Reviewer's report

Title: Predictors of Diagnostic Yield in Bronchoscopy: a Retrospective Cohort Study comparing different combinations of sampling techniques.

Version: 1 Date: 8 October 2007

Reviewer: Douglas C McCrory

Reviewer's report:

General
The authors have reported on the diagnostic yields in a reasonably large series of patients who represent a representative population in Norway. This study seems to have been carefully conducted, and is clearly explained. It adds incrementally to our understanding of the efficiency of the bronchoscopic evaluation of suspected lung cancer. The most interesting data reported here concern the analysis of a third category of endobronchially visible lesions; instead of visible or not visible (with sometimes poorly described threshold in various studies), then authors included an intermediate category including constriction, compression or suspected submucosal changes.

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

None

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

Abstract - Results (first sentence). Compared with results displayed in Table 4, there appears to be an error associated with one of the odds ratio estimates and wrong inequality for the reference group - see corrections in [] "The adjusted odds ratios (OR) with 95% confidence intervals (CI) for a positive diagnostic yield through all procedures were 17.0 (8.5-34.0) for endobronchial lesions, and 2.6 (1.3-5.2) for constriction/compression, compared to non-visible lesions. 3.8 (1.3-10.7) for lesions >4 cm, 6.7 (2.1-21.8) for lesions 3-4 cm, and 2.5 (0.8-7.9) for lesions > 4 cm [this should be "2-3 cm" instead of > 4 cm] compared with lesions < [this should be <=] 2 cm.

Table 4 - change "Odds rate" to "Odds ratio" in the title of this table -- odds ratios cannot correctly be described as "rates."

Discretionary Revisions (which the author can choose to ignore)

Suggest changing punctuation of sentence in abstract as follows (use colon and
semicolon): "The adjusted odds ratios (OR) with 95% confidence intervals (CI) for a positive diagnostic yield through all procedures were: 17.0 (8.5-34.0) for endobronchial lesions, and 2.6 (1.3-5.2) for constriction/compression, compared to non-visible lesions; 3.8 (1.3-10.7) for lesions > 4 cm, 6.7 (2.1-21.8) for lesions 3-4 cm, and 2.5 (0.8-7.9) for lesions 2-3 cm, compared with lesions <= 2 cm.

page 3, edit for clarity: The aims of this study were to evaluate the sensitivity [of bronchoscopy] for [detecting] malignant disease xx xxxxxxxxxxxxxx in clinical practice ...

page 5 change "were" to "was" for subject-verb agreement -- "The largest size of the lesion was measured from the CT scan in all but five cases, in which the size [was] estimated from the chest radiograph.

page 11, Regarding use of the word superior in the following sentence -- "While BTS guidelines presently recommend a combination of biopsy, brushing, and washing, these data suggest that the combination of biopsy and TBNA may be superior for visible and non-visible lesions." Adding washings to biopsy and TBNA can only increase the yield. I suspect that you are arguing that the increase in time, trouble, and expense are not worth the small marginal increase in yeild that washings provide. However, if one is considering only diagnostic yield, or sensitivity, as you have done in this paper, then biopsy and TBNA cannot be "superior" to biopsy, TBNA and washings.

Suggest explaining this point more clearly, or saying "nearly as good as" in place of "superior".

page 12 - identical issue as above regarding the use of the work "better" in the following sentence: "This study has shown that biopsy and TBNA might be better."

What next?: Accept after minor essential revisions

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Needs some language corrections before being published

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

Declaration of competing interests:
I declare that I have no competing interests.