# NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE

## Health Technology Appraisal

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

## Draft scope

### Draft remit/appraisal objective

To appraise the clinical and cost effectiveness of atezolizumab 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 lung cancer that grows rapidly and spreads quickly to other parts of the body. SCLC can be classified as limited disease (cancer has not spread beyond one lung or nearby lymph nodes) or extensive-stage disease (the cancer has spread beyond one lung)[1]. Common symptoms of SCLC include weight loss, malaise, bone pain, breathlessness and haemoptysis.

In 2016 there were 38,381 cases of lung cancer registered in England[2]. Around 12% of lung cancer cases are SCLC[3]. The prognosis for patients with SCLC is poor, with a 5-year survival rate of 5%[4]. An estimated 66% of those with SCLC will receive platinum-based combination chemotherapy as a first therapy[5].

The aims of therapy for people with extensive-stage disease are to prolong survival and improve quality of life[3]. The NICE lung cancer clinical guideline 121 recommends that all patients with untreated extensive stage SCLC should be offered platinum-based combination chemotherapy, for a maximum of six cycles. The disease response and drug toxicity should be assessed before each cycle. In clinical practice, patients may receive etoposide in combination with a platinum therapy, or where etoposide is contraindicated, patients may receive irinotecan in combination with cisplatin or gemcitabine in combination with carboplatin (in patients with poor prognosis)[6]. Thoracic radiotherapy can be offered after chemotherapy if there has been a complete response at distant sites and at least a good partial response within the thorax.

However, for 95 to 100% of people with extensive-stage SCLC treated with first line platinum-based combination chemotherapy, the disease will not respond to treatment or will eventually relapse. 40% of people whose disease relapses or does not respond will have second line chemotherapy. Radiotherapy can be offered for the palliation of local symptoms.

## The technology

Atezolizumab (Tecentriq, Roche) is a humanised, anti-programmed cell death ligand-1 (PD-L1) monoclonal antibody involved in the blockade of immune suppression and the subsequent reactivation of anergic T-cells. It is administered intravenously.

Atezolizumab does not currently have a marketing authorisation in the UK for treating small-cell lung cancer. It has been studied in a randomised controlled trial with carboplatin and etoposide compared to placebo with carboplatin and etoposide in people with untreated extensive-stage SCLC.

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| **Intervention(s)** | Atezolizumab with carboplatin and etoposide |
| **Population(s)** | Adults with untreated extensive-stage small-cell lung cancer |
| **Comparators** | Platinum-based combination chemotherapy regimens |
| **Outcomes** | The outcome measures to be considered include:<br>• overall survival<br>• progression-free survival<br>• response rates<br>• adverse effects of treatment<br>• 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.<br>If appropriate, the appraisal should include consideration of the costs and implications of additional testing for biological markers, but will not make recommendations on specific diagnostic tests or devices.<br>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.<br>The availability of any patient access schemes for the intervention or comparator technologies will be taken into account. |

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| **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:**<br>Topotecan for the treatment of relapsed small-cell lung cancer (2009). NICE Technology Appraisal 184. Placed on the static list in 2013.<br>**Related Guidelines:**<br>Lung cancer: diagnosis and treatment (2011). NICE guideline 121. Reviewed March 2016. Review decision: guideline to be updated.<br>**Related Interventional Procedures:**<br>Microwave ablation for treating primary lung cancer and metastases in the lung (2013). NICE interventional procedures guidance 469.<br>**Related Quality Standards:**<br>Lung cancer in adults (2012). NICE quality standard 17.<br>Related NICE Pathways:<br>**Lung cancer (2016) NICE pathway**<br>http://pathways.nice.org.uk/ |
| **Related National Policy** | **NHS England:**<br>NHS England (May 2017) Manual for prescribed specialised services 2017/18, Chapter 105: Specialist cancer services (adults) and Chapter 18: Adult thoracic surgery services.<br>NHS England (2017/19) Standard contract for cancer: chemotherapy (adult)<br>**Department of Health:**<br>Department of Health (2011) Improving Outcomes: A Strategy for Cancer<br>Department of Health (2016) NHS Outcomes Framework 2016-2017. Domains 1 and 2. |

## Questions for consultation

Have all relevant comparators for atezolizumab been included in the scope? Which treatments are considered to be established clinical practice in the NHS for extensive-stage SCLC?

Are the outcomes listed appropriate?

Are there any subgroups of people in whom atezolizumab is expected to be more clinically effective and cost effective or other groups that should be examined separately?

Where do you consider atezolizumab will fit into the existing NICE pathway, lung cancer?

NICE is committed to promoting equality of opportunity, eliminating unlawful discrimination and fostering good relations between people with particular protected characteristics and others. Please let us know if you think that the proposed remit and scope may need changing in order to meet these aims. In particular, please tell us if the proposed remit and scope:

- could exclude from full consideration any people protected by the equality legislation who fall within the patient population for which atezolizumab will be licensed;

- could lead to recommendations that have a different impact on people protected by the equality legislation than on the wider population, e.g. by making it more difficult in practice for a specific group to access the technology;

- could have any adverse impact on people with a particular disability or disabilities.

Please tell us what evidence should be obtained to enable the Committee to identify and consider such impacts.

Do you consider atezolizumab to be innovative in its potential to make a significant and substantial impact on health-related benefits and how it might improve the way that current need is met (is this a 'step-change' in the management of the condition)?

Do you consider that the use of atezolizumab can result in any potential significant and substantial health-related benefits that are unlikely to be included in the QALY calculation?

Please identify the nature of the data which you understand to be available to enable the Appraisal Committee to take account of these benefits.

To help NICE prioritise topics for additional adoption support, do you consider that there will be any barriers to adoption of this technology into practice? If yes, please describe briefly.

NICE intends to appraise this technology through its Single Technology Appraisal (STA) Process. We welcome comments on the appropriateness of appraising this topic through this process. (Information on the Institute's Technology Appraisal processes is available at http://www.nice.org.uk/article/pmg19/chapter/1-Introduction).

**References**

1. Kalemkerian GP, Schneider BJ. Advances in Small Cell Lung Cancer. Hematol Oncol Clin North Am. 2017; 31(1):143-156 (Accessed September 2018)
2. Office for National Statistics (2016) Cancer registration statistics. (Accessed September 2018)
3. Cancer Research UK, Lung cancer (Accessed September 2018)
4. Alvarado-Luna G, Morales-Espinosa D. Treatment for small cell lung cancer, where are we now?—a review. Transl Lung Cancer Res 2016;5(1):26-38 (Accessed September 2018)
5. Khakwani A, Rich AL, Tata LJ et al. Small-Cell Lung Cancer in England: Trends in Survival and Chemotherapy Using the National Lung Cancer Audit. PLOS ONE. 2014. 9 (2) e89426 (Accessed September 2018)
6. European Society for Medical Oncology. (2013). Small-cell lung cancer: ESMO Clinical Practice Guidelines. (Accessed September 2018)