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Response

To the Editor:

We appreciate the comments by Dr Vorselaars and colleagues on our article in *CHEST*¹ and congratulate them on completing their chart review. Their review adds to an emerging hypothesis-generating data pool on the association between sarcoidosis and thromboembolic phenomenon. We look forward to seeing results from future studies aimed at deciphering this apparent relationship.

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Bedside Ultrasonography for Evaluation of Pneumothorax

To the Editor:

We read with great interest the article by Ding and colleagues¹ in a recent issue of *CHEST* (October 2011). According to their random-effect meta-analysis, pleural ultrasonography (PUS) was more sensitive than, and of similar specificity to, chest radiograph (CXR). They also indicated that PUS is an attractive alternative to CXR in EDs and ICUs and that PUS is a "rule out" test. Although we strongly agree that bedside PUS is very helpful and a readily available tool with very good sensitivity and specificity to detect pneumothorax, we have some concerns.

First, understanding the goal of the study, which was to estimate the accuracy of PUS and CXR from previous studies, we believe that the analysis included a very diverse sample of studies, including retrospective studies with one arm, old studies (some before 1995), some with a low number of subjects (especially on the PUS arm), some with blinding issues, and, in general, studies that included diverse patient populations. In fact, the *I*² statistics indicated very wide heterogeneity. Attempts were made by the authors to explain some of that heterogeneity by doing subgroup analysis and metaregression. It may be better to include recent ICU or ED studies that have a comparison arm with CXR or the gold standard (chest CT scan) and that meet the quality criteria (Quality of Diagnostic Accuracy Studies and Delphi criteria) to obtain more accurate estimates.

Second, PUS is not a very accurate method to estimate the pneumothorax volume. If used alone, PUS can lead to overtreatment with a possibly invasive procedure that can potentially cause more harm than benefit.

Third, we agree that PUS can be an alternative to CXR, but only in a small section of pneumothorax patient populations. In addition to the weak ability of PUS to estimate a clinically significant pneumothorax, it is not accurate in patients with large peripheral bullous emphysema. It also has some other limitations mentioned by the authors, such as the presence of pleural adhesions, pleural calcifications, and subcutaneous emphysema.

We believe that the findings of this analysis do not show that PUS should be used alone and universally on all patients. CXR is still needed in patients who are relatively stable with pneumothorax seen on PUS before deciding on chest tube thoracotomy. Furthermore, the training with bedside PUS in the ICU that is being incorporated in most Pulmonary, Critical Care, and Emergency Medicine fellowship programs in the United States and familiarity with PUS and pneumothorax signs (lung sliding, lung point, and comet tail) are essential before using PUS to make decisions.

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