The Gene Landscape of Lung Adenocarcinoma Patients with Progressive Disease of Leptomeninge

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BACKGROUND

Epidermal growth factor receptor tyrosine kinase inhibitors (EGFR-TKIs) provide a better prognosis in EGFR-mutant non-small cell lung cancer (NSCLC). However, the outcome of leptomeningeal metastasis (LM) remains poor.

METHODS

Forty-five patients with LM-LUAD from May 2019 to June 2021 in Guangdong Sanjiu Brain Hospital were enrolled in this study. Patients with progressive disease (PD) of LM had 3rd-generation EGFR-TKI therapy and were defined as Cohort 1; those without 3rd-generation EGFR-TKI therapy were defined as Cohort 2.

RESULTS

The median age was 53 (range from 30 to 73 years), and 55.6% (25/45) of the patients were female in this study. In addition, 2% (1/45) of the patients had wild-type, 7% (3/45) patients had ROS1 fusions, and 16% (7/45) of patients had ALK fusions. The majority of patients in this study harbored EGFR mutations, accounting for 75% (34/45).

CSF could be a potential candidate for the genetic profiling of LM-LUAD, demonstrating the genetic characteristics of LM in EGFR-mutated lung adenocarcinoma on diverse EGFR-TKI therapies.

CONCLUSION

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