INTRODUCTION

The Flatiron Health cohort, including data from the non-small cell lung cancer (NSCLC) cohort, is an integrated, de-identified, and comprehensive clinical data resource spanning oncology care at sites of care across the United States. The Flatiron Health cohort has been used to study diverse aspects of clinical care, including patient outcomes, drug utilization, and treatment patterns. This study used data from the Flatiron Health cohort to examine the incidence and outcomes associated with the p.G12C mutation in stage IVA–IV NSCLC.

OBJECTIVES, ENDPOINTS, AND DATA ANALYSIS

The primary objectives of this retrospective study were as below:

- To describe the clinicopathological characteristics, treatment patterns, and outcomes of patients with KRAS p.G12C WT, have been analyzed, with a focus on outcomes among patients with KRAS p.G12C mutant advanced NSCLC.
- To compare the median overall survival (OS) and progression-free survival (PFS) of patients with advanced NSCLC who received systemic treatments with or without programmed death-1 (PD-1) inhibitors with or without chemotherapy, based on KRAS, EGFR, and ALK status.
- To analyze the impact of PD-1 inhibitor therapy on overall survival and progression-free survival among patients with advanced NSCLC who received systemic treatments, both of which are associated with nonsquamous KRAS, EGFR, and ALK mutants.

Endpoints

- OS and PFS were calculated using the Kaplan-Meier method. (n = 743)

Study Data Collection

- Data were collected from Flatiron Health Clinicopathological Characteristics, Treatment Patterns, and Outcomes in Patients with KRAS p.G12C Mutant Advanced Non-Small Cell Lung Cancer in the Flatiron Health-Foundation Medicine Clinico-Genomic Database.

RESULTS

Baseline Characteristics

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<tbody>
<tr>
<td>OS (95% Cl)</td>
<td>15.3 (9.6 to 21.1)</td>
<td>12.0 (9.6 to 15.3)</td>
<td>9.8 (7.6 to 12.0)</td>
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<tr>
<td>PFS (95% Cl)</td>
<td>6.4 (5.5 to 7.3)</td>
<td>4.7 (5.5 to 6.4)</td>
<td>6.3 (5.0 to 7.7)</td>
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<tr>
<td>Median OS (95% Cl)</td>
<td>15.3 (9.6 to 21.1)</td>
<td>12.0 (9.6 to 15.3)</td>
<td>9.8 (7.6 to 12.0)</td>
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<tr>
<td>Median PFS (95% Cl)</td>
<td>6.4 (5.5 to 7.3)</td>
<td>4.7 (5.5 to 6.4)</td>
<td>6.3 (5.0 to 7.7)</td>
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Demographic and clinical data window (n = 743)

- Setting: The Flatiron Health-Foundation Medicine Clinico-Genomic Database integrates comprehensive genomic profiling results with foundation medicine genetic data to support a network of community clinics.
- Stage IIIB with subsequent systemic therapy.
- Advanced disease was defined as the initial diagnosis of stage IV NSCLC or the diagnosis of stage IVA with subsequent recurrence or progression.

Patient Disposition

- All patients with advanced NSCLC in the Flatiron Health cohort were included.
- Patients with KRAS p.G12C WT, have been analyzed, with a focus on outcomes among patients with KRAS p.G12C mutant advanced NSCLC.
- Data from additional cohorts, such as NSCLC ART, FoundationOne, and Foundation Medicine CGDB, were analyzed.
- Data were collected from Flatiron Health Clinicopathological Characteristics, Treatment Patterns, and Outcomes in Patients with KRAS p.G12C Mutant Advanced Non-Small Cell Lung Cancer in the Flatiron Health-Foundation Medicine Clinico-Genomic Database.

REFERENCE


ADDITIONAL INFORMATION

- This study was funded by Amgen Inc.
- The study sponsor was responsible for writing the final draft of the manuscript. For information, please contact Amgen, Thousand Oaks, CA, USA.