NATIONAL INSTITUTE FOR HEALTH AND CLINICAL EXCELLENCE

Health Technology Appraisal

Gefitinib for the first-line treatment of locally advanced or metastatic non-small cell lung cancer

Draft scope

Remit/appraisal objective*

To appraise the clinical and cost effectiveness of gefitinib, within its licensed indication, for the first-line treatment of locally advanced or metastatic non-small cell lung cancer.

Background

Lung cancer falls into two main histological categories: around 80% are non-small-cell lung cancers (NSCLC) and the remainder are small-cell lung cancers. The main types of NSCLC are squamous cell carcinoma (45%), adenocarcinoma (45%) and large cell carcinoma (10%). Between 5% and 15% of cases of NSCLC are diagnosed on routine chest radiographic examination, but the majority of cases present with symptoms and signs related either to the site of the growth of the primary tumour, or to the effects of thoracic or metastatic spread. Approximately a third of patients with NSCLC present with local potentially resectable disease and about 50% of these will be suitable for surgery. About 30% of patients present with locally and regionally advanced disease (Stage IIIb) and 40% with advanced disease (Stage IV in which there are distant metastases).

Estimates of the number of patients who receive first line chemotherapy for inoperable NSCLC vary between 1,320 and 6,447 per year. Lung cancer incidence and mortality rates are strongly associated with smoking and socio-economic deprivation. There were 31,900 new diagnoses of lung cancer in England and Wales in 2003 (an incidence of around 60 cases per 100,000 population) and 28,632 deaths in 2005. The prognosis for patients with NSCLC is poor, with an overall median survival of 6 months from diagnosis and 1 year survival of only around 20%.

While one-third of patients with NSCLC have disease which is suitable for potentially curative surgical resection, for the majority of NSCLC patients, cure is not possible and the aims of therapy are to prolong survival and improve quality of life. Treatment may include radiotherapy and supportive care with or without chemotherapy. NICE has published a clinical guideline on the diagnosis and treatment of lung cancer (CG24). It recommends that

* The original remit from the Department of Health was 'To appraise the clinical and cost effectiveness of gefitinib [Iressa] in its licensed indications for non-small cell lung cancer [NSCLC]'. This appraisal was split into two Single Technology Appraisals (first and second line treatment of NSCLC respectively) following the positive opinion from the Committee for Medicinal Products for Human Use (CHMP).

chemotherapy should be offered to patients with stage III or IV NSCLC and a good performance status. First line chemotherapy for advanced NSCLC should include a combination of a single third-generation drug (gemcitabine, docetaxel, paclitaxel or vinorelbine) with a platinum drug (carboplatin or cisplatin). Bevacizumab within its licensed indication for the treatment of unresectable advanced, metastatic or recurrent non-small-cell lung cancer was referred to NICE for appraisal, but no evidence submission was received from the manufacturer. Therefore NICE was unable to recommend the use of this technology to the NHS.

The technology

Gefitinib (Iressa, AstraZeneca) inhibits the intracellular phosphorylation of numerous tyrosine kinases associated with transmembrane cell surface receptors, including the tyrosine kinases associated with the epidermal growth factor receptor (EGFR-TK). EGFR is expressed on the cell surface of many normal cells and cancer cells.

Gefitinib does not currently hold a UK marketing authorisation for first line treatment of locally advanced or metastatic NSCLC.The CHMP has recommended a marketing authorisation for gefitinib for the treatment of adults with locally advanced or metastatic non-small cell lung cancer (NSCLC) with activating mutations of EGFR-TK (epidermal growth factor receptor-tyrosine kinase), in all lines of therapy .

Intervention(s)	Gefitinib
Population(s)	People with chemotherapy naïve EGFR-TK positive locally advanced or metastatic NSCLC.
Comparators	• Platinum based chemotherapy (carboplatin or cisplatin) in combination with gemcitabine, docetaxel, paclitaxel or vinorelbine. • Pemetrexed
Outcomes	The outcome measures to be considered include: • overall survival • progression-free survival • response rates • health-related quality of life • adverse effects of treatment.

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.
Other considerations	If evidence allows the following subgroups will be considered: performance status, histology, gender, previous smoking history, and number of prior treatments. Guidance will only be issued in accordance with the marketing authorisation.
Related NICE recommendations	Related Technology Appraisals: Technology Appraisal No.148. June 2008, 'Bevacizumab for the treatment of non-small-cell lung cancer' (terminated appraisal). Technology Appraisal in development, 'Cetuximab for the treatment of advanced non-small cell lung cancer'. Earliest anticipated date of publication to be confirmed. Technology Appraisal in development, 'Pemetrexed for the first-line treatment of locally advanced or metastatic non-small cell lung cancer'. Earliest anticipated date of publication August 2009. Related Guidelines: Clinical Guideline No.24. February 2005, The diagnosis and treatment of lung cancer. Expected review date February 2009.

Questions for consultation

Are the comparators listed routinely used in clinical practice?

Are the subgroups suggested in 'other considerations appropriate?

Are there any issues that require special attention in light of the duty to have due regard to the need to eliminate unlawful discrimination and promote equality?

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/aboutnice/howwework/devnicetech/technologyappraisalprocessguides/technology_appraisal_process_guides.jsp)