Physician perceptions of barriers to Epidermal Growth Factor Receptor mutation (EGFRm) testing in early and advanced (stage I / II / IIla / IV)

Non-Small Cell Lung Cancer (NSCLC)

Jens Samol1,2, Fedor Moiseenko2, Martha S. Paats4, Ingelel Demedts4, Mustafa Erman4, Doreen A Kahangire4, Vadim Kozlov4, Michael Mark4, Jose Minnata4, Senthil Rajappan1, Mauro Zukin2, Mutsa Madondo2, Alik Taylor2, Tom Bailey2

Objective

• This study investigated real-world EGFRmutation testing patterns in early- and advanced-stage NSCLC, and identified reasons against implementation of testing by surveying physicians’ perceptions

Overall Conclusions (across countries)

• EGFRm testing was reported to be standard practice in the advanced stage setting. Less than half of physicians routinely test for EGFRm in stages I-II, although the proportion of patients tested for EGFRm increased notably from stage I (30%) to stage II (70%)

• Physicians indicate different reasons for not testing for EGFRm mutations in early and advanced NSCLC patients. ‘Waiting for patients to progress’ was the main reason for not testing in early stage disease (34%); the most commonly selected reason against testing at stage IV

• Physicians sometimes initiate treatment before patients receive EGFRm test results, particularly in the early stage setting; this is largely due to ‘risk of disease progression’

• With the introduction of targeted therapy in the early-stage disease setting, there is a need to adopt early EGFRm testing to support clinical decision making

Introduction

• EGFR mutations (EGFRm) are known oncogene drivers in NSCLC

• Guidelines recommend EGFRm testing as standard of care for patients with advanced NSCLC

• Third generation EGFRm Tyrosine Kinase Inhibitor (TKI), osimertinib, has recently been approved in early-stage disease as adjuvant therapy following results from the phase 3 ADJUVANT trial. Data from the trial demonstrated significantly longer disease-free survival (DFS) in stage IIB – IIA EGFR m patients receiving osimertinib vs placebo [Stage IIB-IIIA ADJUVANT placebo: Ratio: 0.20 (95% CI: 0.14, 0.30); p < 0.0001]

Methods

• An online physician survey was conducted in Belgium, Brazil, South Africa, Argentina, Netherlands, Singapore, Russia, Turkey and India between June and September 2021

• Physicians provided responses on perceptions of EGFRm testing patterns, interpretation of results, treatment decisions and attitudes towards testing in advanced NSCLC patients

• A central institution review board (WIRB-Copernicus Group) reviewed the study and provided approval prior to the study start

• Physician selection criteria included:
  o Primary specialty: Thoracic/respiratory/general surgeon, oncologist, pulmonologist/respiratory medicine, radiologist, oncologist, or internal medicine

Results

Physician Demographics

Primary setting, n (%)

Advanced-stage NSCLC patients seen in the past month

Primary setting, n (%)

Stage I (n=174)

Medication (n=10/19)

Hospital only

Office / clinic only

Hospital office / clinic

Physician selection criteria included:

• Primary specialty: Thoracic/respiratory/general surgeon, oncologist, pulmonologist/respiratory medicine, radiologist, oncologist, or internal medicine

Figure 5: Physician-reported reason(s) for initiating treatment before EGFR m test results

Posters presented at the European Lung Cancer Virtual Congress (ELCC), 30 March-2 April 2022

Table 2: Patient Demographics

<table>
<thead>
<tr>
<th>Primary setting, n (%):</th>
<th>Hospital only</th>
<th>Office / clinic only</th>
<th>Hospital office / clinic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital only, n (%)</td>
<td>174 (55%)</td>
<td>14 (4%)</td>
<td>149 (44%)</td>
</tr>
<tr>
<td>Stage I (n=174)</td>
<td>35 (20%)</td>
<td>10 (5%)</td>
<td>50 (29%)</td>
</tr>
<tr>
<td>Stage II (n=120)</td>
<td>33 (28%)</td>
<td>9 (8%)</td>
<td>88 (73%)</td>
</tr>
<tr>
<td>Stage IIla (n=34)</td>
<td>11 (32%)</td>
<td>1 (3%)</td>
<td>23 (68%)</td>
</tr>
<tr>
<td>Stage IV (n=30)</td>
<td>19 (63%)</td>
<td>0 (0%)</td>
<td>11 (37%)</td>
</tr>
</tbody>
</table>

Figure 5: Physician-reported reason(s) for initiating treatment before EGFR m test results

Table 2: Patient Demographics

<table>
<thead>
<tr>
<th>Primary setting, n (%):</th>
<th>Hospital only</th>
<th>Office / clinic only</th>
<th>Hospital office / clinic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital only, n (%)</td>
<td>174 (55%)</td>
<td>14 (4%)</td>
<td>149 (44%)</td>
</tr>
<tr>
<td>Stage I (n=174)</td>
<td>35 (20%)</td>
<td>10 (5%)</td>
<td>50 (29%)</td>
</tr>
<tr>
<td>Stage II (n=120)</td>
<td>33 (28%)</td>
<td>9 (8%)</td>
<td>88 (73%)</td>
</tr>
<tr>
<td>Stage IIla (n=34)</td>
<td>11 (32%)</td>
<td>1 (3%)</td>
<td>23 (68%)</td>
</tr>
<tr>
<td>Stage IV (n=30)</td>
<td>19 (63%)</td>
<td>0 (0%)</td>
<td>11 (37%)</td>
</tr>
</tbody>
</table>

Figure 5: Physician-reported reason(s) for initiating treatment before EGFR m test results

Table 1: Physician Demographics

<table>
<thead>
<tr>
<th>Physician specialty, n (%)</th>
<th>Oncologist</th>
<th>Pulmonologist / respiratory medicine</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oncologist</td>
<td>105 (30%)</td>
<td>27 (7%)</td>
<td>38 (10%)</td>
</tr>
<tr>
<td>Pulmonologist / respiratory medicine</td>
<td>20 (5%)</td>
<td>23 (6%)</td>
<td>48 (13%)</td>
</tr>
<tr>
<td>Other</td>
<td>10 (3%)</td>
<td>12 (3%)</td>
<td>75 (20%)</td>
</tr>
</tbody>
</table>

Disclosure

• No third party funding was received to support this study

References

Da Cunha Santos G, et al. Actigraphics, Madrid, Spain; Basavatarakam Indo American Cancer Hospital & Research Institute; Hyderabad, India; *Oncología* O Dr Río de Janeiro, Reus C/Reus, Reus, Tarragona, Spain; *Atenas* Real World, Buffalo, Cheshire, UK

Medical Oncology Department Tan Fei Fong Hospital, Singapore; *Uchina Hopsipic Academy, USA; *Saint Petersburg: scientific practice center of specialized kinds of medicine (oncological)*, *Saint Petersburg University, Saint Petersburg, Russia; *Department of Pulmonary Medicine, Erasmus MC*, Rotterdam, The Netherlands; *Department of Pulmonary Diseases*, AZ Akkrizelle, Brussels, Belgium; *Haematopatologic University Center, Archie, Turkey, *Özgür Medical Evidence Generation, Ankara, Turkey; *Novosibirsk Regional Clinical Oncology Dispensary, Moscow, Russia; *Kabulilinal Medical Institute*, Kabul, Afghanistan; *Basaanatkalan Indo America Cancer Hospital & Research Institute*, Hyderabad, India; *Oncostra O Dr Río de Janeiro, Reus C/Reus, Reus, Tarragona, Spain; *Atenas* Real World, Buffalo, Cheshire, UK

Jens Samol1,2, Fedor Moiseenko2, Martha S. Paats4, Ingelel Demedts4, Mustafa Erman4, Doreen A Kahangire4, Vadim Kozlov4, Michael Mark4, Jose Minnata4, Senthil Rajappan1, Mauro Zukin2, Mutsa Madondo2, Alik Taylor2, Tom Bailey2

1 Department of Lung Oncology, Singapore General Hospital, Singapore
2 Department of Medicine, University of Otago, Dunedin, New Zealand
3 Department of Medicine, University of British Columbia, Vancouver, Canada
4 Adelphi Real World, Bollington, Cheshire, UK

Poster presented at the European Lung Cancer Virtual Congress (ELCC), 30 March-2 April 2022

Corresponding author email address: jens_samol@hotmail.com

Poster presented at the European Lung Cancer Virtual Congress (ELCC), 30 March-2 April 2022.