Reviewer's report

Title: Evaluation of FTIR Spectroscopy as a diagnostic tool for lung cancer using sputum

Version: 1 Date: 13 May 2010

Reviewer: Donna Maziak

Reviewer's report:

Thank you for allowing me the opportunity to review the paper entitled “Evaluation of FTIR Spectroscopy as a diagnostic tool for lung cancer using sputum”.

1. This is a very well executed paper which is very well written, with a clear objective and sound results.

2. The work that the authors have done is extremely valuable. The one important question I have is that there has been a trend for lung cancers over the past 20-30 years to move from central to peripheral. It would be an important fact whether or not the sputum is indeed a good diagnostic test for analyzing the presence or absence of lung cancer to know whether or not the 25 subjects had indeed centrally located tumours which were visible on bronchoscopy. As most tumours are currently in the periphery, bronchoscopy has not been fruitful in making a tissue diagnosis. Especially in early stage tumours this is often the case. This is an important factor as this will determine whether or not it could be a useful test for screening in the future. I think it is an important inclusion in this paper to state where the tumours are located on bronchoscopy or CT to see whether or not it will be of importance in the future.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:

'I declare that I have no competing interests'