Author's response to reviews

Title: Comparative Chest Computed Tomography Findings of Non-tuberculous Mycobacterial Lung Diseases and Pulmonary Tuberculosis in Patients with AFB Smear-Positive Sputum

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Reviewer 1. (Chin-Chung Shu)

1). We totally agree with you that CT scans in patients with NTM colonization is also important to be compared. In our initial laboratory data, there were indeed many results classified as NTM colonization. The concern we did not put these CT scans from NTM colonization patients is the strict diagnostic criteria for NTM. The patients’ clinical course should match the American Thoracic Society (ATS) guideline in addition to mycobacterial culture. On the other hand, there were no qualified diagnostic rules for NTM colonization. Therefore, NTM colonization results could be colonization of other bacteria that cannot be identified. That is the reason we do not take CT scans in patients with NTM colonization into comparison in our study.

2). The case number of our study is indeed not enough to announce a solid conclusion. We are continually expanding our data bank for future publication. We believe the preliminary statistic results of this paper can help physicians know the most likely diagnoses in AFB-smear positive patients and avoid unnecessary adverse effects and the related costs of anti-TB drugs in endemic areas. Please give us chance to issue this paper.

3). We focus this paper as radiological characteristics of CT scans. Actually, the mycobacteriology data and more clinical details were issued in another publication by our colleagues. We are willing to offer you these information if you request.

Reviewer 2. (Yoshiki Demura)

Major

We totally agree with you that pleural effusion, cavities, small nodules,
bronchiectasis and emphysematous changes have been known as significant CT scan findings in patients with PTB or NTM. The case number of our study is indeed not enough to announce a solid conclusion. We are continually expanding our data bank for future publication. We focus this paper as radiological characteristics of CT scans and hope that our finding can help physicians in endemic areas know the most likely diagnoses in AFB-smear positive patients according to preliminary images interpretation. Your precious opinions would be very helpful and we will be very grateful if our results could be issued. Actually, the pathological and clinical details were issued in another publication by our colleagues. We are willing to offer you these information if you request.

Minor
Thank you very much for your professional suggestions. We have added bronchiectasis and cystic changes after honeycombing appearances in figure legends and author manuscript.

Reviewer 3. (ulas Baqci)

Major
Thank you very much for introducing your study “Automatic detection and quantification of tree-in-bud (TIB) opacities from CT scans.” I and my colleagues are all very impressed by this novel computer-assisted detection (CAD) system for automatically detecting and precisely quantifying abnormal nodular branching opacities in chest computed tomography (CT), termed tree-in-bud (TIB) opacities. We have suggested our hospital executives to introduce this system to assist radiologists and other physicians analyzing CT scans in both research fields and routine CT interpretation. If you have patents or commercial version of this valuable CAD system, please offer information to us. (12703@ymuh.ym.edu.tw). We believe with this CAD systems’ help, we can easily obtain quantitative metric for the amount of abnormal imaging patterns in the CT scans, such as the size (and shape) of the cavity, density (volume) of the nodules. Despite the lack of quantitative metric of abnormal finding of our results, the CT scans were reviewed independently by two experienced radiologists and pulmonary specialist blinded to the patient’s microbiology data. Interobserver and observer-computer agreements are determined by consensus. Although the case number of our study is indeed not enough to announce a solid conclusion, we are continually expanding our data bank for future publication. We believe the preliminary statistic results of this paper can help physicians know the most likely diagnoses in AFB-smear positive patients and avoid unnecessary adverse effects and the related costs of anti-TB drugs in endemic areas. Please give us chance to issue this paper.

Minor
Thank you for your thorough review of this paper. We have reexamined the wording and the following are the final expression at patients and methods section of our manuscripts. “ A total of 95 CT scans obtained from the 159 patients were analyzed, 75 scans were from patients with PTB and 20 scans from NTM lung disease.”