Reviewer's report

Title: Perseverant, non-indicated treatment of obese patients for obstructive lung disease

Version: 2 Date: 4 December 2012

Reviewer: Francesco Pistelli

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Major Compulsory Revisions

1. The manuscript lacks of an appropriate background. Studies on prevalence of airways obstruction and/or restriction, respiratory diagnosis (e.g. COPD, asthma) and use of respiratory medicines in obese patients are not quoted.

2. The study design is not described in the Methods section. The authors should demonstrate how the use of inhaled bronchodilators changes before and after the results of a single spirometric measurement performed in a group of obese patients consecutively assessed in a hospital lung function laboratory. Confounding factors are not taken into account, for example: possible recent episodes of acute bronchitis or further spirometric measurements performed between the baseline and follow-up evaluation, which may have prompted the prescription of inhaled bronchodilators; respiratory misdiagnosis at baseline (e.g. asthmatic patients in clinical remission); etc.

3. The criteria and reference values used to define airways obstruction and/or restriction are not specified. For example, according to the ATS-ERS criteria (quoted as reference no. 9 in the manuscript), a restrictive ventilatory defect is defined by a reduction in TLC below the 5th percentile of the predicted value, and a normal FEV1/VC. However, the authors state that only 57 patients (37% of the whole study sample) had measurements of lung volumes (see Results, first paragraph).

4. Descriptive statistics of lung function measurements of the study subjects are not reported.

5. The study does not assess statistical differences between the proportion of the same subjects who continue to use inhaled bronchodilators before and after spirometry, stratified by baseline respiratory diagnosis.

6. The logistic regression model is not described (second paragraph in the Methods section) in term of independent variables analyzed, and the obtained results are not presented.

7. The authors do not discuss possible explanations of misuse of bronchodilators in obese patients (second paragraph of Discussion section). For example: the proportion of study subjects that was referred for spirometry by a pulmonologist is not considered; the physicians who prescribed medications after the spirometry (as reported in table 2) are not characterized.
8. The authors do not report if the study was approved by the Ethical Committee.

Minor essential revisions

1. Abstract. Background. Bronchodilators are a mainstay of treatment also for COPD, which is defined by not reversible or partially reversible airflow obstruction.

2. Figure 1. It is not quoted in the text of the manuscript. The text in the box should be completed with: “53 individuals were excluded because there were no records #6 months after testing”. Part of figure 1 reports the same results reported in Figure 2B.

3. Figure 2A and B. It lacks of a legend for abbreviations.

4. Table 2 is not quoted in the text of the manuscript.

Minor issues not for publication

1. Figure 2B. Correct “incocusive”.

**Level of interest:** An article of limited interest

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.