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 pembrolizumab within its marketing authorisation, as an option for the adjuvant treatment of non-small-cell lung cancer (NSCLC) with a high risk of recurrence after complete resection and platinum-based chemotherapy in adults.

Eligible population for pembrolizumab

Table 1 shows the population who are eligible for pembrolizumab and the number of people who are expected to have pembrolizumab in each of the next 5 years, including population growth.

Table 1 Population expected to be eligible for and have pembrolizumab in England

Eligible population and uptake	2025 to 2026	2025 to 2026	2026 to 2027	2027 to 2028	2028 to 2029
People eligible for pembrolizumab	352	355	358	362	365
Uptake for pembrolizumab (%)	31	32	33	34	35
People having pembrolizumab each year	109	114	108	123	128

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

- 90% of people who have surgical excision do not have EGFR mutation. People who have this mutation would have a more targeted treatment
- people with stage IA tumours that are easily operable with performance score (PS) 0 to 2 would have surgery and are therefore excluded (55%)

- all people with stage II, IIIA or IIIB cancer have complete resection to achieve best survival benefit (45%)
- the proportion of the above population who have not had neoadjuvant treatment is 25% (100% less 75% per NICE appraisal guidance TA1017).

The uptake for pembrolizumab is based on:

- an assumption that around a third of people will be eligible for and have atezolizumab in the Cancer Drugs Fund, these are people have a PD-L1>50% (confirmed by oncology expert opinion)
- the remaining people who are not having pembrolizumab or atezolizumab have active monitoring (around a third). Active monitoring includes scans, blood tests and observations
- year 1 assumes a full year uptake in 2025 and 2026.

Treatment options for the eligible population

The evaluation committee agreed that active monitoring was the relevant comparator for pembrolizumab in both the company's proposed population and the full licensed population.

Pembrolizumab is delivered by intravenous infusions lasting 30 minutes. An oncology attendance is required to initiate treatment and there may be additional follow-up attendances required.

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

Financial resource impact (cash items)

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

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

There will be a disinvestment opportunity in subsequent treatments, which will mean cash savings to the system. This is because of the improved disease-free survival, which translates to an increased proportion of patients that may be cured. Savings associated with a reduction in people requiring treatment for advanced disease are anticipated. There are numerous treatment options for people with advanced NSCLC, this makes the resource benefits challenging to estimate.

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

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	2025 to 2026	2026 to 2027	2027 to 2028	2028 to 2029	2029 to 2030
Change in number of treatment cycles	950	990	1,030	1,070	1,110
Change in oncology attendances	110	115	120	120	130
Change in pharmacy support time (hours)	240	250	260	270	280

There is likely to be a capacity benefit, which may offset the impacts above from reduced use of subsequent treatments which require attendance for intravenous infusions or radiotherapy. This is challenging to estimate because of the number of options available and variations in treatment length.

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 & Tumours - Lung
Commissioner	NHS England
Providers	NHS hospital trusts
Pathway position	Post surgery and after platinum-based chemotherapy

About this resource impact summary report

This resource impact summary report accompanies the NICE technology appraisal guidance on pembrolizumab for adjuvant treatment of resected non-small-cell lung cancer and should be read with it. See terms and conditions on the NICE website.

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