NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE

Health Technology Evaluation

Talazoparib for treating HER2-negative locally advanced or metastatic breast cancer with germline BRCA1/2-mutations

Draft scope

Draft remit/evaluation objective

To appraise the clinical and cost effectiveness of talazoparib within its marketing authorisation for treating HER2-negative locally advanced or metastatic breast cancer with germline BRCA1/2-mutations after chemotherapy or when chemotherapy is not suitable.

Background

Breast cancer arises from the tissues of the ducts or lobules of the breast. The cancer is said to be 'advanced' if it has spread to other parts of the body such as the bones, liver, and lungs (metastatic cancer), or if it has grown directly into nearby tissues and cannot be completely removed by surgery (locally advanced).

In 2019 in England, 48,387 people were diagnosed with breast cancer.[1] Appproximately 7.6% and 4.2% of people with breast cancer in England in 2019 were diagnosed with stage 3 (locally advanced) and stage 4 (metastatic) breast cancer respectively.[2] It is estimated that approximately 75-85% of women with breast cancer will have HER2-negative tumours.[3] Between 1.5% and 2% of all breast cancers in the UK are due to BRCA mutations, and this rises to around 3 to 7% among those under age 35. Approximately 60% of women with a BRCA 1 mutation and 55% of those with a BRCA 2 mutation will develop breast cancer by age 70.[4]

Current treatments for advanced breast cancer aim to relieve symptoms, prolong survival and maintain a good quality of life with minimal adverse events. Treatment depends on whether the cancer cells have HER2 and hormone positive receptors, the extent of the disease, and previous treatments.

NICE clinical guideline 81 (CG81) recommends systemic sequential therapy for most patients with advanced breast cancer having chemotherapy. Where anthracyclines are not suitable (because they are contraindicated or because of prior anthracycline treatment) the sequencing should follow: single-agent docetaxel (taxane) as a first-line treatment, single-agent vinorelbine or capecitabine as second line treatment, and single-agent capecitabine or vinorelbine (whichever was not used as second line treatment) as third line treatment. In addition, NICE technology appraisal 423 recommends eribulin as an option for treating locally advanced or metastatic breast cancer when it has progressed after at least two chemotherapy regimens.

The technology

Talazoparib (Talzenna, Pfizer) has a marketing authorisation in the UK for the treatment of ‘adult patients with germline BRCA1/2-mutations, who have HER2-negative locally advanced or metastatic breast cancer. Patients should have been

previously treated with an anthracycline and/or a taxane in the (neo)adjuvant, locally advanced or metastatic setting unless patients were not suitable for these treatments. Patients with hormone receptor (HR)-positive breast cancer should have been treated with a prior endocrine-based therapy, or be considered unsuitable for endocrine-based therapy.'

Intervention(s)	Talazoparib
Population(s)	Adults with HER2-negative locally advanced or metastatic breast cancer with germline BRCA1/2-mutations that has previously been treated with an anthracycline and/or a taxane in the (neo)adjuvant, locally advanced or metastatic setting or for whom these treatments would not be suitable.
Comparators	• Vinorelbine • Capecitabine • Eribulin (after at least 2 chemotherapy regimens)
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. 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. The use of talazoparib is conditional on the presence of germline BRCA1/2-mutations. The economic modelling should include the costs associated with diagnostic testing for germline BRCA1/2-mutations in people with breast cancer who would not otherwise have been tested. A sensitivity analysis should be provided without the cost of the diagnostic test. See section 4.8 of the guidance development manual (available here: https://www.nice.org.uk/process/pmg36/chapter/introduction-to-health-technology-evaluation).
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 fulvestrant for treating hormone receptor-positive, HER2-negative advanced breast cancer after endocrine therapy (2021) NICE technology appraisal guidance 725. Next review 2024 Ribociclib with fulvestrant for treating hormone receptor-positive, HER2-negative advanced breast cancer after endocrine therapy (2021) NICE technology appraisal guidance 687. Next review 2024 Palbociclib with fulvestrant for treating hormone receptor-positive, HER2-negative, advanced breast cancer (2020) NICE technology appraisal guidance 619. Next review to be confirmed. Eribulin for treating locally advanced or metastatic breast cancer after 2 or more chemotherapy regimens (2016) NICE

	technology appraisal guidance 423. Next review to be confirmed. Everolimus with exemestane for treating advanced breast cancer after endocrine therapy (2016). NICE technology appraisal guidance 421. Next review 2019 **Related Guidelines:** Advanced breast cancer diagnosis and treatment (2009; updated 2017) NICE guideline [CG81] Familial breast cancer: classification, care and managing breast cancer and related risks in people with a family history of breast cancer (2013; updated 2019) NICE guidance CG164 Improving outcomes in breast cancer (2002; checked 2014) NICE guideline CSG1 MammaTyper in vitro diagnostic test for determining breast cancer subtypes (2018) NICE Medtech Innovation Briefing 135 **Related Quality Standards:** Breast cancer (2011) NICE quality standard 12
Related National Policy	The NHS Long Term Plan, 2019. NHS Long Term Plan NHS England (2018/2019) NHS manual for prescribed specialist services (2018/2019) Chapter 105: Specialist cancer services (adults)

Questions for consultation

Where do you consider talazoparib will fit into the existing care pathway for advanced breast cancer?

Are there any subgroups of people in whom talazoparib is expected to be more clinically effective and cost effective or other groups that should be examined separately?

Would talazoparib be a candidate for managed access?

Do you consider that the use of talazoparib can result in any potential 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 committee to take account of these benefits.

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 talazoparib is 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.

NICE intends to evaluate this technology through its Single Technology Appraisal process. We welcome comments on the appropriateness of appraising this topic through this process. (Information on NICE's health technology evaluation processes is available at https://www.nice.org.uk/about/what-we-do/our-programmes/nice-guidance/nice-technology-appraisal-guidance/changes-to-health-technology-evaluation).

References

1 NHS Digital (2021) Cancer registration statistics, England, 2019. Accessed September 2022.

2 Cancer Research UK (2022) Early diagnosis data hub. Accessed September 2022.

3 Macmillan (2022). Information and support: HER-2 positive breast cancer. Accessed September 2022.

4 Health Policy Partnership (2019) Genetic testing for BRCA mutations. Accessed September 2022.