NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE

Health Technology Appraisal

Ribociclib in combination with an aromatase inhibitor for previously untreated advanced or metastatic hormone receptor-positive, HER2-negative breast cancer

Final scope

Remit

To appraise the clinical and cost-effectiveness of LEE011 within its marketing authorisation for breast cancer.

Appraisal objective

To appraise the clinical and cost effectiveness of ribociclib within its marketing authorisation for previously untreated advanced, or metastatic, hormone receptor-positive, HER2-negative breast cancer.

Background

Breast cancer arises from the tissues of the ducts or lobules of the breast. Metastatic breast cancer describes disease that has spread to another part of the body, such as the bones, liver, or lungs.

Over 46,400 people were diagnosed with breast cancer in England in 2014, and there were approximately 9500 deaths from breast cancer in 2014[1,2]. Approximately 15% of women with invasive breast cancers have locally advanced or metastatic disease when they are diagnosed [4], and it has been estimated that around 35% of people with early or locally advanced disease will progress to metastatic breast cancer in the 10 years following diagnosis [5].

Current treatments for locally advanced and metastatic breast cancer aim to relieve symptoms, prolong survival and maintain a good quality of life with minimal adverse events. Treatment may depend on whether the cancer cells have particular receptors (hormone receptor status or HER2 status), the extent of the disease, and previous treatments. For people with advanced or metastatic hormone receptor-positive breast cancer, NICE Clinical Guideline 81 (CG81) recommends first-line treatment with endocrine therapy for most people. But for people whose disease is life-threatening or requires early relief of symptoms, CG81 recommends chemotherapy. The endocrine therapies used in clinical practice for hormone receptor-positive breast cancer in postmenopausal women include aromatase inhibitors (anastrozole and letrozole) for locally advanced and metastatic cancer, and tamoxifen, only if aromatase inhibitors are not tolerated or are contraindicated, for locally advanced cancer.

The technology

Ribociclib (brand name unknown, Novartis) is a selective cyclin-dependent-kinase 4 and 6 (CDK4/6) inhibitor. When either of these two proteins are activated they can cause the cancer cells to grow and divide too quickly. It is taken orally.

Ribociclib does not currently have a marketing authorisation in the UK. It has been studied in clinical trials in combination with letrozole in postmenopausal women with advanced, or metastatic, hormone receptor positive, HER2 negative breast cancer; in patients who have received no prior therapy for advanced disease.

Intervention(s)	Ribociclib in combination with an aromatase inhibitor
Population(s)	Postmenopausal women with advanced or metastatic hormone receptor positive, HER2 negative breast cancer previously untreated in the advanced setting.
Comparators	Aromatase inhibitors (such as letrozole or anastrozole).
Outcomes	The outcome measures to be considered include: • overall survival • progression free survival • response rate • 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.
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: 'Bevacizumab in combination with capecitabine for the first-line treatment of metastatic breast cancer' (2012). NICE Technology Appraisal guidance 263. Guidance on static list. 'Bevacizumab in combination with a taxane for the first-line treatment of metastatic breast cancer' (2011). NICE Technology Appraisal 214. Guidance on static list. 'Fulvestrant for the treatment of locally advanced or metastatic breast cancer' (2011). NICE Technology Appraisal 239. Review date Nov 2014. Review decision, static list 'Gemcitabine for the treatment of metastatic breast cancer' (2007). NICE technology Appraisal 116. Review date, May 2010. Review decision, static list. Appraisals in development: 'Palbociclib in combination with an aromatase inhibitor for previously untreated metastatic, hormone receptor-positive, HER2-negative breast cancer'. NICE Technology Appraisal guidance [ID915]. Earliest anticipated publication date June 2017. Related Guidelines: Familial breast cancer: Classification and care of people at risk of familial breast cancer and management of breast cancer and related risks in people with a family history of breast cancer (2013). NICE guideline CG164. Update in progress. 'Advanced breast cancer: diagnosis and treatment' (2009). NICE guideline 81 This guidance replaces previous Technology Appraisals No. 30, 54 and 62. Review date December 2015. Update in progress. Related Quality Standards: 'Breast cancer' (2016) NICE quality standard 12. 'Related NICE Pathways: Advanced breast cancer (2015) NICE pathway
Related National Policy	Department of Health (2016) 'NHS Outcomes Framework. Domain 1. NHS England (2016) 'Manual for Prescribed Specialised Services'. Chapter 105, Specialist Cancer services (adults)

References

1. Office for National Statistics (2014) Cancer registration statistics, England, 2014. Accessed September 2016.

2. Cancer Research UK (2014) Breast cancer mortality statistics. Accessed September 2016.

3. Cancer Research UK (2014) Breast cancer survival statistics. Accessed September 2016.

4. Cancer Research UK (2015) Breast cancer incidence statistics. Accessed September 2016.

5. NICE (2009) Costing report for clinical guideline 81: advanced breast cancer. Accessed September 2016.