NICE National Institute for Health and Care Excellence

Putting NICE guidance into practice

Resource impact report:
Osimertinib for untreated EGFR mutation-positive non-small-cell lung cancer (Rapid review of TA621) (TA654)

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Summary

NICE has recommended osimertinib as an option for untreated locally advanced or metastatic epidermal growth factor receptor (EGFR) mutation-positive non-small-cell lung cancer (NSCLC) in adults.

We estimate that:

- 1,440 people with untreated EGFR mutation-positive NSCLC are eligible for treatment with osimertinib each year.
- People with untreated disease receive treatment for an average of 21 months.
- Uptake is estimated to reach 80% of the eligible population in 2023/24.
- Around 2,300 people will be treated with osimertinib from year 2024/25 onwards (includes people continuing treatment from a previous year) as shown in table 1.

Table 1 Estimated number of people in England having osimertinib

	2020/21	2021/22	2022/23	2023/24	2024/25
Proportion of people who have osimertinib	20%	40%	60%	80%	80%
Population having osimertinib each year	290	870	1,440	2,020	2,300

This report is supported by a local resource impact template because the list price of osimertinib has a discount that is commercial in confidence. The discounted price of osimertinib can be put into the template and other variables may be amended.

This technology is commissioned by NHS England. Providers are NHS hospital trusts.

1 Osimertinib

1.1 NICE has recommended osimertinib within its marketing authorisation, as an option for untreated locally advanced or metastatic epidermal growth factor receptor (EGFR) mutation-positive non-small-cell lung cancer (NSCLC) in adults.

1.2 Locally advanced or metastatic EGFR mutation-positive NSCLC is usually first treated with afatinib, erlotinib or gefitinib. Osimertinib is currently in the Cancer Drugs Fund as a second-line treatment and due to be reviewed. Osimertinib recommended as a first-line treatment in routine commissioning changes it's treatment pathway. This is because people would not be given the same treatment after their cancer has progressed.

1.3 Evidence from a randomised controlled trial suggests that people who take osimertinib live longer than people who take erlotinib or gefitinib. They also live longer before their disease gets worse. There is uncertainty on whether this applies to afatinib as there is no direct evidence comparing afatinib with the other options.

2 Resource impact of the guidance

2.1 We estimate that:

- 1,440 people with EGFR mutation-positive NSCLC are eligible for treatment with osimertinib each year.
- People receive treatment for an average of 21 months.
- Uptake is estimated to reach 80% of the eligible population in 2023/24.
- Around 2,300 people will be treated with osimertinib from year 2024/25 onwards (includes people continuing treatment from a previous year) as shown in table 2.

2.2 The current treatment and future uptake figure assumptions are based on expert clinical opinion and are shown in the resource impact template. Table 2 shows the number of people in England who are estimated to have osimertinib by financial year.

Table 2 Estimated number of people having osimertinib using NICE assumptions

	2020/21	2021/22	2022/23	2023/24	2024/25
Proportion of people who have osimertinib	20%	40%	60%	80%	80%
Population having osimertinib each year	290	870	1,440	2,020	2,300

2.3 This report is supported by a local resource impact template. The company has a commercial arrangement, including a patient access scheme, which makes osimertinib available to the NHS with a discount. The size of the discount is commercial in confidence. It is the company's responsibility to let relevant NHS organisations know details of the discount. For enquiries about the commercial arrangement please contact Market.AccessUK@astrazeneca.com

Savings and benefits

2.4 Clinical experts stated that osimertinib would be beneficial as an additional treatment option because it is better tolerated than existing treatments, with fewer side effects. Also, if osimertinib was a first-line treatment option it would remove the need for T790M mutation testing before second line treatment. This involves a biopsy, which is invasive and can be psychologically distressing.

3 Implications for commissioners and providers

3.1 This technology is commissioned by NHS England. Providers are NHS hospital trusts.

3.2 Osimertinib will be available through routine commissioning and there will be a resource impact for specialised commissioning. Osimertinib falls within the programme budgeting category 2D: Cancers and Tumours - Lung.

4 How we estimated the resource impact

The population

Around 38,900 people were diagnosed with lung cancer in 2017 (Office for National Statistics 2019). Table 3 shows the details of the population with EGFR mutation-positive non-small-cell lung cancer who are estimated to be eligible for first-line treatment with osimertinib.

Table 3 Number of people eligible for treatment in England

Population	Proportion of previous row (%)	Number of people
Adult population		44,022,560
Incidence of lung cancer [1]	0.09	38,900
People who have NSCLC[2]	88.5	34,400
People who have stage III or IV disease (advanced)[2]	61	21,000
Proportion of people tested for EGFR mutation[3]	87	18,300
Proportion who have EGFR mutation[4]	10	1,830
Proportion who receive treatment with an anti-cancer drug[4]	79	1,440
Total number of people eligible for treatment with osimertinib each year		**1,440**
Total number of people estimated to commence osimertinib each year from year 2023/24 once maximum uptake has been reached[5]	80	1,150
People continuing treatment with osimertinib from the previous year[6]		1,150
Total number of people having osimertinib from year 2024/25		2,300

[1] Office for National Statistics 2019

[2] Royal College of Physicians: National lung cancer Audit 2018 (for the audit period 2016) Available [online] from:

National Lung Cancer Audit Annual Report 2017

[3] National Lung Cancer Audit - Annual report 2014 (87% tested for EGFR mutation)

[4] Company submission

[5] Clinical expert estimate

[6] Average treatment duration per FLAURA study is 20.8 months

Assumptions

4.1 The resource impact template assumes that:

- Based on information clinical expert opinion, uptake of osimertinb is estimated to reach 80% by 2023/24.
- It is estimated 20% of people receive other recommended first-line treatments by 2023/24.

- The average time on treatment with Osimertinib when given as a first-line treatment is 21 months.
- The template excludes EGFR-status diagnostic costs. This was confirmed to be part of routine clinical practice for people who have NSCLC by clinical experts and the committee. EGFR test costs would therefore not vary after implementing the guidance.
- 60% of people are currently estimated to receive a further active treatment after a first-line targeted therapy, with 30% having osimertinib via the CDF and 30% having pemetrexed plus carboplatin.
- 40% of people who do not take up further active treatment have best supportive care
- People who have osimertinib as a first-line treatment and whose disease progresses would no longer have osimertinib as a subsequent treatment. Clinical experts estimate around a third of people who progress after a targeted EGFR treatment would not receive a further active therapy with the remaining people (67%) receiving pemetrexed plus carboplatin.
- Oral chemotherapy administration costs are applicable for osimertinib, afatinib, dacomitinib erlotinib and gefitinib. This is required monthly. The cost using 2020/21 National tariff (code SB11Z – Deliver exclusively oral chemotherapy) is £128 per visit.

Other factors

4.2 The treatment options included in the resource impact template reflect all the options recommended in line with the guidance indication. These differ from the comparators used in the guidance which reflects the options available at the time of this appraisal.

4.3 NICE guidance recommending osimertinib for routine commissioning in people whose disease has been previously

treated for EGFR NSCLC who have the T790M mutation (previously recommended for use in the CDF TA416) is due to be published at the same time as this guidance. The number of people with previously treated disease taking up osimertinib and the estimated resource impact is likely to be very low because people are anticipated to receive osimertinib or another targeted option as their first treatment. Therefore the resource impact of osimertinib in this setting is considered in a resource impact statement and has not been included in this assessment.

About this resource impact report

This resource impact report accompanies the NICE guidance on osimertinib and should be read with it.