NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE

Health Technology Evaluation

Ribociclib with an aromatase inhibitor for adjuvant treatment of hormone receptor-positive, HER2-negative early breast cancer [ID6153]

Final scope

Remit/evaluation objective

To appraise the clinical and cost effectiveness of ribociclib with an aromatase inhibitor within its marketing authorisation for adjuvant treatment of hormone receptor-positive, HER2-negative early breast cancer.

Background

Breast cancer arises from the tissues of the ducts or lobules of the breast. Breast cancer is described as 'early' if it is restricted to the breast, or the breast and nearby lymph nodes, and has not spread to other parts of the body.

In 2020, there were 39,730 new diagnoses of breast cancer in England.[1] Of these, 28,229 (71%) were diagnoses of early breast cancer.[1] Around two-thirds of breast cancers are hormone receptor-positive and human epidermal growth factor receptor 2 (HER2) negative.[2,3] Around 5% to 10% of breast cancers have mutations in the BRCA1 or BRCA2 genes.[4]

Treatment may depend on genetic mutations, receptor status, the extent of the disease, and previous treatments. Adjuvant therapy is used to reduce the risk of the cancer coming back after surgery. The decision about whether to have adjuvant therapy is based on the assessment of the risk of the cancer coming back and the potential benefits and side effects of the treatment. NICE guideline 101 recommends adjuvant endocrine therapy (tamoxifen or aromatase inhibitors) for hormone receptor-positive early breast cancer. It also recommends considering ovarian function suppression for premenopausal women and extended endocrine therapy (total duration of endocrine therapy of more than 5 years). Adjuvant chemotherapy (a regimen containing both a taxane and an anthracycline), adjuvant radiotherapy and adjuvant bisphosphonate therapy (for postmenopausal women) are also recommended for early breast cancer. NICE technology appraisal 810 recommends abemaciclib with endocrine therapy, within its marketing authorisation, as an option for adjuvant treatment of hormone receptor-positive, HER2-negative, node-positive early breast cancer in adults whose disease is at high risk of recurrence. NICE technology appraisal 886 recommends olaparib (alone or with endocrine therapy), within its marketing authorisation, as an option for the adjuvant treatment of HER2-negative high-risk early breast cancer that has been treated with neoadjuvant or adjuvant chemotherapy in adults with germline BRCA1 or 2 mutations.

The technology

Ribociclib (Kisqali, Novartis) with an aromatase inhibitor does not currently have a marketing authorisation in the UK for adjuvant treatment of hormone receptor-positive, HER2-negative early breast cancer. It has been studied in clinical trials in combination with aromatase inhibitors compared with aromatase inhibitors alone, as

adjuvant treatment in people with hormone receptor-positive, HER2-negative early breast cancer.

Ribociclib has a UK marketing authorisation for the treatment of women with hormone receptor-positive, human epidermal growth factor receptor 2 (HER2)-negative locally advanced or metastatic breast cancer in combination with an aromatase inhibitor or fulvestrant as initial endocrine-based therapy, or in women who have received prior endocrine therapy.

Intervention(s)	Ribociclib with an aromatase inhibitor
Population(s)	Adults with hormone receptor-positive, HER2-negative early breast cancer after surgery of the primary breast tumour.
Subgroups	If the evidence allows the following subgroups will be considered: • Node positive/negative disease • Risk of recurrence • Presence of germline BRCA1 or 2 mutations
Comparators	• Standard endocrine therapy For hormone receptor-positive, HER2-negative, node-positive early breast cancer at high risk of recurrence: • Abemaciclib (with endocrine therapy) For BRCA mutation-positive HER2-negative high-risk early breast cancer after chemotherapy: • Olaparib (with or without endocrine therapy)
Outcomes	The outcome measures to be considered include: • overall survival • invasive disease-free survival • distant disease-free survival • 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. The availability and cost of biosimilar and generic products should 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	**Related technology appraisals:** Abemaciclib with endocrine therapy for adjuvant treatment of hormone receptor-positive, HER2-negative, node-positive early breast cancer at high risk of recurrence (2022). NICE technology appraisal guidance 810 Olaparib for adjuvant treatment of BRCA mutation-positive HER2-negative high-risk early breast cancer after chemotherapy (2023). NICE technology appraisal guidance 886 Intrabeam radiotherapy system for adjuvant treatment of early breast cancer (2018). NICE technology appraisal guidance 501 **Related NICE guidelines:** Early and locally advanced breast cancer: diagnosis and management (2018) NICE guideline NG101. Last updated 14 June 2023
Related National Policy	The NHS Long Term Plan (2019) NHS Long Term Plan Department of Health and Social Care (2016) NHS outcomes framework 2016 to 2017 NHS Digital (2022) NHS Outcomes Framework England, March 2022 Annual Publication

References

1. NHS digital. Case-mix adjusted percentage of cancers diagnosed at stages 1 and 2 in England, 2020. Accessed July 2023.

2. DeKoven M, Bonthapally V, Jiao X, et al. Treatment pattern by hormone receptors and HER2 status in patients with metastatic breast cancer in the UK, Germany, France, Spain and Italy (EU-5): results from a physician survey. J Comp Eff Res 2012;1:453-63.

3. Howlader N, Altekruse SF, Li CI, et al. US Incidence of Breast Cancer Subtypes Defined by Joint Hormone Receptor and HER2 Status. JNCI: Journal of the National Cancer Institute 2014;106.

4. NHS England. Clinical Commissioning Policy: Genetic Testing for BRCA1 and BRCA2 Mutations. Accessed July 2023.