Reviewer’s report

Title: Bone and body composition analyzed by Dual-energy X-ray Absorptiometry (DXA) in clinical and nutritional evaluation of young patients with Cystic Fibrosis: a cross-sectional study

Version: 1 Date: 11 July 2009

Reviewer: Isabelle Sermet-Gaudelus

Reviewer’s report:

Review of “Bone and Body composition analyzed by Dual-energy X-ray Absorptiometry (DXA) in clinical and nutritional evaluation of young patients with Cystic Fibrosis: a cross-sectional study” by Lucidi et al.

General comments:
This study is another set of data about bone mineralization in CF children and young adults. The 2 interesting points are that (1) as few other studies, the authors report a low BMD even in young children (2) the data of the patients are compared to healthy subjects, matched for age, gender, height and pubertal stage, which is quite seldom, and the authors should be congratulated for such a rigorous manner to conduct the study. Therefore this paper needs to be published. However, before publication, several points need to be clarified.

Major comments
The patients were matched to controls, according sex, age, height and pubertal stages: How was the repartition of pubertal stage in the CF and the controls? How many controls were matched for one patient? Did the prepubertals have a normal BMD as reported by Buntain et al (Thorax 2006) there is a relatively large amount of low BMD in this set of patients. This seems related to severity of respiratory disease and nutritional status. Did the authors also consider the vitamin D Status, by studying the level of 25(OH)vit D. Can the authors give this additional data?
The authors report that all the patients were treated with inhaled steroids. It would be interesting, considering the studies, outside the field of CF to relate this to the cumulative dosage.
The correlation with body composition is very interesting. Could the authors describe specifically the BMD of patients with normal weight. Some studies indeed report low BMD in patients with normal weight and low lean mass (Sermet-Gaudelus AJRCCM 2007).
Finally it would be interesting to describe the multivariate analysis to outweigh in this set of patients the different risk factors.

Minor points
the figure need to be improved. the points are too small.
**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**

'I declare that I have no competing interests'