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REAPPRAISE THE ADVANCED TECHNIQUE FOR TUMOR LOCALIZATION AND SENTINEL LYMPH NODE ASSESSMENT IN CLINICAL EARLY-STAGE

NON-SMALL CELL LUNG CANCER

To the Editor:

We read with interest the report “A Novel Technique for Tumor Localization and Targeted Lymphatic Mapping in Early-Stage Lung Cancer” by Hachey and colleagues,¹ which published online on March 6, 2017, in the *Journal*. While congratulating them for their great effort in investigating the safety and feasibility of navigational bronchoscopy (NB)-guided near-infrared (NIR) tumor localization and sentinel lymph nodes (SLNs) for accurate staging in patients with non-small cell lung cancer, we want to share some significant concerns.

Our first concern pertains to the necessity of applying NB-guided NIR to every undetermined pulmonary lesion. In this study, several lesions were 1 cm or greater with depth from the pleural surface of 1 cm or less. For these cases, we would argue that Hachey and colleagues¹ did not need such a complicated technique to find a lesion just beneath the pleura. Direct visualization, digital palpation, or a sliding method with an instrument might be enough for the localization of the target nodule. In our practice, most lesions 8 mm or greater with depth from the pleural surface 2 cm or less can be located by digital palpation without any other redundant methods. In addition, the average time to visualization after injection was 65 ± 31 minutes. For patients with compromised physical status, the shorter the operating or anesthetic time, the less postoperative complications there will be. The technique of NB-guided NIR was truly helpful, but it might have been overused.

Our second concern pertains to the effectiveness of SLNs in predicting the whole status of lymph nodes (LNs). Studying the effectiveness of SLNs was truly helpful for

surgeons to make a decision on how many LNs should be dissected especially for early-stage disease or patients with compromised physical status because the incidence of macroscopic skip metastasis has been reported to range from 20% to 38% in patients with lung cancer.² In this study, several patients underwent only 1- or 2-station LN dissection after examining the SLN. We think this is not enough to evaluate the concordance of the SLN with the overall nodes. In addition, the incidence of micrometastasis was reported to be approximately 19%,² and it usually could not be detected by standard hematoxylin-eosin staining. The potential existence of micrometastasis in the SLN might attenuate the effectiveness of the SLN. Therefore, we suggest that only if the authors perform standard systemic LN dissection can they evaluate effectively the concordance of the SLN with the overall nodes. Also, taking consideration of micrometastasis in SLNs might be helpful to enhance the effectiveness of SLN in predicting the whole nodal status.

In short, we agree with them that NB-guided NIR lesion localization and SLN identification may permit the accurate localization and nodal staging of early-stage lung cancers. We also believe that NB-guided NIR lesion localization is useful, but this does not mean it should be used in every case. We are looking forward to their further study on the histopathologic status of SLN versus overall nodes and concordance with the final pathologic stage in a larger cohort.

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A “GREEN” LIGHT FOR STAGING IN EARLY LUNG CANCER

Reply to the Editor:

We thank Drs Liu and Liu for their interest and insightful comments regarding our article “A Novel Technique for Tumor Localization and Targeted Lymphatic Mapping in Early Stage Lung Cancer.”