

NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE

Single Technology Appraisal

Atezolizumab for adjuvant treatment of resected non-small-cell lung cancer

Final scope

**Remit/appraisal objective**

To appraise the clinical and cost effectiveness of atezolizumab within its marketing authorisation for adjuvant treatment of resected non-small-cell lung cancer.

**Background**

Lung cancer is the third most common cancer and the most common cause of cancer death in the UK, accounting for 13% of all new cancer cases and 21% of all cancer deaths in 2017.<sup>1</sup> There are around 38,900 new lung cancer cases and 27,700 deaths from lung cancer in the England every year. Up to 85% of lung cancers are non-small-cell lung cancers (NSCLC).<sup>2</sup>

Most lung cancers are 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). Less than 30% of lung cancers are diagnosed at an early stage (stage I or II).

NICE guideline Lung cancer: diagnosis and management recommends surgery, radiotherapy, chemoradiotherapy or a combination of these for early stage disease.<sup>3</sup> Around 18% of people with NSCLC had surgical resection with curative intent in England and Wales in 2017.<sup>4</sup> If well enough, people may be offered a cisplatin-based chemotherapy (adjuvant treatment) after surgery.<sup>3</sup> People are actively monitored for cancer recurrence. If the cancer comes back, treatment options and prognosis depend on the site of the recurrence. Despite the curative intent of treatment for early-stage lung cancer, survival is poor, with only about 57% people with stage I, 34% with stage II and 13% with stage III surviving for 5 years after diagnosis.<sup>1</sup>

It is estimated that over half of all NSCLCs express the programmed cell death ligand-1 (PD-L1) biomarker.<sup>5</sup> Cancer cells expressing PD-L1 are believed to suppress certain immune responses and cause increased tumor aggressiveness.

**The technology**

Atezolizumab (Tecentriq, Roche) is a humanised, monoclonal antibody that targets PD-L1 resulting in reactivation of T cells that are attacking the cancer cells. It is administered intravenously.

Atezolizumab does not currently have a marketing authorisation in the UK as adjuvant treatment for NSCLC after surgery and adjuvant cisplatin-based chemotherapy. It is being studied in a clinical trial compared with best supportive care, in adults with resectable (stage IB to stage IIIA) NSCLC after surgery and adjuvant cisplatin-based chemotherapy.

<b>Intervention(s)</b>	Atezolizumab (as an adjuvant treatment)
<b>Population(s)</b>	Adults with fully resected NSCLC after adjuvant cisplatin-based chemotherapy
<b>Comparators</b>	Established clinical management without atezolizumab (that is, active monitoring)  For adults with EGFR mutation-positive NSCLC: <ul style="list-style-type: none"> <li>• Osimertinib (subject to NICE appraisal)</li> </ul>
<b>Outcomes</b>	The outcome measures to be considered include: <ul style="list-style-type: none"> <li>• overall survival</li> <li>• disease-free survival</li> <li>• response rate</li> <li>• adverse effects of treatment</li> <li>• health-related quality of life.</li> </ul>
<b>Economic analysis</b>	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. The availability of any managed access arrangement for the intervention will be taken into account.
<b>Other considerations</b>	If evidence allows, subgroup analysis by level of PD-L1 expression will be considered.  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.
<b>Related NICE recommendations and NICE Pathways</b>	<b>Related Technology Appraisals:</b> <a href="#">Atezolizumab monotherapy for untreated advanced non-small-cell lung cancer</a> (2021). NICE Technology Appraisals

	<p>guidance TA705.</p> <p><a href="#">Atezolizumab for treating locally advanced or metastatic non-small-cell lung cancer after chemotherapy</a> (2018). NICE Technology Appraisals guidance TA520.</p> <p><a href="#">Atezolizumab in combination for treating metastatic non-squamous non-small-cell lung cancer</a> (2019) NICE Technology Appraisal guidance TA584.</p> <p><b>Terminated appraisals</b></p> <p><a href="#">Atezolizumab with carboplatin and nab-paclitaxel for untreated advanced non-squamous non-small-cell lung cancer</a> (terminated appraisal) (2020). NICE Technology appraisal TA618.</p> <p><b>Appraisals in development (including suspended appraisals):</b></p> <p><a href="#">Osimertinib for adjuvant treatment of EGFR mutation-positive non-small-cell lung cancer after complete tumour resection</a>. NICE technology appraisals guidance [ID3835]. Publication date to be confirmed.</p> <p><a href="#">Atezolizumab in combination for untreated squamous non-small-cell lung cancer</a>. [ID1481] (suspended).</p> <p><b>Related Guidelines:</b></p> <p><a href="#">Lung cancer: diagnosis and management</a> (2019). NICE guideline NG122.</p> <p><b>Related Interventional Procedures</b></p> <p><a href="#">Microwave ablation for treating primary lung cancer and metastases in the lung</a> (2013). NICE interventional procedures guidance 469.</p> <p><b>Related Quality Standards:</b></p> <p><a href="#">Lung cancer in adults</a> (2019). NICE quality standard 17</p> <p><b>Related NICE Pathways:</b></p> <p><a href="#">Lung cancer</a> (2021) NICE pathway</p>
<p><b>Related National Policy</b></p>	<p>The NHS Long Term Plan, 2019. <a href="#">NHS Long Term Plan</a> NHS England (2018) <a href="#">Manual for prescribed specialised services 2018/19</a> Chapter 105: Specialist cancer services (adults).</p> <p>Department of Health, <a href="#">NHS Outcomes Framework 2016-2017</a> (published 2016): Domain 1</p>

## References

1. [Lung cancer statistics](#). Cancer Research UK. Accessed August 2021
2. [Types of lung cancer](#). Cancer Research UK. Accessed August 2021

3. [Lung cancer: diagnosis and management](#). (2019) NICE guideline 122
4. [National Lung Cancer Audit: Annual report 2018 \(for the audit period 2017\)](#) (2020). Royal College of Physicians. Accessed August 2021.
5. Skov, B., Rørvig, S., Jensen, T. et al. (2020) The prevalence of programmed death ligand-1 (PD-L1) expression in non-small cell lung cancer in an unselected, consecutive population. *Mod Pathol* 33, 109–117