NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE

Health Technology Appraisal

Sacituzumab govitecan for treating unresectable locally advanced or metastatic triple-negative breast cancer after two or more therapies

Final scope

Remit/appraisal objective

To appraise the clinical and cost effectiveness of sacituzumab govitecan within its marketing authorisation for treating unresectable locally advanced or metastatic triple-negative breast cancer after two or more therapies.

Background

Breast cancer arises from the tissues of the ducts or lobules of the breast. 'Locally advanced' breast cancer generally refers to cancer that has spread from the breast to lymph nodes close to the breast, to the skin of the breast, or to the chest wall (stage 3). When the cancer has spread beyond the breast to other parts of the body such as the bones, liver, lung, and brain, it is known as metastatic breast cancer (stage 4).

Over 46,100 people were diagnosed with breast cancer in England in 2017 and there were approximately 9,600 deaths from breast cancer in England in 2018.[1,2] Around 15% of breast cancers are triple-negative breast cancers whereby the cancer cells test negative for oestrogen receptors, progesterone receptors (hormone-receptor-negative cancer) and human epidermal growth factor receptor 2 (HER2-negative cancer).[3]

Triple-negative breast cancer is associated with poor prognosis with high risk of relapse and short progression-free survival and overall survival. It can be particularly aggressive, is more likely to recur than other subtypes of breast cancer and is associated with poorer survival. It is diagnosed more frequently in younger people, black people, and people with BRCA1 mutations (a gene on chromosome 17 that normally helps to supress cell growth, which is an inherited gene mutation that may increase the risk of breast cancer).[3,4,5]

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 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

Sacituzumab govitecan (Trodelvy, Gilead Sciences) is a Trop-2-directed antibody and topoisomerase inhibitor drug conjugate. It is administered by intravenous infusion.

Sacituzumab govitecan does not currently have a marketing authorisation in the UK for treating locally advanced or metastatic triple-negative breast cancer. It has been studied in a clinical trial, compared with treatment of physician's choice (that is, eribulin, capecitabine, gemcitabine or vinorelbine), in adults with unresectable locally advanced or metastatic triple negative breast cancer previously treated with at least two systemic chemotherapy regimens.

Intervention(s)	Sacituzumab govitecan
Population(s)	Adults with unresectable locally advanced or metastatic triple-negative breast cancer who have had at least two prior therapies, including at least one for locally advanced or metastatic disease
Comparators	• capecitabine • vinorelbine • eribulin
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 taken into account. The availability of any managed access arrangement for the intervention 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) technology appraisal guidance 423. Reviewed October 2019 Atezolizumab with nab-paclitaxel for untreated PD-L1-positive, locally advanced or metastatic, triple-negative breast cancer (2020) technology appraisal guidance 639. Review date 2023. Appraisals in development Pembrolizumab in combination for untreated, locally recurrent inoperable or metastatic, triple negative breast cancer [ID1546]. Publication date: TBC. Pembrolizumab in combination with chemotherapy for neoadjuvant treatment of triple negative breast cancer [ID1500]. Publication date TBC. Atezolizumab with paclitaxel for untreated advanced triple-negative breast cancer [ID2705]. Publication date: Suspended. Pembrolizumab for previously treated metastatic triple negative breast cancer [ID1246]. Publication date: Suspended. Related Guidelines: Advanced breast cancer: diagnosis and treatment (2009, updated 2017) NICE guideline CG81 Related Quality Standards: Breast cancer (2011) NICE quality standard 12. http://www.nice.org.uk/guidance/qualitystandards/qualitystandards.jsp Related NICE Pathways: Advanced breast cancer (updated 2020) NICE pathway.
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): Specialist cancer services (adults) Department of Health and Social Care, NHS Outcomes Framework 2016-2017: Domains 1, 2, 4 and 5

References

1 Office for National Statistics (2019) Cancer registration statistics, England, 2017. Accessed July 2021.

2 Cancer research UK (2018) Breast cancer mortality statistics. Accessed July 2021.

3 Cancer research UK (2020) Triple negative breast cancer. Accessed July 2021

4 Couch FJ, Hart SN, Sharma P et al. Inherited mutations in 17 breast cancer susceptibility genes among a large triple-negative breast cancer cohort unselected for family history of breast cancer. Journal of Clinical Oncology 2015;33(4):304-311

5 Macmillan Cancer Support (2021) Triple negative breast cancer. Accessed July 2021