



# Resource impact summary report

Resource impact

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# Resource impact summary report

This summary report is based on the NICE assumptions used in the [resource impact template](#). Users can amend the 'Population and treatments' and 'Unit costs' worksheets in the template to reflect local data and assumptions.

## Guidance recommendation

See [NICE's recommendation on pembrolizumab for neoadjuvant and adjuvant treatment of resectable locally advanced head and neck squamous cell carcinoma](#).

## Financial and capacity resource impact

The key drivers of resource impact are that:

- The recommendation introduces a neoadjuvant treatment option for resectable locally advanced head and neck squamous cell carcinoma in adults whose tumours express PD-L1 with a combined positive score of 1 or more and so changes the treatment pathway, with the introduction of immunotherapy treatment prior to surgery.
- The recommendation introduces an option to use pembrolizumab in the adjuvant setting alongside radiotherapy with or without cisplatin and then as a monotherapy. Radiotherapy with or without cisplatin is the current established adjuvant treatment option, so the addition of pembrolizumab will increase adjuvant drug and administration costs. Clinical teams have significant experience in the delivery of pembrolizumab and management of people having treatment with immunotherapy.
- There will be an increased need for PD-L1 testing and it will need to be done earlier in the treatment pathway because this is needed before treatment with pembrolizumab. Because [NICE technology appraisal guidance 661](#) already recommends pembrolizumab for untreated metastatic or unresectable recurrent head and neck squamous cell carcinoma, there is already some PD-L1 testing being done, which may offset the numbers being tested because of this recommendation.

The company has a [commercial arrangement](#). This makes pembrolizumab available to the NHS at a discount.

Users can input the confidential price of pembrolizumab and amend other variables in the [resource impact template](#).

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

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

## 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 3 years, excluding forecast population growth.

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

Eligible population and uptake	Number of people eligible for pembrolizumab	Uptake for pembrolizumab in neoadjuvant setting (%)	Number of people starting treatment each year in neoadjuvant setting	Uptake for pembrolizumab in adjuvant setting (%)	Number of people having adjuvant pembrolizumab each year
Current practice without pembrolizumab	0	0	0	0	0
Year 1	1,582	40	633	75	475
Year 2	1,582	80	1,266	75	949
Year 3	1,582	80	1,266	75	949

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

- 1,938 resections took place for stage III or IV head and neck cancer in 2022 as per [NHS cancer registration statistics](#).
- 90% of head and neck cancers are squamous cell as reported by [Macmillan](#).
- 95.5% of these have a PD-L1 combined positive score of 1 or more as per the mid-point in the [Keynote-689 trial](#).

- 95% are eligible to receive adjuvant treatment as per an estimate provided by clinical experts.

The market share for pembrolizumab is based on estimates provided by the company and NHS England.

For more information about the treatments, such as dose and average treatment duration, see the [resource impact template](#) .

## Key information

Table 2 Key information

Time from publication to routine commissioning funding	90 days
Programme budgeting category	02A, Cancer, Head and Neck
Commissioner	NHS England
Providers	NHS hospital trusts
Pathway position	Pre-operative (neoadjuvant) head and neck squamous cell carcinoma and adjuvant (post operative) with radiotherapy for resectable, locally advanced, head and neck squamous cell carcinoma in adults whose tumours express PD-L1 with a combined positive score of 1 or more.

## About this resource impact summary report

This resource impact summary report accompanies the [NICE technology appraisal guidance on pembrolizumab for neoadjuvant and adjuvant treatment of resectable locally advanced head and neck squamous cell carcinoma](#) and should be read with it.

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