NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE

Health Technology Evaluation

Serplulimab with carboplatin and etoposide for untreated extensive-stage small-cell lung cancer

Final scope

Remit/evaluation objective

To appraise the clinical and cost effectiveness of serplulimab with carboplatin and etoposide within its marketing authorisation for untreated extensive-stage small-cell lung cancer.

Background

Lung cancer falls into two main histological categories: non-small-cell lung cancers and small-cell lung cancers. Small-cell lung cancer (SCLC) is a type of cancer that grows rapidly and spreads quickly to other parts of the body. It can be classified as limited or extensive disease. Extensive disease is when the cancer has spread beyond one lung and nearby lymph nodes, making radiotherapy unsuitable.[1] Common symptoms of SCLC include weight loss, malaise, bone pain, breathlessness and haemoptysis.

Lung cancer is the 3rd most common cancer in the UK, accounting for 13% of all new cancer cases between 2017 and 2019.[2] In 2022, 36,886 people were diagnosed with lung cancer in England, of which 6.8% were SCLC.[3] The prognosis for patients with extensive-stage SCLC is poor, with a 5-year survival rate of 10%.[4]

Surgical intervention has limited use in SCLC because most patients present with advanced disease.[5] The NICE guideline 'Lung cancer: diagnosis and management (NG122)' recommends platinum-based combination chemotherapy for first-line treatment of SCLC, up to a maximum of six cycles. In addition, NICE technology appraisal guidance 638 recommends atezolizumab with carboplatin and etoposide as an option for untreated extensive-stage SCLC in adults who have an Eastern Coopoerative Oncology Group performance status of 0 or 1.

The technology

Serplulimab (Hertronifly, Accord Healthcare) does not currently have a marketing authorisation in the UK for the treatment of small-cell lung cancer (SCLC). Serplulimab with carboplatin and etoposide has been studied in a phase 3 clinical trial in people with previously untreated extensive-stage SCLC compared with carboplatin and etoposide alone. It is also being studied in an ongoing phase 3 clinical trial for the same population compared with atezolizumab with carboplatin and etoposide.

Intervention(s)	Serplulimab with carboplatin and etoposide
Population(s)	Adults with untreated extensive-stage small-cell lung cancer
Comparators	• Platinum-based combination chemotherapy • Atezolizumab with carboplatin and etoposide (for people with Eastern Cooperative Oncology Group performance status of 0 or 1) • Durvalumab with etoposide and platinum-based chemotherapy (subject to NICE appraisal)
Outcomes	The outcome measures to be considered include: • overall survival • progression-free survival • response rates • adverse effects of treatment • health-related quality of life.
Economic analysis	The reference case stipulates that the cost effectiveness of treatments should be expressed in terms of incremental cost per quality-adjusted life year. The reference case stipulates that the time horizon for estimating clinical and cost effectiveness should be sufficiently long to reflect any differences in costs or outcomes between the technologies being compared. Costs will be considered from an NHS and Personal Social Services perspective. The availability of any commercial arrangements for the intervention, comparator and subsequent treatment technologies will be taken into account.
Other considerations	Guidance will only be issued in accordance with the marketing authorisation. Where the wording of the therapeutic indication does not include specific treatment combinations, guidance will be issued only in the context of the evidence that has underpinned the marketing authorisation granted by the regulator.
Related NICE recommendations	**Related technology appraisals:** Atezolizumab with carboplatin and etoposide for untreated extensive-stage small-cell lung cancer (2020). NICE technology appraisal 638. **Related technology appraisals in development:**

	Durvalumab with etoposide and platinum-based chemotherapy for untreated extensive-stage small-cell lung cancer. NICE technology appraisal ID6404 **Related NICE guidelines:** Lung cancer: diagnosis and management (2019) NICE guideline NG122. Updated 2024. **Related quality standards:** Lung cancer in adults (2012). NICE quality standard 17. Updated 2019.
Related National Policy	The NHS Long Term Plan (2019) NHS Long Term Plan NHS England (2023) Manual for prescribed specialist services (2023/2024), Chapter 105 Specialist cancer services (adults)

References

1. Cancer Research UK (2023), Limited and extensive stage (small cell lung cancer) (Accessed August 2024)

2. Cancer Research UK, Lung cancer statistics (Accessed August 2024)

3. National Lung Cancer Audit (2024), National Lung Cancer Audit State of the Nation 2024, version 2 (Accessed August 2024)

4. Khakwani A, Rich AL, Tata LJ et al. (2014) Small-Cell Lung Cancer in England: Trends in Survival and Chemotherapy Using the National Lung Cancer Audit. PLOS ONE. 2014. 9 (2) e89426 (Accessed August 2024)

5. American Cancer Society, Surgery for Small Cell Lung Cancer (Accessed August 2024)