



# ASO Author Reflections: Prognostic Impact of the Primary Tumor Resection for Lung Cancer Patients Diagnosed with Pleural Dissemination in the Perioperative Period—Importance of Biomarker-Based Treatment Decision Making

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## PAST

Advances in imaging technology, including PET/CT, have improved the accuracy of preoperative staging of non-small-cell lung cancer (NSCLC).<sup>1</sup> Pleural dissemination (PD) or malignant pleural effusion (MPE) was found during surgery or on postoperative pathology in some patients, although it was not noted on preoperative imaging studies.<sup>2</sup> According to the eighth edition of the TNM staging system, NSCLC with PD or MPE is classified as stage IVA, and surgical resection is generally not indicated.<sup>3</sup> Occasionally, primary tumor resection is performed in these patients for histological examination, genetic testing, and symptom relief. Interestingly, some patients with radiologically undetermined PD and/or MPE demonstrated long-term survival, but the prognostic factors remain unknown.

## PRESENT

A review of 9463 NSCLC patients identified 114 cases (1.2%) with PD and/or MPE detected during or after surgery.<sup>4</sup> The favorable independent prognostic factors for overall survival (OS) were lung adenocarcinoma, clinically undetected lymph node metastasis, and *EGFR* mutation.

An analysis of 41 patients with *EGFR* mutations showed significantly better 5-year OS in patients who underwent resection of the primary tumor than those with exploratory thoracotomy. However, no prognostic benefit was observed in patients with wild-type *EGFR* who underwent primary tumor resection as compared with patients who underwent exploratory thoracotomy.

## FUTURE

Biomarker testing is essential for determining the treatment strategy for NSCLC. Recent evidence shows that *EGFR* tyrosine kinase inhibitors improve the prognosis of advanced NSCLC, and they also function as adjuvant therapy after complete resection. Our study suggests that appropriate biomarker-based patient selection and primary tumor resection may improve the prognosis of patients with stage IVA NSCLC with perioperatively identified PD. A randomized controlled phase III trial is currently examining the therapeutic significance of additional primary tumor resection for stage IVA NSCLC with radiologically undetermined PD (<https://jrct.niph.go.jp/en-latest-detail/jRCTs031220666>). Further prospective multicenter studies stratified by biomarkers are warranted.

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