

Actionable biomarkers in a non-small cell lung cancer (NSCLC) clinical pathway (CP)

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Background

Oncologists use Via Pathways (VP) to drive standardization to best evidence-based cancer care. VP include guidance for biomarker testing and associated treatments. Practices collaborated to analyze the first line non squamous carcinoma NSCLC VP for medical oncology. An unexpectedly large percentage of treatment decisions captured by oncologists in the VP portal had unknown ALK translocation or EGFR mutation test results. The VP was modified to require input of whether or not the test was ordered. This analysis examines the impact of this change.

Methods

Data captured in the VP database from 1/1/2014 to 5/31/2015 was analyzed for ALK and EGFR test results and subsequent treatment decisions. On 1/30/15, the test results answer options were modified to replace unknown with the following options: Awaiting Test Results, Did Not Order Test.

Results – ALK and EGFR Testing

From 1/1/2014 to 1/29/2015, ~40% of EGFR or ALK testing responses were for the unknown option. Post-implementation (1/30/2015 to 5/31/2015), 29.7% were charted as awaiting ALK results and 9.5% did not order the test; 29.4% were charted as awaiting EGFR results and 7.8% did not order the test.

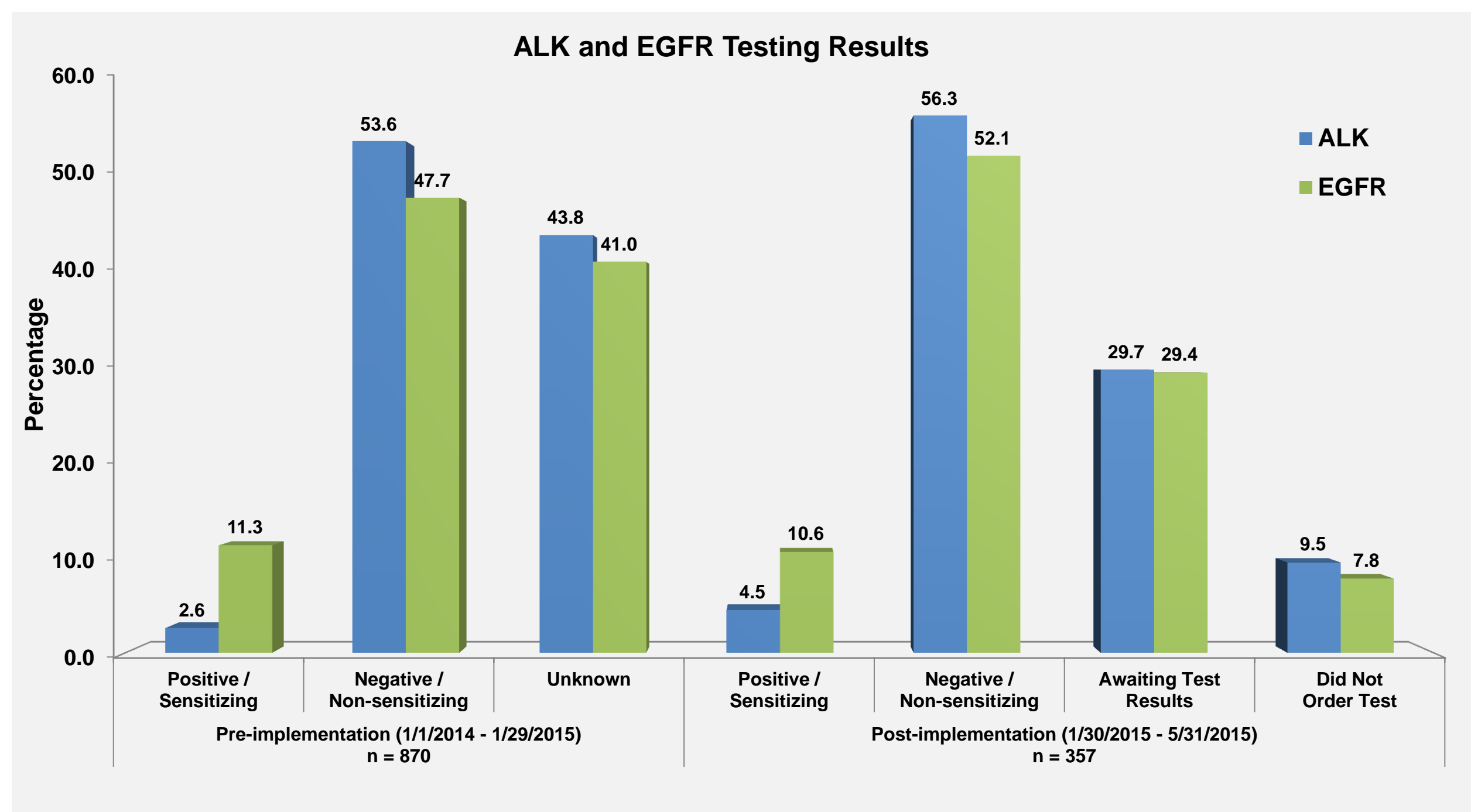


Figure 1: ALK and EGFR testing results as captured in the Via Pathways database from 1/1/2014 to 5/31/2015

Results – Treatment Decisions

For the combined period, appropriate targeted agents were selected as first line therapy for 89.2% (n = 37) and 86.5% (n = 133) of patients who were ALK translocation positive and EGFR sensitizing mutation positive, respectively.

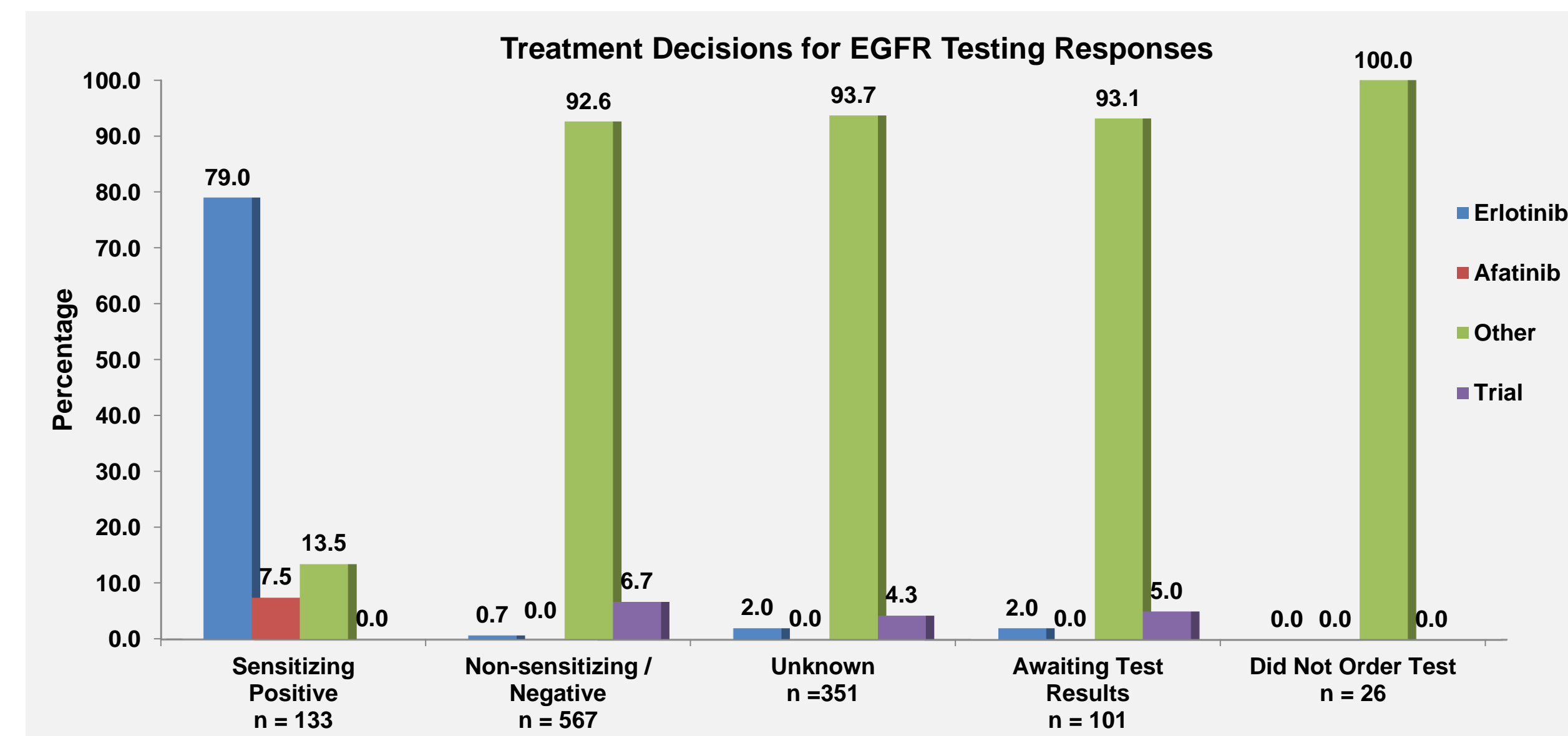
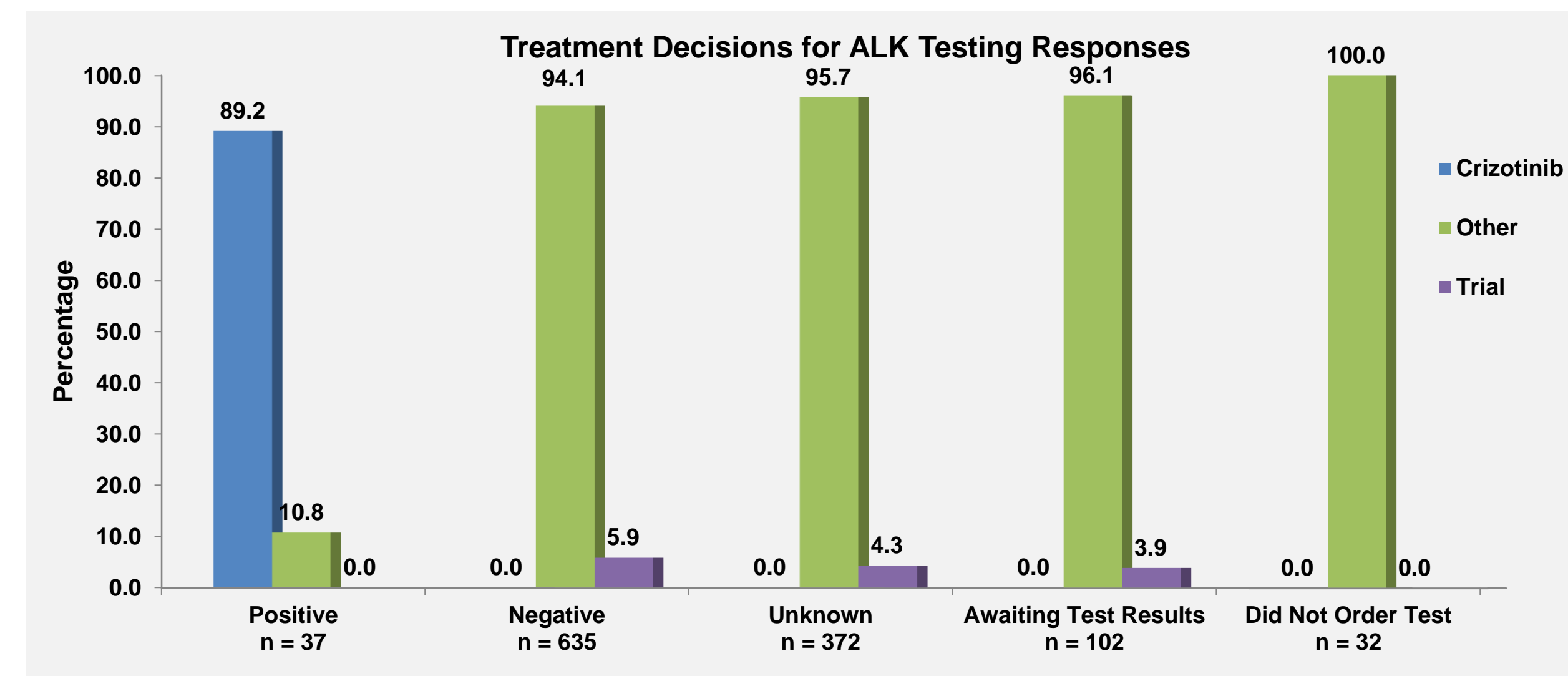


Figure 2: First line treatment decisions based on ALK and EGFR test results

Conclusions and Future Work

The results demonstrate the ability of CP to promote testing of key biomarkers and use of appropriate targeted agents. Frequent evaluation and modification of pathway content is needed to ensure practice patterns are accurately captured.

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