

# Pembrolizumab for untreated PD-L1-positive metastatic non-small-cell lung cancer

Technology appraisal guidance

Published: 18 July 2018

[www.nice.org.uk/guidance/ta531](https://www.nice.org.uk/guidance/ta531)

## Your responsibility

The recommendations in this guidance represent the view of NICE, arrived at after careful consideration of the evidence available. When exercising their judgement, health professionals are expected to take this guidance fully into account, alongside the individual needs, preferences and values of their patients. The application of the recommendations in this guidance is at the discretion of health professionals and their individual patients and do not override the responsibility of healthcare professionals to make decisions appropriate to the circumstances of the individual patient, in consultation with the patient and/or their carer or guardian.

All problems (adverse events) related to a medicine or medical device used for treatment or in a procedure should be reported to the Medicines and Healthcare products Regulatory Agency using the [Yellow Card Scheme](#).

Commissioners and/or providers have a responsibility to provide the funding required to enable the guidance to be applied when individual health professionals and their patients wish to use it, in accordance with the NHS Constitution. They should do so in light of their duties to have due regard to the need to eliminate unlawful discrimination, to advance equality of opportunity and to reduce health inequalities.

Commissioners and providers have a responsibility to promote an environmentally sustainable health and care system and should [assess and reduce the environmental impact of implementing NICE recommendations](#) wherever possible.

# Contents

1 Recommendation .....	4
2 Information about pembrolizumab .....	5
Marketing authorisation indication .....	5
Dosage in the marketing authorisation .....	5
Price.....	5
3 Committee discussion .....	6
Clinical management.....	6
Clinical effectiveness .....	8
Cost effectiveness .....	10
Innovation.....	16
End of life .....	17
Conclusion .....	17
4 Implementation.....	19
5 Appraisal committee members and NICE project team .....	20
Appraisal committee members .....	20
NICE project team .....	20

This guidance replaces TA447.

# 1 Recommendation

1.1 Pembrolizumab is recommended as an option for untreated PD-L1-positive metastatic non-small-cell lung cancer (NSCLC) in adults whose tumours express PD-L1 (with at least a 50% tumour proportion score) and have no epidermal growth factor receptor- or anaplastic lymphoma kinase-positive mutations, only if:

- pembrolizumab is stopped at 2 years of uninterrupted treatment or earlier in the event of disease progression and
- the company provides pembrolizumab according to the [commercial access agreement](#).

## Why the committee made this recommendation

People with untreated metastatic PD-L1-positive NSCLC are usually offered platinum-based chemotherapy (docetaxel, gemcitabine, paclitaxel, vinorelbine or pemetrexed, with a platinum-based drug).

Clinical trial evidence shows that pembrolizumab increases the length of time people live by nearly 16 months compared with chemotherapy. Although there is uncertainty about the long-term treatment benefit of pembrolizumab after treatment is stopped, there was sufficient evidence of an important extension-to-life benefit in people with untreated stage 4 metastatic PD-L1-positive NSCLC compared with standard care.

The most plausible cost-effectiveness estimate for pembrolizumab compared with chemotherapy is within the range NICE normally considers acceptable for an end-of-life treatment. Therefore it can be recommended as an option for untreated metastatic PD-L1-positive (with at least a 50% tumour proportion score) NSCLC if treatment is stopped after 2 years.

## 2 Information about pembrolizumab

### Marketing authorisation indication

- 2.1 Pembrolizumab (Keytruda, Merck Sharp & Dohme) has a marketing authorisation for the first-line treatment of metastatic non-small cell lung carcinoma in adults whose tumours express PD L1 with at least a 50% tumour proportion score with no epidermal growth factor receptor or anaplastic lymphoma kinase-positive tumour mutations.

### Dosage in the marketing authorisation

- 2.2 The dosage schedule is available in the [summary of product characteristics](#).

### Price

- 2.3 The cost of pembrolizumab is £1,315.00 per 50-mg vial (excluding VAT; BNF online accessed March 2017). The average cost of a course of treatment is £84,002 based on the list price.
- 2.4 The company has a [commercial arrangement](#). This makes pembrolizumab 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 the details of the discount.

## 3 Committee discussion

The [appraisal committee](#) considered evidence submitted by Merck Sharp & Dohme and a review of this submission by the evidence review group (ERG). See the [committee papers](#) for full details of the evidence.

### Clinical management

#### **Pembrolizumab is an important option for untreated metastatic PD-L1-positive non-small-cell lung cancer**

- 3.1 The clinical experts explained that people with untreated metastatic non-small-cell lung cancer (NSCLC) whose tumours express PD-L1 with at least a 50% tumour proportion score and who have no epidermal growth factor receptor (EGFR)- or anaplastic lymphoma kinase (ALK)-positive tumour mutations have limited treatment options. The committee understood that patients can be on treatment for a long time and this can cause unpleasant side effects. Symptoms such as breathlessness and cough are difficult to treat. The clinical experts explained that new treatments, which offer survival benefits with fewer side effects than standard care, are needed for this population. The patient experts explained that symptoms can be debilitating, so improving quality of life and even small extensions in length of life are of considerable importance to this patient group. The committee understood that pembrolizumab is generally well tolerated. It concluded that pembrolizumab is an important treatment option for people with untreated metastatic PD-L1-positive NSCLC.

#### **PD-L1 testing could be implemented as standard practice in the NHS**

- 3.2 The committee noted that the marketing authorisation for pembrolizumab only covers people with untreated metastatic NSCLC if their tumour expresses PD-L1 with at least a 50% tumour proportion score. The NHS England clinical lead stated that all lung cancer centres should be able to offer testing for PD-L1

status. The clinical expert explained that testing involves an immunohistochemical assay and facilities for this are widely available in histopathology laboratories. However, they noted that PD-L1 tests are complex to interpret and the standard time needed for assessment is 20 minutes. The committee concluded that PD-L1 testing could be standardised quickly and, with training, implemented as standard clinical practice in the NHS.

## **Pembrolizumab is an alternative to chemotherapy**

- 3.3 The committee understood from the clinical experts that management of untreated metastatic PD-L1-positive NSCLC in clinical practice is platinum-based combination chemotherapy (that is, cisplatin or carboplatin and either pemetrexed or gemcitabine). Docetaxel, gemcitabine, paclitaxel or vinorelbine alone (single-agent chemotherapy) is recommended for people who cannot tolerate combination therapy (see [NICE's guideline on lung cancer: diagnosis and management](#)). [NICE's technology appraisal guidance on pemetrexed for the first-line treatment of NSCLC](#) recommends pemetrexed with cisplatin for adenocarcinoma or large-cell carcinoma. Pemetrexed is also recommended as a maintenance treatment for locally advanced or metastatic non-squamous NSCLC in adults whose disease has not progressed after pemetrexed and cisplatin therapy (see [NICE's technology appraisal guidance on pemetrexed maintenance treatment for non-squamous NSCLC after pemetrexed and cisplatin](#)), and after platinum-based chemotherapy plus gemcitabine, paclitaxel or docetaxel (see [NICE's technology appraisal guidance on pemetrexed for the maintenance treatment of NSCLC](#)). The committee understood that pembrolizumab would be considered as an alternative to platinum-based combination therapy. The committee concluded that pembrolizumab was appropriately positioned in the clinical pathway as an option for people with untreated metastatic PD-L1-positive NSCLC, that is, as an alternative to platinum-based combination chemotherapy.

## Clinical effectiveness

### The KEYNOTE-024 trial is generalisable to clinical practice in England

- 3.4 The clinical effectiveness evidence for pembrolizumab came from KEYNOTE-024. This was an open-label phase 3 randomised controlled trial, comparing pembrolizumab with standard care. Standard care therapies included platinum-based combinations with either gemcitabine or paclitaxel, and a platinum-based combination with pemetrexed (with or without pemetrexed maintenance for non-squamous disease). The ERG explained that no evidence was available for single-agent chemotherapy and the clinical experts noted that it is mainly used as an option for previously treated disease. The clinical experts explained that although fewer patients in KEYNOTE-024 had a pemetrexed-containing regimen than expected, they considered that the standard care treatments were likely to be the same as those used in clinical practice in England. The committee was aware that the inclusion criteria in KEYNOTE-024 were that patients had untreated stage 4 metastatic PD-L1-positive NSCLC (with tumours expressing at least 50% PD-L1 and no EGFR- or ALK-positive mutations) with an Eastern Cooperative Oncology Group (ECOG) performance status of 0 or 1. The NHS England clinical lead said that there were more people with an ECOG performance status of 0 in KEYNOTE-024 than those who had pembrolizumab through the Cancer Drugs Fund. The clinical experts explained that although the proportion of patients with squamous disease was smaller than expected, and patients with stage 3 disease were not included, the overall population in KEYNOTE-024 was comparable to the population seen in clinical practice in England. The committee therefore concluded that KEYNOTE-024 was generalisable to clinical practice in England.

### Pembrolizumab offers 15 months more overall survival benefit than standard care

- 3.5 The committee was aware of the results from the final analysis of overall survival in KEYNOTE-024. The median duration of follow-up was 25.2 months; 14.9% of people remained on pembrolizumab compared with 1.3% on standard care. The committee noted that the intention-to-treat results (hazard ratio [HR] 0.63; 95%



confidence interval [CI] 0.47 to 0.86) suggested a statistically significant survival benefit for pembrolizumab compared with standard care. Median overall survival was 30.0 months for people on pembrolizumab and 14.2 months for those on standard care. The committee was aware that the trial protocol allowed people to switch from the standard care arm to have immunotherapy treatment on disease progression. The trial's data and safety monitoring committee also recommended that KEYNOTE-024 should be stopped at the second interim analysis to give patients in the standard care arm the opportunity to have pembrolizumab. The company considered that no adjustment to the results was needed to account for people switching from standard care to pembrolizumab because in NHS clinical practice, immunotherapy is now becoming standard treatment for disease that has progressed after chemotherapy. The committee agreed that no adjustment was needed to account for treatment switching in the trial. It concluded that, based on the trial data, there was sufficient evidence that pembrolizumab has an important extension-to-life benefit in people with untreated stage 4 metastatic PD-L1-positive NSCLC compared with standard care.

## **A 2-year treatment duration with pembrolizumab is clinically plausible**

- 3.6 The committee was aware that the maximum possible treatment duration with pembrolizumab in KEYNOTE-024 was 2 years (35 cycles). It noted that, despite this, the summary of product characteristics states that treatment should continue until disease progression or unacceptable toxicity. The ERG noted that no patients in the pembrolizumab arm had completed 2 years' therapy. The clinical experts explained that the best treatment duration with pembrolizumab was unknown. The clinical and patient experts stated that although pembrolizumab has low toxicity, long courses of intravenous infusions can be a burden to patients. They further agreed that stopping treatment at 2 years independent of disease status would be acceptable to patients. The committee noted comments from the NHS England clinical lead that benefits to patients may occur when the immune system responds sufficiently to the treatment against the cancer, and patients may not need continued treatment until disease progression. The NHS England clinical lead also stated that, if NHS trusts continue treatment beyond 2 years for individual patients, NHS England will not reimburse them for this non-commissioned use of the drug if NICE

recommendations state that treatment should be stopped at 2 years. The committee concluded that limiting pembrolizumab treatment to 2 years was clinically plausible, but the best treatment duration was unknown.

## Cost effectiveness

### **The company's economic model is appropriate for decision-making**

- 3.7 The committee discussed the company's cost-effectiveness evidence and the ERG's review. It noted that the company's model included the agreed commercial access agreement discount for pembrolizumab and an estimated discount for pemetrexed. The committee accepted the structure of the company's economic model and considered it appropriate for decision-making.

### **Including a 2-year stopping rule in line with the clinical trial is appropriate**

- 3.8 The committee discussed the assumption in the company's model that at 2 years, all patients, including patients whose disease had not progressed, would stop treatment. It understood that this assumption was based on the KEYNOTE-024 protocol. The committee recalled its conclusion that limiting pembrolizumab treatment to 2 years is clinically plausible, and that patient and clinical experts agreed that stopping treatment at 2 years independent of disease status would be acceptable to patients (see [section 3.6](#)). The committee concluded that implementing a 2-year stopping rule in the model was appropriate.

### **The different time points for extrapolating overall survival are equally plausible**

- 3.9 The committee noted that in the company's sensitivity analyses, the most influential parameter in the cost-effectiveness analysis was the extrapolation of

overall survival in the pembrolizumab and standard care arms. To estimate overall survival, the company's base-case analysis used 33-week Kaplan–Meier data from KEYNOTE-024. After 33 weeks, the company fitted separate exponential models to the data. The company's base-case incremental cost-effectiveness ratio (ICER) using this approach was £30,244 per quality-adjusted life year (QALY) gained. In scenario analyses the company explored alternative time points to extrapolate the trial data; 23 and 43 weeks of Kaplan–Meier data. Both these analyses increased the company's base-case ICER; to £31,321 per QALY gained for the 23-week time point and £33,829 per QALY gained for the 43-week time point. The committee noted the ERG's scenario analyses, which suggested that the 43-week point was a better visual fit for the data. The committee agreed that the time at which the distribution is applied to the Kaplan–Meier data is arbitrary and each time point used can be considered equally plausible. It also noted that the choice of time point had a limited effect on the ICER. The committee agreed that the ERG's suggestion of 43 weeks for extrapolating the Kaplan–Meier data from KEYNOTE-024 was plausible. However, because of the high level of uncertainty around the extrapolation of overall survival data, the other time points were equally plausible.

## **The company's choice of distribution to extrapolate overall survival is plausible but associated with uncertainty**

- 3.10 The ERG highlighted that although the final overall survival analysis from the company includes an additional 6 months of data, this only accounts for 10% of the 20-year time horizon. The committee noted that the company's choice of exponential extrapolation to model overall survival for people having pembrolizumab or standard care was pessimistic compared with all but one of the other distributions. The ERG highlighted that the ICER for pembrolizumab compared with standard care varied substantially when alternative distributions were used (for example, a generalised gamma distribution decreased the ICER; a Weibull distribution increased the ICER). However, it acknowledged that confidence in any distribution decreases as time from the last available data point increases. The ERG stated that the uncertainty around the overall survival extrapolation even at 2 years is the main source of uncertainty in the cost-effectiveness analyses, but the company's approach was plausible. The committee concluded that there was a high level of uncertainty around the

extrapolation of the overall survival data, but agreed that the company's choice of extrapolation was plausible.

## **A long-term treatment effect of pembrolizumab after stopping treatment is plausible but its duration is uncertain**

- 3.11 The committee noted that the duration of treatment effect is an area of uncertainty for new immunotherapies. The company stated that there is no evidence that the treatment effect stops, as shown by the tail of the pembrolizumab Kaplan–Meier overall survival curve based on the latest KEYNOTE-024 data (July 2017). The committee noted the company's scenario analyses, which explored stopping the treatment effect by setting the overall survival hazard ratio at 1 at different time points in the model. This increased the company's base-case ICER from £30,244 per QALY gained to £44,483 and £36,156 per QALY gained for the 3- and 5-year scenarios. The committee agreed that although it was biologically plausible for the treatment effect to continue after stopping pembrolizumab, its duration was uncertain. The committee concluded that the company's scenarios were plausible and would be taken into account in its decision-making.

## **A 5-year survival rate of 8–11% for standard care is reasonable for decision-making**

- 3.12 In NICE's technology appraisal guidance on pembrolizumab for untreated PD-L1-positive metastatic non-small-cell lung cancer (TA447), the committee agreed that the estimated 5-year survival in the standard care arm was 2.4%, 2.7% and 4.5% when the data were extrapolated from the 22-week, 14-week and 30-week time points respectively. The committee noted that the 5-year survival estimate extrapolated from 30 weeks was close to a 5% estimate by the National Lung Cancer Audit (NLCA). The ERG highlighted that the NLCA dataset was a reliable source of evidence but not all patients had chemotherapy (which has been shown to extend life), so 5.0% is likely to be an underestimate of the survival rate. The committee recalled that since TA447 was published, immunotherapy is now being used as an option after chemotherapy. It noted the company's revised base case, which takes into account people having immunotherapy after progression

following chemotherapy and that this would likely increase the 5-year overall survival rate from the 5% that the committee previously agreed was plausible. The committee noted that the company's revised estimate for 5-year overall survival for people in the standard care arm was between 8% and 11% depending on the time point used for extrapolating the Kaplan–Meier data (23, 33 or 43 weeks). The committee acknowledged that there was uncertainty in accurately estimating 5-year overall survival, but it considered that the company's estimates of overall survival for the standard care arm at these time points were all plausible. The committee concluded that the analyses using a survival rate of 8–11% at 5 years for the standard care arm were reasonable for its decision-making.

## **The utility values in KEYNOTE-024 appear implausible, but many patients had a good performance status**

- 3.13 The committee discussed the utility data used in the company model. It noted that EQ-5D data were collected in KEYNOTE-024; these data are the preferred measure of health-related quality of life in adults. The utility values for pembrolizumab and standard care were pooled (adjusted for age) and divided into 4 groups based on time to death (from less than 30 days to at least 360 days). The committee noted that in the company's sensitivity analyses, the utility values for long-term survivors were the second most influential parameter in the cost-effectiveness analysis. The committee understood that given the number of patients in KEYNOTE-024 (n=305), dividing the utility data into 4 groups based on time to death may have increased the uncertainty around the utility values for each state. The ERG highlighted that the utilities derived from KEYNOTE-024 were also implausibly high; the values at 360 days before death were higher than the UK population norm for people of the same age. The committee was aware that 87% of patients in the standard care arm and 97% of patients in the pembrolizumab arm of KEYNOTE-024 were current or former smokers, which is higher than in the general population. It also recognised that the utility values from KEYNOTE-024 used the tariff derived from a representative sample of the UK population and values from patients with the condition. The ERG noted that although the utility values for some people with metastatic lung cancer could be higher than the population norm, NICE's reference case methods specify the use of a general population utility tariff applied to patient quality-of-

life data. The committee also considered that the utility values did not support the evidence in the company's submission, which described patients with NSCLC as having the highest prevalence of psychological distress (3 times more than in other cancers), leading to a poorer prognosis and greater patient burden. However, the NHS England clinical lead noted that around a third of patients in KEYNOTE-024 had an ECOG performance status of 0 and led relatively normal lives. The committee agreed with the ERG that the utility values from KEYNOTE-024 appeared implausible and did not seem in line with the physical symptoms described by the patient experts, but it was aware that a substantial number of people in KEYNOTE-024 had a good ECOG performance status.

## **The ERG's approach of capping the utility value to the UK population norm is preferred**

- 3.14 The committee considered the analysis in which the utility values for at least 360 days to death were set to the UK population norm. Using these utilities had a limited effect on the company's base-case ICER of £30,244 per QALY gained. The ERG explored using much lower utility values from [NICE's technology appraisal guidance on pemetrexed for the first-line treatment of NSCLC](#), which would increase this ICER (by reducing the change in QALYs by 0.16). But it highlighted that this scenario did not use time to death utilities, and was therefore only an exploratory analysis. The committee agreed that simply adjusting utility to the population norm is a conservative assumption given the physical symptoms and psychological distress reported by patients with NSCLC. Accounting for the uncertainty in the utility values, the committee acknowledged that the ICER could fall between that from the analysis setting the utility for 360 days to death to that of the UK population norm, and the analysis using utilities from the pemetrexed guidance. However, it concluded that there were limitations associated with the utility values from the pemetrexed guidance and preferred to use values from KEYNOTE-024 combined with the ERG's approach of setting the utility value for 360 days to death to the UK population norm.



## **The dosage of pembrolizumab used in the economic model should be in line with the marketing authorisation**

- 3.15 The marketing authorisation for pembrolizumab states that it should be given as a fixed dose of 200 mg every 3 weeks by intravenous infusion for untreated PD-L1-positive metastatic NSCLC. For people who have previously had chemotherapy, the dose should be 2 mg/kg every 3 weeks. The ERG highlighted that in the economic model, the company assumed the fixed 200 mg dose of pembrolizumab for people in the standard care group (who go on to have pembrolizumab after disease progression), which is not in line with the marketing authorisation or how it is given in NHS clinical practice. The NHS England clinical lead confirmed that in practice, pembrolizumab would be administered in line with its marketing authorisation. The ERG did an exploratory analysis that corrected the pembrolizumab dosage in the model in line with the marketing authorisation. This increased the ICER by about £5,000 per QALY gained. The committee concluded that the dosage of pembrolizumab in the model should reflect the marketing authorisation.

## **The most plausible ICER for decision-making lies between the company's ICER and the ERG's ICER**

- 3.16 The committee discussed the ICERs for pembrolizumab compared with standard care. It was aware that the company's base-case ICER was £30,244 per QALY gained (including a 2-year stopping rule). The committee agreed that, although the choice of overall survival extrapolation could have a large effect on the cost-effectiveness estimates, the data were still immature and the estimate of overall survival was associated with uncertainty. The committee acknowledged that the ICER changed very little depending on which time point was used to extrapolate overall survival (£31,321 per QALY gained when survival data were extrapolated from 23 weeks and £33,829 per QALY gained when extrapolated from 43 weeks; see [section 3.9](#)). It agreed that extrapolations at these time points gave a plausible estimate of overall survival (8 to 11%) at 5 years for standard care given that immunotherapy is now used after chemotherapy (see [section 3.12](#)). The company also explored alternative assumptions about the period of treatment benefit associated with pembrolizumab treatment; these scenarios gave ICERs ranging from £30,244 to £44,483 per QALY gained (see [section 3.11](#)). The

committee agreed with the ERG's suggested amendments, which included:

- setting the utility value for at least 360 days to death at the UK population norm (see [section 3.13](#)) and
- bringing the cost associated with pembrolizumab after chemotherapy in line with the marketing authorisation (see [section 3.15](#)).

Setting the utility value to the UK population norm had a minimal impact on the company's ICER, whereas amending the cost of using pembrolizumab after chemotherapy in line with the marketing authorisation increased the ICER. The decision-making ICERs cannot be presented because they include the commercial access agreement reduction for pemetrexed. The committee noted that the most plausible cost-effectiveness estimates were associated with uncertainty, particularly for overall survival and the duration of treatment effect. However, it agreed that the ICERs, ranging from £30,000 per QALY gained to less than £50,000 per QALY gained, on which it was basing its decision were associated with uncertainty, particularly for overall survival and the duration of treatment effect. The committee concluded that all the scenarios presented were plausible. Therefore, the most plausible cost-effectiveness estimate was likely to be between the ranges presented by the company and the ERG.

## Innovation

### **There were no additional benefits not already captured in the economic analysis**

- 3.17 The committee considered the innovative nature of pembrolizumab. The patient and clinical experts explained that in the past 20 years, there have been few improvements for untreated metastatic NSCLC in people whose tumours have no EGFR- or ALK-positive mutations, and that there is an important unmet need for people with this condition. The clinical experts also said that pembrolizumab is innovative in its potential to have a significant and substantial effect on health-related benefits. The committee understood that improvements in survival and reduced adverse effects are important for people with this condition. It



concluded that pembrolizumab could be considered an important treatment option for this population, but there were no additional benefits associated with this treatment that had not been captured in the economic analysis.

## End of life

### Pembrolizumab meets NICE's end-of-life criteria

- 3.18 The committee considered the advice about life-extending treatments for people with a short life expectancy in [NICE's Cancer Drugs Fund technology appraisal process and methods](#). The committee discussed whether life expectancy without pembrolizumab would be less than 24 months. It noted the company's evidence, which showed that people with NSCLC have an average life expectancy of less than 24 months. The committee discussed whether a survival benefit of over 3 months can be expected for pembrolizumab compared with standard care. The committee heard that the average number of months of life gained with pembrolizumab, as estimated by the company's economic model, is 36.0 months compared with 22.3 months for standard care. Therefore the committee felt confident that pembrolizumab is likely to offer, on average, considerably more than 3 months' extension to life compared with standard care. The committee concluded that pembrolizumab met the life expectancy and life extension criteria to be considered a life-extending, end-of-life treatment.

## Conclusion

### Pembrolizumab is recommended for routine use in the NHS

- 3.19 The committee agreed that the most plausible ICER for pembrolizumab compared with standard care was likely to be within the range normally considered to be a cost-effective use of NHS resources. Therefore, it concluded that pembrolizumab could be recommended for routine use as an option for people with untreated PD-L1-positive metastatic NSCLC (with at least a 50% tumour proportion score) and no EGFR- or ALK-positive tumour mutations, only if pembrolizumab is

stopped at 2 years of uninterrupted treatment, or earlier in the event of disease progression, and if the company provides pembrolizumab according to the commercial access agreement.

## 4 Implementation

- 4.1 Section 7 of the National Institute for Health and Care Excellence (Constitution and Functions) and the Health and Social Care Information Centre (Functions) Regulations 2013 requires integrated care boards, NHS England and, with respect to their public health functions, local authorities to comply with the recommendations in this evaluation within 3 months of its date of publication. Because pembrolizumab has been available through the early access to medicines scheme, NHS England and integrated care boards have agreed to provide funding to implement this guidance 30 days after publication.
- 4.2 The Welsh ministers have issued directions to the NHS in Wales on implementing NICE technology appraisal guidance. When a NICE technology appraisal guidance recommends the use of a drug or treatment, or other technology, the NHS in Wales must usually provide funding and resources for it within 2 months of the first publication of the final draft guidance.
- 4.3 When NICE recommends a treatment 'as an option', the NHS must make sure it is available within the period set out in the paragraphs above. This means that, if a patient has untreated PD-L1-positive metastatic non-small-cell lung cancer (with at least a 50% tumour proportion score) and no epidermal growth factor receptor (EGFR)- or anaplastic lymphoma kinase (ALK)-positive tumour mutations, and the healthcare professional responsible for their care thinks that pembrolizumab is the right treatment, it should be available for use, in line with NICE's recommendation.

# 5 Appraisal committee members and NICE project team

## Appraisal committee members

The 4 technology appraisal committees are standing advisory committees of NICE. This topic was considered by [committee D](#).

Committee members are asked to declare any interests in the technology to be appraised. If it is considered there is a conflict of interest, the member is excluded from participating further in that appraisal.

The [minutes of each appraisal committee meeting](#), which include the names of the members who attended and their declarations of interests, are posted on the NICE website.

## NICE project team

Each technology appraisal is assigned to a team consisting of 1 or more health technology analysts (who act as technical leads for the appraisal), a technical adviser and a project manager.

### **Christian Griffiths**

Technical Lead and Technical Adviser

### **Fay McCracken**

Technical Adviser

### **Kate Moore**

Project Manager

ISBN: 978-1-4731-3013-5