* Comparison of the unstructured clinician estimate of pretest probability for pulmonary embolism to the Canadian score and the Charlotte rule: a prospective observational study. *Acad Emerg Med* 2005; 12: 587–593.
6 Rodger MA, Maser E, Stiell I, *et al.* The interobserver reliability of pretest probability assessment in patients with suspected pulmonary embolism. *Thromb Res* 2005; 116: 101–107.

DOI: 10.1183/09031936.00138410

Confirmation of asthma diagnosis in the community

To the Editors:

The study of LUKS *et al.* [1] highlights an area of asthma care that has important patient and economic implications. The authors strive to answer a very relevant clinical question related to practical clinical considerations surrounding asthma diagnosis: how many steps of a diagnostic algorithm are required to confirm diagnosis of asthma among patients previously diagnosed with asthma in the community? The authors demonstrate that >90% of patients were confirmed with only one or two study visits by either pre- and post-bronchodilator spirometry or a single bronchial challenge test. Based on the protocol design, the patients studied at visit 1 and visit 2 were similar, since steroid tapering did not occur until visit 3. From figure 1 in [1], it appears that 54 out of 499 (10.8%) patients were diagnosed with asthma using simple pre- and post-bronchodilator spirometry. At visit 2, methacholine challenge testing resulted in a confirmation rate of 274 out of 444 (61.7%) patients and an exclusion rate of 121 out of 444 (27.3%) patients. In order to identify the most simple and practical approach to asthma diagnosis confirmation in this population, a methacholine challenge test (MCT) should have been performed at visit 1. It is possible that some, if not most, of the spirometrically confirmed cases (visit 1) would also be confirmed with MCT. This issue is relevant because it would provide practical information about which test should be ordered first in the real world; the results of the study by LUKS *et al.* [1] suggest that MCT may be the option of choice among this population. If primary care physicians are to be encouraged to adopt a role in confirmation of asthma diagnosis in the community, this issue requires further clarification. The design of the current algorithm may actually underestimate its utility in terms of the number of visits required to confirm asthma diagnosis; this may turn out to be a one-visit process for most patients.

Given the algorithm design, it would be more clear to state that at least two visits were required to confirm or exclude a diagnosis of asthma in the majority of patients. Further studies are needed to determine how simple spirometry compares to MCT for *de novo* asthma diagnosis in the community setting.