SMC2905

cemiplimab concentrate for solution for infusion (Libtayo®)

Regeneron UK Limited

09 October 2026

The Scottish Medicines Consortium (SMC) has completed its assessment of the above product and, following review by the SMC executive, advises NHS Boards and Area Drug and Therapeutics Committees (ADTCs) on its use in NHSScotland. The advice is summarised as follows:

ADVICE: following a full submission

cemiplimab (Libtayo®) is accepted for restricted use within NHSScotland.

Indication under review: as monotherapy for the first-line treatment of adult patients with non-small cell lung cancer (NSCLC) expressing PD-L1 (in ≥ 50% of tumour cells), with no EGFR, ALK or ROS1 aberrations, who have:

- locally advanced NSCLC who are not candidates for definitive chemoradiation or
- metastatic NSCLC

SMC restriction: for patients with locally advanced NSCLC who are not candidates for definitive chemoradiation. Treatment with cemiplimab is subject to a stopping rule of a maximum of 36 three-weekly cycles.

Evidence from an open-label phase III study demonstrated that cemiplimab monotherapy improved overall survival compared with chemotherapy. Results from the locally advanced subgroup were broadly consistent with those in the full study population.

This advice applies only in the context of an approved NHSScotland Patient Access Scheme (PAS) arrangement delivering the cost-effectiveness results upon which the decision was based, or a PAS/ list price that is equivalent or lower.

Co Vice Chair
Scottish Medicines Consortium

1. Clinical Context

1.1. Medicine background

Cemiplimab is a monoclonal antibody which binds to the programmed cell death-1 (PD-1) receptor and blocks its interaction with the programmed cell death ligand 1 (PD-L1). Some cancers produce PD-L1 which combines with PD-1 to switch off activity of T cells of the immune system, preventing them from attacking the cancer. By blocking PD-1, cemiplimab increases the immune system's ability to kill cancer cells.[1, 2] The recommended dose of cemiplimab is 350 mg every 3 weeks, administered as an intravenous (IV) infusion over 30 minutes; treatment may be continued until disease progression or unacceptable toxicity.[1]

1.2. Disease background

Lung cancer is the most common cause of cancer death in Scotland, accounting for 22% of all cancer deaths in Scotland in 2024.[3] It was the third most common malignancy in Scotland in 2023 with 5,324 diagnoses.[4] Rates have fallen over the past decade, and this reflects success in reducing the prevalence of smoking which is the largest risk factor for lung cancer.[4] Lung cancers are usually first diagnosed at an advanced stage, when the cancer has spread to lymph nodes and other organs in the chest (locally advanced disease; stage III) or to other parts of the body (metastatic disease; stage IV).[2] In Scotland, 42% of lung cancers were diagnosed at stage IV, while 21% were diagnosed at stage III in 2023.[4] Non-small cell lung cancer (NSCLC) is the most prevalent type of lung cancer, accounting for about 85% of all lung cancer cases.[5] Stage III locally advanced NSCLC accounts for up to one third of diagnoses of NSCLC and is a heterogenous disease with large differences in tumour size, local infiltration, and lymph node involvement.[5] For patients with unresectable disease, 5-year survival rates have ranged from 10% to 30%.[6]

1.3. Company proposed position

The submitting company has requested that cemiplimab is restricted for use in patients with locally advanced NSCLC who are not candidates for definitive chemoradiation. Treatment with cemiplimab is subject to a stopping rule of a maximum of 36 three-weekly cycles.

1.4. Treatment pathway and relevant comparators

The preferred treatment for those with unresectable stage III locally advanced NSCLC is concurrent chemoradiation therapy (CRT).[5, 7] However, many of these patients may not be suitable for curative-intent (definitive) concurrent CRT due to several factors (for example tumour size and location).[6] Immunotherapies are a standard treatment option in metastatic NSCLC. However, atezolizumab, nivolumab and pembrolizumab (either as monotherapy or as combination therapy), are either not licensed in the UK and/or not recommended by SMC for first-line use in patients with locally advanced disease with PD-L1 ≥50%.

The most relevant comparator for patients with locally advanced NSCLC who are not suitable for surgery or definitive CRT, is chemotherapy. The most common regimens include carboplatin in combination with either gemcitabine, vinorelbine, or paclitaxel (in squamous NSCLC) or carboplatin in combination with pemetrexed (in non-squamous NSCLC).[8, 9] Although not routinely available in Scottish clinical practice, some clinical experts consulted by SMC stated that there may be some patients who receive off-label pembrolizumab plus chemotherapy in this setting.

There is no Cancer Medicines Outcomes Programme Public Health Scotland (CMOP-PHS) real-world evidence report for this submission.

1.5. Category for decision-making process

Eligibility for a PACE meeting

Cemiplimab meets SMC end of life criteria for this indication.

2. Summary of Clinical Evidence

2.1. Evidence for the licensed indication under review

The evidence to support the use of cemiplimab for this indication comes from the EMPOWER-Lung 1 study. Details are summarised in table 2.1.

Table 2.1. Overview of relevant study.

Criteria	EMPOWER-Lung 1.[2, 10]
Study design	International, randomised, open-label, phase III study.
Eligible patients	• Adults (aged 18 years or above). • Histologically or cytologically confirmed locally advanced (stage IIIB or IIIC) or metastatic (stage IV) squamous or non-squamous NSCLC (patients with locally advanced disease who were not candidates for surgical resection or definitive chemoradiotherapy; patients with stage IV disease were untreated)[a]. • PD-L1 tumour expression of 50% or higher (PD-L1 ≥ 50%). • ECOG PS of 0 or 1. • No EGFR, ALK or ROS1 genomic tumour aberrations. • Patients who had never smoked were excluded (defined as smoking less than 100 cigarettes in a lifetime).
Treatments and Randomisation	Patients were randomised equally to receive cemiplimab 350 mg IV once every three weeks or investigator's choice of platinum-based doublet chemotherapy for four to six cycles. Chemotherapy options, determined before randomisation, were selected based on histology and included: paclitaxel IV plus carboplatin IV, paclitaxel IV plus cisplatin IV, gemcitabine IV plus carboplatin IV, gemcitabine IV plus cisplatin IV, pemetrexed IV plus carboplatin IV (plus pemetrexed maintenance treatment), or pemetrexed IV plus cisplatin IV (plus pemetrexed maintenance treatment). Treatment continued up to 108 weeks or until disease progression or unacceptable toxicity. Randomisation was stratified according to histology (squamous versus non-squamous) and region (Europe, Asia, rest of world).
Co-primary outcomes	• Overall survival (defined as the time from randomisation to death from any cause). • Progression-free survival, defined as the time between date of randomisation to the date of first progression (assessed by BIRC using RECIST v1.1 criteria) or death from any cause, whichever occurred first.
Selected Secondary Outcome	Objective response rate.
Statistical analysis	Efficacy analyses were performed in the ITT population (which included all randomised patients) and the mITT-1 subpopulation, which included all randomised patients who were tested (or retested) with a PD-L1 assay performed in accordance with approved MHRA labelling. During the study it was found that some PD-L1 testing had quality issues necessitating the mITT-1 subpopulation analysis. At the second interim analysis of OS (data cut March 2020), only OS was analysed according to the SAP and PFS was not controlled for type-1 error; therefore, results for PFS at this data cut and results at the January 2024 data cut are descriptive only.

Abbreviations: AUC = area under the curve; BIRC = blinded independent review committee; CT = computed tomography; ECOG PS = Eastern Cooperative Oncology Group performance status; IRC = independent review committee; ITT = intention-to-treat; IV = intravenous; MRI = magnetic resonance imaging; NSCLC = non-small cell lung cancer; OS = overall survival; PD-L1 = programmed death ligand 1; PFS = progression-free survival; RECIST v1.1 = Response Evaluation Criteria in Solid Tumours version 1.1; SAP = statistical analysis plan.

[a] Patients who received adjuvant or neoadjuvant platinum-doublet chemotherapy (after surgery and/or radiation therapy) and developed recurrent or metastatic disease more than 6 months after completing therapy are eligible

At the March 2020 data cut of EMPOWER-Lung 1, treatment with cemiplimab resulted in a statistically significant improvement in OS when compared with investigator's choice (IC) chemotherapy in the ITT population; there was also an improvement in PFS in favour of cemiplimab. Results in the mITT-1 subpopulation were consistent with the ITT population. As the primary outcome was met, the March 2020 data cut was considered the primary analysis of the study, and patients in the IC chemotherapy group could crossover to the cemiplimab group thereafter. Exploratory results from the January 2024 data cut are also presented. Further details are presented in table 2.2

Table 2.2. Efficacy results for EMPOWER-Lung 1 in the ITT population and the mITT-1 subpopulation.[10, 11]

	ITT population		**mITT-1 subpopulation[b]**	
	Cemiplimab (n=356)[a]	**IC chemotherapy (n=354)[a]**	**Cemiplimab (n=283)[a]**	**IC chemotherapy (n=280)[a]**
Co-primary outcome: OS (data cut: March 2020)				
Median follow-up	13.1 months	13.1 months	10.8 months	10.9 months
Events, n	108	141	70	105
Median OS	22.1 months	14.3 months	NR	14.2 months
Hazard ratio (95% CI), p-value	0.68 (0.53 to 0.87), p=0.0022		0.57 (0.42 to 0.77)[b]	
KM estimated event-free rate at 24 months	49%	30%	50%	27%
Co-primary outcome: PFS (BIRC, RECIST 1.1) (data cut: March 2020)				
Median follow-up	13.1 months	13.1 months	10.8 months	10.9 months
Events, n	201	262	147	197
Median PFS	6.2 months	5.6 months	8.2 months	5.7 months
Hazard ratio (95% CI)	0.59 (0.49 to 0.72)[b]		0.54 (0.43 to 0.68)	
KM estimated event-free rate at 18 months	28%	3.9%	28%	NE
Co-primary outcome: OS (data cut: January 2024)				
Median follow-up	59.6 months		Not reported	
Events, n	Not reported		173	202
Median OS	23.4 months	13.7 months	26.1 months	13.3 months
Hazard ratio (95% CI)	0.64 (0.54 to 0.77)		0.59 (0.48 to 0.72)	
KM estimated event-free rate at 36 months	38%	22%	41%	22%
Co-primary outcome: PFS (data cut: January 2024)				
Median follow-up	59.6 months		Not reported	
Events, n	Not reported		221	236
Median PFS	6.3 months	5.2 months	8.1 months	5.3 months
Hazard ratio (95% CI)	0.53 (0.46 to 0.66)		0.50 (0.41 to 0.61)	

KM estimated event-free rate at 24 months	25%	4.1%	27%	4.7%

[a] The January 2024 data cut includes an additional patient randomised to each treatment group after the March 2020 data cut
[b] Not adjusted for multiplicity

Abbreviations: BIRC = blinded independent review committee; CI = confidence interval; IC = investigator's choice; ITT = intention-to-treat; KM = Kaplan Meier; mITT = modified intention-to-treat; NE = not evaluable; NR = not reached; OS = overall survival; PFS = progression-free survival

During the study, amendments to the protocol were made to allow patients who progressed on cemiplimab monotherapy to continue cemiplimab treatment with the addition of four cycles of histology-specific chemotherapy until further progression was observed. Similarly, patients in the chemotherapy arm were allowed to crossover to cemiplimab after initial disease progression on chemotherapy.[2] At the March 2020 data cut, OS sensitivity analyses adjusting for crossover and/or continued cemiplimab treatment beyond progression were conducted in the mITT-1 subpopulation using three different methods: a rank preserving structural failure time model (RPSFT), inverse probability of censoring weighting (IPCW), and a simplified two-stage correction (with or without recensoring). Results for each of the methods produced central estimates and confidence intervals that were consistent with those that unadjusted in the mITT-1 subpopulation.[12]

2.2. Evidence to support the positioning proposed by the submitting company

Evidence to support the company's proposed positioning comes from a post-hoc subgroup analysis of the locally advanced subgroup in EMPOWER-Lung 1 which consisted of 15% (87/563) of the mITT-1 subpopulation; 45 patients in the cemiplimab group and 42 in the IC chemotherapy group. Baseline demographic and clinical characteristics were generally consistent between both groups in the locally advanced subgroup and were comparable to the mITT-1 subpopulation.

At a median follow-up of 35.7 months (January 2024 data cut), the median OS was 26.1 months in the cemiplimab group versus 13.9 months with IC chemotherapy (hazard ratio [HR] of 0.67; 95% confidence interval [CI]: 0.38 to 1.17). Median PFS was 8.1 months versus 6.2 months, respectively (HR: 0.56; 95% CI: 0.34 to 0.95). These results were broadly consistent with the mITT-1 subpopulation, with treatment effects favouring cemiplimab over chemotherapy for both OS and PFS; however it is noted that the confidence interval crossed one for OS.[6]

2.3. Health-related quality of life outcomes

Health-related quality of life was assessed using the European Organisation for Research and Treatment of Cancer Quality of Life Questionnaire Core 30 (EORTC QLQ-C30) and the European Organisation for Research and Treatment of Cancer Quality of Life Questionnaire Lung Cancer 13 (EORTC QLQ-LC13). For the scales of the EORTC QLQ-C30 and EORTC QLQ-LC13, the mean change from baseline score to each post-baseline visit was summarised descriptively. Overall, patients in the cemiplimab group had numerically favourable changes from baseline in global health status/quality of life (GHS/QOL), functioning, and most symptom scales.[13]

3. Summary of Safety Evidence

Evidence from EMPOWER-Lung 1 supports the relative safety of cemiplimab compared with IC chemotherapy for the treatment of patients with locally advanced (who are not candidates for definitive chemoradiation) NSCLC. Chemotherapy is a relevant comparator for patients with locally advanced NSCLC. Data presented are from the ITT population at the January 2024 data cut; median duration of exposure was 36 weeks (interquartile range: 13.9 to 93.0) in the cemiplimab group (n=356) and 18 weeks (interquartile range: 11.7 to 20.1) in the chemotherapy group (n=343).[10]

In the cemiplimab (n=356) and IC chemotherapy (n=343) groups respectively: 63% and 90% had any treatment-related adverse event (TRAE); 18% and 40% had any grade ≥ 3 TRAE; 7.3% and 4.4% had a TRAE that led to discontinuation of study treatment; and 2.8% and 2.0% had a TRAE that led to death. The most commonly reported TRAEs reported with an incidence of ≥ 10% were: anaemia (6.2% versus 47%); decreased appetite (5.6% versus 15%); fatigue (5.6% versus 13%); nausea (5.1% versus 27%); vomiting (3.1% versus 13%); constipation (2.8% versus 11%); neutropenia (2.5% versus 18%); peripheral neuropathy (0.8% versus 11%); alopecia (0.6% versus 25%); platelet count decreased (0.6% versus 11%); and neutrophil count decreased (0% versus 13%). Immune-mediated adverse events of any grade occurred in 23% of the patients in the cemiplimab group; however, most were of low grade and were clinically manageable.[10]

Safety data for cemiplimab monotherapy versus IC chemotherapy are also available in the locally advanced subgroup from the EMPOWER-Lung 1 study at the March 2022 data cut. The safety profile of cemiplimab monotherapy in the locally advanced subgroup was consistent with that in the ITT population.[6]

Overall, the safety profile of cemiplimab exhibited in EMPOWER-Lung 1 was as expected with no new safety signals being identified; regulators considered the safety profile was acceptable in this setting.[2] Patients should be monitored for signs and symptoms of immune-mediated adverse reactions and infusion-related reactions.[1]

4. Summary of Clinical Effectiveness Considerations

4.1. Key strengths

- Cemiplimab would be the first immunotherapy accepted for use within NHSScotland for locally advanced NSCLC who are not candidates for definitive chemoradiation.
- EMPOWER-Lung 1 was a randomised, phase III study that provides direct evidence against chemotherapy; the most relevant comparator for patients with locally advanced NSCLC who are not candidates for definitive chemoradiation. Approximately 80% of the IC chemotherapy given in the study consisted of carboplatin in combination with either gemcitabine, pemetrexed, or paclitaxel[11]; which aligns with Scottish clinical practice.[8, 9]
- In the ITT population, median OS in the cemiplimab group was 22.1 months compared with 14.3 months in the IC chemotherapy group (March 2020 data cut); this was statistically significant and can be considered clinically meaningful.[2] At the 5-year follow-up (January 2024 data cut), cemiplimab continued to show an OS benefit compared with IC chemotherapy.[10]

Results from PFS (co-primary outcome) were also supportive. The results in the mITT-1 subpopulation were consistent with these results.

- Relevant to the company's proposed positioning, the OS and PFS results in the locally advanced subgroup were broadly consistent with those in the ITT population and mITT-1 subpopulation.[6]

4.2. Key uncertainties

- Evidence to support the company's proposed positioning in patients with locally advanced NSCLC (who are not candidates for definitive chemoradiation) had some limitations. The locally advanced subgroup was small (approximately 15% of the ITT population) and was not powered to detect statistical differences. Therefore, the results should be interpreted with caution. The 95% confidence interval crossed one for overall survival, reflecting the uncertainty in the results.
- There was an imbalance in censoring between treatment groups due to withdrawn consent from patients (11% in the cemiplimab group and 19% in the chemotherapy group). In addition, crossover to cemiplimab from IC chemotherapy on progression may have impacted OS results. At the March 2020 data cut, patients in the chemotherapy group were able to switch to the cemiplimab without requiring evidence of disease progression. Although sensitivity analysis adjusting for crossover were consistent, some uncertainty remains.
- Patients in EMPOWER-Lung 1 were able to continue on cemiplimab treatment with the addition of four cycles of chemotherapy following disease progression; this differs to dosing recommendations in the Summary of Product Characteristics, that state cemiplimab monotherapy may be continued until disease progression or unacceptable toxicity.[1] At the January 2024 data cut (ITT population), 24% (85/357) of patients in the cemiplimab group had received cemiplimab plus chemotherapy as an extended treatment, as allowed by the protocol amendment.[14]
- There may be some generalisability issues with EMPOWER-Lung 1 to Scottish clinical practice. EMPOWER-Lung 1 excluded patients with no smoking history. Although some studies suggest that this group of patients may benefit less from PD-L1 monotherapy[15, 16], the SPC does not exclude patients with no smoking history.. It is estimated that between 4% and 11% of patients with stage III NSCLC are never smokers.[17] Furthermore, patients with squamous NSCLC may have been overrepresented, and female patients were underrepresented in EMPOWER-Lung 1 compared with clinical practice.
- The open-label design of EMPOWER-Lung 1 may have biased patient-reported outcomes including safety outcomes and health-related quality of life. The quality of life results were impacted by the lower patient numbers at later time points.[2]

4.3. Clinical expert input

Clinical experts consulted by SMC considered that cemiplimab fills an unmet need in this therapeutic area, since no first-line immunotherapy options are accepted for use within NHSScotland for this proposed positioning. However, views were mixed about whether

cemiplimab represents a therapeutic advancement in this setting due to some off-label use of immunotherapy.

4.4. Service implications

No service implications are expected.

Diagnostic test required to identify patients eligible for treatment: contact local laboratory for information.

5. Summary of Patient and Carer Involvement

The following information reflects the views of the specified patient group.

- We received a patient group submission from Roy Castle Lung Cancer Foundation. Roy Castle Lung Cancer Foundation is a registered charity.
- Roy Castle Lung Cancer Foundation has received 10% pharmaceutical company funding in the past two years, including from the submitting company.
- Lung cancer has a debilitating and devastating effect on both the person and their family. The symptoms are difficult to manage, and prognosis is generally not good. Patients may develop breathlessness, fatigue, chronic troublesome cough, loss of appetite, weight loss and pain. The symptoms impact on mobility, showering, dressing, household chores, and many become housebound and dependent on others. There is a great emotional strain on them and their loved ones causing low mood, depression, feeling isolated and stigmatised.
- Current treatments of chemotherapy are not deemed effective enough and there is an unmet need to provide better treatment options for this group of patients.
- The new treatment has the potential to improve the quality of life of patients and extend their life. It would provide hope for the person and their loved ones, that there is possibly an alternative treatment option available to them, at an already distressing and stressful time for them.

6. Summary of Comparative Health Economic Evidence

6.1. Economic case

Table 6.1 describes the economic case.

Table 6.1 Description of economic analysis

Criteria	Overview
Analysis type	Cost-utility analysis.
Time horizon	30 years (lifetime).
Population	The cost-effectiveness of cemiplimab monotherapy was evaluated in patients with locally advanced NSCLC expressing PD-L1 (in ≥50% of tumour cells), with no EGFR, ALK or ROS1 aberrations.
Comparators	The comparator was comprised of a weighted basket of chemotherapy regimens (paclitaxel, carboplatin, pemetrexed, gemcitabine), with treatment proportions informed by clinical expert opinion received by the submitting company. Post-progression subsequent treatments included chemotherapy and immunotherapy (atezolizumab and pembrolizumab), with treatment distributions also based on clinical expert opinion.

Model description	A partitioned survival model comprising pre-progression, post-progression and death health states. A once-month cycle length with half-cycle correct was applied.
Clinical data	Clinical evidence was primarily sourced from the EMPOWER-Lung 1 Phase III open-label, randomised study.[10, 11] Baseline characteristics and adverse event rates were informed by the mITT-1 population, while comparative OS and PFS estimates were derived from the locally advanced subgroup.
Extrapolation	Independent parametric survival curves were fitted to the five-year EMPOWER-lung 1 OS and PFS data for the locally advanced subgroup. A log-logistic distribution was selected for OS and PFS for both treatment arms. OS was adjusted for treatment switching using the Two Stage Estimation simple method (non-re-censored approach). A treatment waning effect for cemiplimab was applied from three to five years. Time to treatment discontinuation (TTD) was assumed to equal PFS for all treatments. Maximum treatment durations included four cycles for chemotherapy (with pemetrexed maintenance until progression for eligible non-squamous patients) and a maximum of treatment of 36 three-weekly cycles for cemiplimab.
Quality of life	Health-related quality of life data were collected in EMPOWER-Lung 1 using the EORTC QLQ-C30 and QLQ-LC13 questionnaires. State-specific utilities were estimates using a linear mixed-effects models and mapped to EQ-5D values using Longworth et al (2014).[18] The resulting utility values were 0.745 in the pre-progressed state and 0.713 in the progressed state. The model included Quality Adjusted Life Year (QALY) decrements associated with experiencing Grade 3+ adverse events, sourced from published literature.
Costs and resource use	The costs included in the model were medicine acquisition, end of life care, adverse events, and healthcare resource use costs. Medicine acquisition costs included, cemiplimab and chemotherapy costs, subsequent treatment costs, and administration costs, taking into account wastage.
PAS/contract price	A Patient Access Scheme (PAS) was submitted by the company and assessed by the Patient Access Scheme Assessment Group (PASAG) as acceptable for implementation in NHSScotland. Under the PAS, a discount was offered on the list price. A PAS discount is in place for subsequent treatments pembrolizumab and atezolizumab and these were included in the results used for decision-making.

6.2. Results

The use of cemiplimab was estimated to generate additional health outcomes for patients, but also additional costs.

SMC considered results for decision-making that considered all relevant prices. SMC is unable to present these results due to competition law issues.

*Other data were also assessed but remain confidential.**

6.3. Sensitivity analyses

A range of sensitivity and scenario analyses were considered and descriptions of these key scenarios are provided in table 6.3 below

Table 6.3 Scenario analysis.

	Parameter	Base case	Scenario	ICER (£/QALY)
	Base case			CIC
1	Waning PFS and OS	3-5 years	From 60 months	CIC
2			No treatment waning applied	CIC
3	HSUV	EMPOWER-Lung 1	NICE TA654 osmertinib EGFR positive NSCLC	CIC
4	AE costs and disutilities	Include	Exclude	CIC
5	Wastage	Included	No wastage	CIC

6	HCRU estimates	Clinical opinion	Brown et al. 2013[19]	CIC
7	Relative usage of chemotherapy regimens	Clinical opinion	EMPOWER-Lung 1	CIC
8	Source of OS and PFS data	EMPOWER-Lung 1 Locally advanced subgroup	EMPOWER-Lung 1 metastatic and locally advanced populations	CIC
9a	OS and PFS curves	Log-logistic distribution for OS and PFS	Lognormal distribution for PFS and OS	CIC
9b			Gamma distribution for PFS and OS	CIC
9c			Generalised gamma distribution for PFS and OS	CIC
9d			Weibull distribution for PFS and log-logistic for OS	CIC
10a	OS crossover adjustment	adjusted OS curves (not recensored)	Unadjusted OS curves	CIC
10b			Adjusted OS (recensored)	CIC
11	Time to treatment discontinuation	TTD=PFS	TTD from EMPOWER-Lung 1	CIC
12	Combination	Scenarios 2 & 9b		CIC

Abbreviations: CIC = commercial in confidence; Incr. = incremental; ICER = incremental cost-effectiveness ratio; OS = overall survival; PFS = progression-free survival; HCRU = healthcare resource use; HSUV = health state utility values; QALYs = quality adjusted life year; TTD = time to treatment discontinuation

6.4. Key strengths

- The partitioned survival model structure and cycle length were considered appropriate.
- The economic analysis was informed by the locally advanced PD-L1 ≥50% subgroup of EMPOWER-Lung 1; a phase III randomised controlled study, which provided direct comparative evidence for cemiplimab versus chemotherapy.
- Health state utility values were estimated directly from EMPOWER-Lung 1 using patient-reported quality of life data and appropriate mapping methods.

6.5. Key uncertainties

- The economic analysis was informed by the locally advanced subgroup of EMPOWER-Lung 1, which was relatively small. This introduced uncertainty around the survival estimates used in the model. Although Scenario 8, which used the outcomes from the combined metastatic and locally advanced subpopulations, had only a minimal impact on the incremental cost-effectiveness ratio (ICER).
- There was inherent uncertainty associated with extrapolating OS and PFS beyond the observed follow-up. Other extrapolation choices were available within selection criteria, which resulted in a modest increase in the ICER (Scenarios 9a to d).
- The company's approach to modelling treatment duration was associated with notable uncertainty. Time on treatment is assumed to be equal to PFS, despite some patients in the EMPOWER-Lung 1 study continuing cemiplimab beyond progression in combination with

chemotherapy. However, exploring an alternative assumption using the observed TTD data from EMPOWER-Lung 1 (Scenario 11), had only a minimal impact on the ICER.

- Treatment distributions for the comparator chemotherapy regimens and the post-progression subsequent treatments were informed by clinical expert opinion received by the submitting company. While using study-based chemotherapy treatment distributions (Scenario 7) had only a limited impact on the ICER, no scenario analysis was presented to explore alternative subsequent treatment distributions.

7. Conclusion

After considering all the available evidence, the Committee accepted cemiplimab for restricted use in NHSScotland.

8. Guidelines and Protocols

National Institute for Health and Care Excellence (NICE) published guidelines on 28 March 2019 (last updated 08 March 2024) titled "Lung cancer: diagnosis and management".[20]

European Society for Medical Oncology (ESMO) have a living guideline titled "ESMO Living Guideline: Early and Locally Advanced NSCLC". Current version is 1.2, last updated June 2026.[21]

9. Additional Information

9.1. Product availability date

24 September 2021

Table 9.1 List price of medicine under review

Medicine	Dose regimen	Cost per year (£)
Cemiplimab	**350 mg every 3 weeks intravenously until disease progression or unacceptable toxicity**	**80,600**

Costs from BNF online on 18 June 2026. Costs calculated using the full cost of vials assuming wastage. Costs do not take any patient access schemes into consideration.

10. Company Estimate of Eligible Population and Estimated Budget Impact

The submitting company estimated there would be 55 patients eligible for treatment with cemiplimab monotherapy in year 1 and 74 patients in year 3. The estimated uptake rate was 19% in year 1 and 31% in year 3. This resulted in 10 patients estimated to receive treatment in year 1 rising to 59 patients in year 3.

SMC is unable to publish the with PAS budget impact due to commercial in confidence issues. A budget impact template is provided in confidence to NHS health boards to enable them to estimate the predicted budget with the PAS. This template does not incorporate any PAS/contract price discounts associated with comparator medicines or PAS/contract prices associated with medicines used in a combination regimen.

*Other data were also assessed but remain confidential.**

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This assessment is based on data submitted by the applicant company up to and including **10 September 2026.**

**Agreement between the Association of the British Pharmaceutical Industry (ABPI) and the SMC on guidelines for the release of company data into the public domain during a health technology appraisal:*https://www.scottishmedicines.org.uk/about-us/policies-publications/

Medicine prices are those available at the time the papers were issued to SMC for consideration. SMC includes Scottish national contract prices in its decision-making. These contract prices are

commercial in confidence and cannot be put in the public domain, including via the SMC Detailed Advice Document.

Patient Access Schemes (PAS): A PAS is a scheme proposed by a pharmaceutical company in order to improve the cost-effectiveness of a medicine and enable patients to receive access to cost-effective innovative medicines. The Patient Access Scheme Assessment Group (PASAG), established under the auspices of Public Services Delivery Scotland, reviews and advises NHS Scotland on the feasibility and acceptability on implementing proposed schemes. PASAG operates separately from SMC to maintain the integrity and independence of the assessment process of the SMC. When SMC accepts a medicine for use in NHS Scotland on the basis of a PAS that has been considered acceptable for implementation by PASAG, a set of guidance notes on the operation of the scheme will be circulated to health boards' Area Drugs and Therapeutics Committees prior to publication of SMC advice.

Advice context:

No part of this advice may be used without the whole of the advice being quoted in full.

This advice represents the view of the Scottish Medicines Consortium and was arrived at after careful consideration and evaluation of the available evidence. It is provided to inform the considerations of Area Drug & Therapeutics Committees and NHS Boards in Scotland in determining medicines for local use or local formulary inclusion. This advice does not override the individual responsibility of health professionals to make decisions in the exercise of their clinical judgement in the circumstances of the individual patient, in consultation with the patient and/or guardian or carer.