NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE

Health Technology Appraisal

Abemaciclib monotherapy for treating advanced hormone-receptor positive, HER2-negative breast cancer after endocrine therapy and chemotherapy

Draft scope

Draft remit/appraisal objective

To appraise the clinical and cost effectiveness of abemaciclib within its marketing authorisation for treating hormone-receptor positive, HER2-negative breast cancer.

Background

Breast cancer arises from the tissues of the ducts or lobules of the breast. 'Locally advanced' cancer describes tumours that are larger than 5 cm in size, or have grown into the skin or muscle of the chest or nearby lymph nodes. Metastatic breast cancer describes disease that has spread to another part of the body, such as the bones, liver, or lungs.

In 2015 in England, around 46,083 people were diagnosed with breast cancer[1]. In 2014 there were approximately 9,554 deaths from breast cancer in England[2]. The 5-year survival rate for people with metastatic breast cancer in England is 15%[3]. Approximately 13% of women with breast cancer have locally advanced or metastatic disease when they are diagnosed[4], and 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 advanced breast cancer NICE clinical guideline 81 recommends endocrine therapy for most people.

For people having chemotherapy for advanced breast cancer, CG81 recommends anthracycline-based regimens as the initial treatment, followed by sequential lines of treatment with docetaxel first line followed by capecitabine and vinorelbine as second or third line. Gemcitabine monotherapy is also used in clinical practice in the UK. Patients for whom anthracyclines are not suitable (because of contraindication or progression on prior anthracycline treatment) are offered sequential treatment with systemic chemotherapy.

The technology

Abemaciclib (brand name unknown, Eli Lilly and Company) is an inhibitor of cyclin-dependent kinases 4 and 6, which prevents DNA synthesis by

prohibiting progression of the cell cycle from G1 to S phase. It is administered orally.

Abemaciclib does not currently have a marketing authorisation in the UK for treating hormone receptor-positive, HER2-negative breast cancer. It has been studied in clinical trials as monotherapy after endocrine therapy and two or more chemotherapy regimens.

Intervention(s)	Abemaciclib monotherapy
Population(s)	People with advanced hormone-receptor positive HER2-negative breast cancer that has progressed after endocrine therapy and chemotherapy.
Comparators	Chemotherapy (in accordance with NICE guidance) including eribulin, vinorelbine, gemcitabine and capecitabine.
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. If the technology is likely to provide similar or greater health benefits at similar or lower cost than technologies recommended in published NICE technology appraisal guidance for the same indication, a cost-comparison may be carried out. 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 patient access schemes for the comparator technologies will 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 and NICE Pathways	Related technology appraisals: Eribulin for treating locally advanced or metastatic breast cancer after 2 or more chemotherapy regimens (2016) NICE technology appraisal guidance 423. Next review December 2019. Everolimus with exemestane for treating advanced breast cancer after endocrine therapy (2016) NICE technology appraisal 421. Next review December 2019. Fulvestrant for the treatment of locally advanced or metastatic breast cancer (2011) NICE technology appraisal guidance 239. On static list. Bevacizumab in combination with capecitabine for the first-line treatment of metastatic breast cancer (2012) NICE technology appraisal 263. On static list. Bevacizumab in combination with a taxane for the first-line treatment of metastatic breast cancer (2011) NICE technology appraisal 214. On static list. Gemcitabine for the treatment of metastatic breast cancer (2007). NICE technology appraisal 116. On static list. Appraisals in development (including suspended appraisals): Fulvestrant for untreated hormone-receptor positive metastatic breast cancer. NICE technology appraisal guidance [ID951]. Publication expected January 2018. Palbociclib in combination with an aromatase inhibitor for previously untreated metastatic, hormone receptor-positive, HER2-negative breast cancer. NICE technology appraisal guidance [ID915]. Publication date to be confirmed. Palbociclib for treating hormone-receptor positive, HER2-negative breast cancer. NICE technology appraisal guidance [ID916]. Suspended. Ribociclib in combination with an aromatase inhibitor for previously untreated advanced or metastatic hormone receprot-positive, HER2-negative breast cancer. NICE

	technology appraisal [ID1026]. Publication date to be confirmed. Eribulin for treating locally advanced or metastatic breast cancer after one prior chemotherapy regimen. NICE technology appraisal guidance [ID1072]. Publication date to be confirmed. Related guidelines: Advanced breast cancer: diagnosis and treatment (2009, updated 2017). NICE guideline CG81. Review date 2017. 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, updated 2017). NICE guideline 164. Next review to be scheduled. Related quality standards: Breast cancer (2011, updated 2016). NICE quality standard 12. Related NICE Pathways: Advanced breast cancer (2017) NICE Pathway Familial breast cancer (2013) NICE Pathway
Related National Policy	NHS England (2016) 'Manual for Prescribed Specialised Services'. Chapter 105, Specialist Cancer services (adults) Department of Health (2016) NHS Outcomes Framework 2016-2017. Domains 1 and 2.

Questions for consultation

Have all relevant comparators for abemaciclib been included in the scope? Which treatments are considered to be established clinical practice in the NHS for advanced hormone-receptor positive, HER2-negative breast cancer that has progressed after endocrine therapy and chemotherapy?

Are the outcomes listed appropriate?

Are there any subgroups of people in whom abemaciclib is expected to be more clinically effective and cost effective or other groups that should be examined separately, for example, women who are pre- or post-menopausal?

Where do you consider abemaciclib will fit into the existing NICE pathway, advanced breast 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 abemaciclib 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 abemaciclib 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 abemaciclib 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).

NICE has published an addendum to its guide to the methods of technology appraisal (available at https://www.nice.org.uk/Media/Default/About/what-we-

do/NICE-guidance/NICE-technology-appraisals/methods-guide-addendum-cost-comparison.pdf), which states the methods to be used where a cost comparison case is made. We welcome comments on the appropriateness and suitability of the cost comparison methodology to this topic.

- Is the new technology likely to be similar in its clinical efficacy and resource use to any of the comparators?
- Is the primary outcome that was measured in the trial or used to drive the model for the comparator(s) still clinically relevant?
- Is there any substantial new evidence for the comparator technologies that has not been considered? Are there any important ongoing trials reporting in the next year?

References

1 Office for National Statistics (2017) Cancer registration statistics, England, 2015. Accessed August 2017.

2 Cancer Research UK (2015) Breast cancer mortality statistics. Accessed August 2017.

3 Cancer Research UK (2014) Breast cancer survival statistics. Accessed August 2017.

4 Cancer Research UK (2014) Breast cancer incidence statistics. Accessed August 2017.

5 Dewis R and Gribbin J (2009) Breast cancer: diagnosis and treatment, an assessment of need. Cardiff: National Collaborating Centre for Cancer. Accessed August 2017.