NICE National Institute for Health and Care Excellence

Resource impact summary report

Resource impact
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This summary report is based on the NICE assumptions used in the resource impact template. Users can amend the 'Inputs and eligible population' and 'Unit costs' worksheets in the template to reflect local data and assumptions.

Recommendation

NICE has recommended osimertinib with pemetrexed and platinum-based chemotherapy, within its marketing authorisation, as an option for untreated advanced non-small-cell lung cancer (NSCLC) in adults whose tumours have epidermal growth factor receptor (EGFR) exon 19 deletions or exon 21 (L858R) substitution mutations. Osimertinib with pemetrexed and platinum-based chemotherapy is only recommended if the company provides it according to the commercial arrangement.

Eligible population for osimertinib with pemetrexed and platinum-based chemotherapy

Table 1 shows the population that is eligible for osimertinib with pemetrexed and platinum-based chemotherapy (osimertinib with chemotherapy) and the number of people who are expected to have osimertinib with chemotherapy in each of the next 5 years, including forecast population growth.

Table 1 Population expected to be eligible for and have osimertinib with chemotherapy in England

Eligible population and uptake	People eligible for osimertinib with chemotherapy	Uptake for osimertinib with chemotherapy (%)	People starting osimertinib with chemotherapy each year
Year 0	877	0%	0
Year 1	886	15%	133
Year 2	894	20%	179
Year 3	903	30%	271
Year 4	911	30%	273

Eligible population and uptake	People eligible for osimertinib with chemotherapy	Uptake for osimertinib with chemotherapy (%)	People starting osimertinib with chemotherapy each year
Year 5	920	30%	276

The following assumptions have been used to calculate the eligible population:

- 92% of people are tested for EGFR mutations
- 10% of tumours are EGFR mutation positive
- 90% of the above 10% with EGFR mutations have exon 19 deletions or L858R point mutations
- people who are Eastern Cooperative Oncology Group (ECOG) status 0 or 1 would in clinical practice have treatment. This is estimated to be 64% of people.

The uptake for osimertinib with chemotherapy is estimated by NICE using feedback at consultation from the company and the NICE appraisal committee. This highlighted that, although an additional treatment option was welcomed by clinicians and patients, there was an expectation that osimertinib monotherapy would remain standard of care. This is consistent with the patient organisation submission, in which people highlighted the benefits of having osimertinib orally without any disruption to their daily lives.

Treatment options for the eligible population

Osimertinib is an oral tablet (80 mg) taken once daily. Each pack contains 30 tablets. Pemetrexed and either cisplatin or carboplatin are delivered via IV infusions on day 1 of a 21-day cycle. Pemetrexed is infused over 10 minutes, carboplatin infusion takes between 1 and 2 hours, cisplatin infusion takes 2 hours with a wait of 30 minutes after pemetrexed infusion. The guidance committee preferred to assume that 100% of people would have carboplatin (section 3.13 of guidance). The resource impact template allows users to enter their local practice. An increased number of hospital attendances are needed for chemotherapy-associated side effects of the combination treatment.

The comparator treatment for the eligible population is osimertinib monotherapy. This is taken orally at home.

Results from clinical trials indicated that osimertinib with chemotherapy is more effective at preventing or delaying progression or death than osimertinib alone, but the additional adverse effects and burden from adding chemotherapy to osimertinib monotherapy should

be considered.

For more information about the treatments, such as dose and average treatment duration, see the resource impact template.

The company has a commercial arrangement. This makes osimertinib available to the NHS with a discount.

Users can input the confidential price of osimertinib and amend other variables in the resource impact template.

The payment mechanism for osimertinib is determined by the responsible commissioner and depends on osimertinib being classified as high cost.

- We expect the resource impact of implementing the recommendations in England to be less than £5 million per year (or approximately £8,800 per 100,000 population, based on a population for England of 57.16 million people).
- This is because osimertinib is already in use as monotherapy for this indication, so the overall incremental cost of treatment is low.

For further analysis or to calculate the financial impact of cash items, see the resource impact template.

Capacity impact

Table 2 shows the impact on capacity activity in each of the next 5 years.

Table 2 Capacity impact (activity) in England

Capacity impact	Current practice (without osimertinib with chemotherapy)	Year 1	Year 2	Year 3	Year 4	Year 5
Number of IV cycles	0	2,300	3,900	5,800	6,500	6,500
Number of hours to administer cycles	0	3,000	4,600	6,800	7,300	7,300
Pharmacy support (hours)	0	1,200	2,100	3,100	3,400	3,500

Capacity impact	Current practice (without osimertinib with chemotherapy)	Year 1	Year 2	Year 3	Year 4	Year 5
Adverse events, (various cases) – change (grade 3 and above)		100	140	210	210	210

For further analysis or to calculate the financial capacity impact from a commissioner (national) and provider (local) perspective, see the resource impact template.

Key information

Table 3 Key information

Time from publication to routine commissioning funding	90 days
Programme budgeting category	2D Cancers and Tumours – Lung
Commissioner(s)	NHS England
Provider(s)	NHS hospital trusts
Pathway position	Untreated for EGFR positive advanced NSCLC

About this resource impact summary report

This resource impact summary report accompanies the NICE guidance on osimertinib with pemetrexed and platinum-based chemotherapy for treating EGFR mutation-positive advanced NSCLC and should be read with it. See terms and conditions on the NICE website.

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