Reply to Letter to Editor re: usefulness of FDG PET/CT in determining benign from malignant endobronchial obstruction

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Dear Sir,

We agree with the author's comment that delineation of the malignant tumour extent within the collapsed lung is critical in determining the radiation field. However, our research [1] focused on the differentiation between malignancy and benign obstruction at the obstruction site itself.

Nevertheless, it is important to delineate the accurate tumour volume within the atelectatic lung to reduce unnecessary radiation. One of the main difficulties in delineating malignant foci within the atelectatic lung would be increased FDG uptake due to inflammatory cells accumulated within the atelectatic lung [2, 3]. However, the investigators point out that there might be a difference of vascularity between the neoplastic areas and adjacent non-neoplastic atelectatic lung. In fact, this result was shown in their recent parametric imaging study using 15O-H₂O perfusion technique [4]. We agree that the use of 15O-H₂O could be useful in defining tumour within the atelectatic lung, however, routine use of 15O-H₂O may be difficult in the clinical setting, due to its very short half-

life. A possible alternative to bring this perfusion studies in the clinical setting might be to perform a perfusion computed tomography using contrast media, or initial dynamic study using 18F-FDG as a perfusion tracer immediately after injection, instead of using 15O-H₂O [5, 6]. Correlation between the previous dynamic study with 15O-H₂O with dynamic 18F-FDG PET in the atelectatic lung could lead to an interesting result.

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