Response Rate and Outcomes in Crizotinib Treated Advanced ALK-positive NSCLC Patients

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BACKGROUND
Crizotinib is an orally bioavailable inhibitor with superior safety and tolerability profiles compared to gefitinib.1

Crizotinib was approved in the United States (US) in August 2011 for the treatment of ALK-positive non-small-cell lung cancer (NSCLC).2,3

The clinical experience of crizotinib-treated patients with ALK-positive NSCLC has not been widely assessed outside of clinical trials.

The current study aimed to assess the treatment patterns and outcomes of patients with ALK-positive advanced NSCLC treated with crizotinib in regular clinical practice.

METHODS

- **Study design**: Retrospective cohort study from 2013 to 2015.
- **Data source**: Medical chart abstractor performance in 2016 was a reported sample of 97 oncologists in the US (n = 127) and Canada (n = 42).
- **Patient inclusion criteria**: Diagnosed with metastatic NSCLC and confirmed ALK gene rearrangement.
- **Age at diagnosis**: Age 18 years or older at diagnosis of ALK-positive NSCLC.
- **Setting of Crizotinib Initiation**: All crizotinib-treated patients were included in the study from August 1, 2011 to March 31, 2015 (n = 212 patients) or April 1, 2015 to March 31, 2016 (n = 278 patients) for US and Canada oncologists, respectively.3,4

- **Study endpoints**:
  - **Response rates**: Assessed using the World Health Organization (WHO) criteria (2010).5
  - **Survival**: Measured from crizotinib initiation until the earlier of death or crizotinib discontinuation.

RESULTS

**Characteristics of the Participating Physicians**
- **Oncologists**: Oncologists were reported to have mostly medical school training and many had prior clinical research experience.

**Patient Demographic and Clinical Characteristics**
- **Data collection**: Data were extracted from 212 patient records in the US (n = 147) and Canada (n = 65).
- **Study design**: Analyses were stratified by the setting (first-line vs. second-line or later) in which crizotinib was initiated.
- **Medication changes**: Changes in crizotinib dose (if patient died less than 3 months after last dose, the patient record was still censored).

**Disease progression following initial response**
- **Clinical response**: Most patients had no changes (reduction or escalation) in crizotinib dose.

**Chemotherapy**
- **Chemotherapy administration**: Most patients (90%) had chemotherapy following crizotinib initiation.

**Dose and duration of crizotinib**
- **Crizotinib total daily dose changes**: Most patients (90%) had no changes in crizotinib dose.

**Patient request**
- **Patient request**: Patient request for dose adjustment was observed in 19.3% of cases.

**Chemotherapy**
- **Chemotherapy administration**: Most patients (90%) had chemotherapy following crizotinib initiation.

**Radiotherapy**
- **Radiotherapy administration**: Most patients (90%) had radiotherapy following crizotinib initiation.

**Targeted therapy**
- **Targeted therapy administration**: Most patients (90%) had targeted therapy following crizotinib initiation.

**Other therapy**
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