ECONOMIC ANALYSIS OF OSIMERTINIB IN PREVIOUSLY UNTREATED EGFR-MUTANT ADVANCED NO-SMALL CELL LUNG CANCER

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PURPOSE

The aim of the study is to evaluate the cost–effectiveness of osimertinib in patients with mutated EGFR NSCLC compared to other tyrosinkinase inhibitors (TKIs).

MATERIAL AN METHODS

Cost–effectiveness study of osimertinib in patients with EGFR-mutated NSCLC in a third level hospital considering a period of one year of treatment (01/01/2019-12/01/2019).
The protocol of the hospital was reviewed to include all therapeutic alternatives: afatinib, gefitinib and erlotinib. The main variable of the study was the incremental cost–effectiveness ratio (ICER) of osimertinib compared to other TKIs. Secondary variables included: cost of treatment per month (euros), efficacy (life-months gained), total cost of treatment (euros) and incremental cost of osimertinib compared to other TKIs.

RESULTS

<table>
<thead>
<tr>
<th></th>
<th>OSIMERTINIB</th>
<th>ERLOTINIB</th>
<th>GEFTINIB</th>
<th>AFATINIB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dosage</td>
<td>80 mg/24h</td>
<td>150 mg/24h</td>
<td>250 mg/24h</td>
<td>40 mg/24h</td>
</tr>
<tr>
<td>Cost of treatment/month</td>
<td>4.313 €/month</td>
<td>2045 €/month</td>
<td>1.227 €/month</td>
<td>1964 €/month</td>
</tr>
<tr>
<td>Total cost of treatment</td>
<td>81.516 €*</td>
<td>22.904 €**</td>
<td>12.515 €*</td>
<td>20.033 €*</td>
</tr>
<tr>
<td>Incremental cost of osimertinib compared to other TKIs</td>
<td>Reference drug</td>
<td>Δ 58.612 €</td>
<td>Δ 69.001 €</td>
<td>Δ 61483 €</td>
</tr>
<tr>
<td>Effectiveness (progression-free survival)</td>
<td>18.9 months*</td>
<td>10.4 months**</td>
<td>10.2 months*</td>
<td>10.2 months*</td>
</tr>
</tbody>
</table>

* PFS FLAURA study; ** PFSEURTAC study
+ FLAURA study; ++ EURTAC study

CONCLUSIONS

- At the current commercialized price, first-line osimertinib therapy in patients with EGFR-mutant NSCLC would mean an incremental cost of € 7455 ± € 439 per month of progression-free survival gained compared to other TKIs. If we consider a year of treatment, the incremental cost of osimertinib would be an additional € 74547 ± 4388.
- The reduction of the cost of osimertinib would significantly improve its cost–effectiveness profile. The main limitation of this study was that the cost of the complete treatment was calculated using the drug’s PVL.

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