

MEETING ABSTRACT

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# Different significance of HRCT and FDG-PET/CT to predict lymph node status between patients with clinical stage IA lung adenocarcinoma and squamous cell carcinoma

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## Background/Introduction

True node-negative small sized non-small cell lung cancers are optimal candidates for sublobar resection without systematic lymph node dissection.

## Aims/Objectives

The purpose of this study is to identify the predictive factors of true node-negative clinical stage IA non-small cell lung cancer.

## Method

A multicenter database of patients with completely resected clinical stage IA lung adenocarcinoma (n = 502) or squamous cell carcinoma (n = 100) was retrospectively analyzed. The relationship between lymph node status and preoperative factors such as tumor size on HRCT and maximum standardized uptake value (SUVmax) on FDG-PET/CT were examined.

## Results

Multivariate analyses revealed that solid tumor size on HRCT (Odds ratio (OR), 1.42;  $p < 0.001$ ) or SUVmax on FDG-PET/CT (OR, 1.04;  $p = 0.049$ ) was identified as an independent predictor of lymph node metastasis in patients with lung adenocarcinoma. The predictive criteria of node-negative lung adenocarcinoma were solid tumor size  $< 0.8$  cm or SUVmax  $< 1.5$ . Among patients who met the node-negative criteria, recurrence-free survival at 5 years was not significantly different between those who

underwent lobectomy (96.0%) and those who underwent sublobar resection (97.2%). In patients with squamous cell carcinoma of the lung, no independent predictive factors for lymph node metastasis were identified in univariate or multivariate analysis.

## Discussion/Conclusion

Either solid tumor size on HRCT or SUVmax on FDG-PET/CT was a significant independent predictor of nodal status in clinical stage IA lung adenocarcinoma. The node-negative criteria of solid tumor size  $< 0.8$  cm or SUVmax  $< 1.5$  are helpful for choosing candidates for sublobar resection without systematic lymphadenectomy. In patients with clinical stage IA lung squamous cell carcinoma, systematic lymphadenectomy is advisable.

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