NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE

Single Technology Appraisal

Durvalumab in combination with platinum-based chemotherapy for untreated extensive stage small-cell lung cancer

Final scope

Remit/appraisal objective

To appraise the clinical and cost effectiveness of durvalumab in combination with platinum-based chemotherapy within its marketing authorisation for untreated extensive stage small-cell lung cancer.

Background

Lung cancer falls into 2 main histological categories: non-small-cell lung cancers and small-cell lung cancers. Small-cell lung cancer (SCLC) is a type of lung cancer that grows rapidly and spreads quickly to other parts of the body. SCLC can be classified as limited disease (cancer that is contained in a single area that can be treated with radiotherapy for example, 1 lung or nearby lymph nodes) or extensive-stage disease (cancer that has spread beyond a single area that can be treated with radiotherapy for example, to the other lung or to other parts of the body).[1] Common symptoms of SCLC include weight loss, malaise (a general feeling of discomfort), bone pain, breathlessness and haemoptysis (coughing up blood).

In 2017 there were 38,906 cases of lung cancer registered in England.[2] Around 12% of lung cancer cases are SCLC.[3] The prognosis for patients with extensive-stage SCLC is poor, with a 2 year survival rate of around 5%.[4] An estimated 66% of those with extensive-stage SCLC will receive chemotherapy.[5]

The aims of therapy for people with extensive-stage disease are to prolong survival and improve quality of life.[3] The NICE guideline 122 for Lung cancer: diagnosis and management recommends that all patients with untreated extensive stage SCLC should be offered platinum-based combination chemotherapy, for a maximum of 6 cycles. Thoracic radiotherapy with prophylactic cranial irradiation can be offered after chemotherapy if there has been a partial or complete response to chemotherapy within the thorax (chest) and at distant sites.

For untreated metastatic disease (includes extensive stage), the ESMO clinical practice guideline for small-cell lung cancer recommends:

- etoposide in combination with a platinum therapy or
- irinotecan in combination with cisplatin or gemcitabine in combination with carboplatin (for patients with poor prognosis) if etoposide is contraindicated.

The technology

Durvalumab (Imfinzi, AstraZeneca) is a human monoclonal antibody directed against programmed cell death ligand-1 (PD-L1). Durvalumab blocks PD-L1 interaction with both PD-1 and CD80 on T cells, countering the tumour's immune-evading tactics and activating the patient's immune system to attack the cancer. It is administered intravenously.

Durvalumab in combination with platinum-based chemotherapy regimens (etoposide with either carboplatin or cisplatin) does not currently have a marketing authorisation in the UK for small-cell lung cancer. Durvalumab with platinum-based chemotherapy has been studied in a clinical trial in people with untreated extensive stage small-cell lung cancer compared with platinum based chemotherapy alone.

Intervention(s)	Durvalumab in combination with platinum-based chemotherapy (etoposide with either carboplatin or cisplatin)
Population	Adults with untreated extensive-stage small-cell lung cancer
Comparators	• Established clinical management without durvalumab (such as platinum-based combination chemotherapy) • Atezolizumab (subject to ongoing 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 and NICE Pathways	**Related Technology Appraisals:** Topotecan for the treatment of relapsed small-cell lung cancer (2009). NICE Technology Appraisal 184. Placed on the static list in 2013. **Appraisals in development (including suspended**

	appraisals) Atezolizumab with carboplatin and etoposide for untreated extensive-stage small-cell lung cancer [ID1504]. Publication expected December 2019. **Related Guidelines:** Lung cancer: diagnosis and treatment (2019). NICE guideline 122. March 2019. **Related Interventional Procedures:** Microwave ablation for treating primary lung cancer and metastases in the lung (2013). NICE interventional procedures guidance 469. **Related Quality Standards:** Lung cancer in adults (2012). NICE quality standard 17. Related NICE Pathways: **Lung cancer (2019) NICE pathway** https://pathways.nice.org.uk/pathways/lung-cancer
Related National Policy	The NHS Long Term Plan, 2019. NHS Long Term Plan NHS England (2018/2019) NHS manual for prescribed specialist services (2018/2019). Chapter 105: Specialist cancer services (adults) and Chapter 18: Adult thoracic surgery services. NHS England (2017/19) Standard contract for cancer: chemotherapy (adult) Department of Health and Social Care, NHS Outcomes Framework 2016-2017 (published 2016): Domains 1 and 2.

References

1. Kalemkerian GP and Schneider BJ. (2017) Advances in Small Cell Lung Cancer. (Accessed July 2019)
2. Office for National Statistics (2017) Cancer registration statistics. (Accessed July 2019)
3. Cancer Research UK, Lung cancer. (Accessed July 2019)
4. Alvarado-Luna G and Morales-Espinosa D. (2006) Treatment for small cell lung cancer, where are we now? – a review. (Accessed July 2019)
5. 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 9(2) e89426 (Accessed July 2019)

