

NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE

Single Technology Appraisal

Fulvestrant for untreated hormone-receptor positive locally advanced or metastatic breast cancer

Final scope

Remit

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

Appraisal objective

To appraise the clinical and cost effectiveness of fulvestrant within its marketing authorisation for untreated hormone-receptor positive locally advanced or metastatic 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 2014 in England, around 46,417 people were diagnosed with breast cancer, and there were approximately 9,554 deaths from breast cancer^{1,2}. The 5-year survival rate for people with metastatic breast cancer in England is 15%³. Approximately 13% of women with invasive breast cancers have locally advanced or metastatic disease when they are diagnosed⁴, and around 35% of people with early or locally advanced disease will progress to metastatic breast cancer in the 10 years following diagnosis^{5,6}.

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.

NICE Clinical Guideline 80 (CG80) recommends that early and locally advanced breast cancer is treated with surgery (to remove the tumour) followed by systemic adjuvant treatment to reduce the risk of the cancer coming back. Adjuvant treatment may involve endocrine therapy (for hormone receptor-positive breast cancer only), biological therapy (for HER2-positive breast cancer only), chemotherapy, or radiotherapy. For people with 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 untreated locally advanced and metastatic hormone receptor-positive breast cancer in postmenopausal people include aromatase inhibitors (anastrozole and letrozole) and tamoxifen, only if aromatase inhibitors are not tolerated or are contraindicated.

The technology

Fulvestrant (Faslodex, AstraZeneca) is an oestrogen receptor antagonist given by intramuscular injection. It blocks the trophic actions of oestrogen, by down-regulating oestrogen receptor protein levels.

Fulvestrant does not currently have a UK marketing authorisation for untreated locally advanced or metastatic breast cancer. Fulvestrant has been compared with anastrozole in clinical trials in postmenopausal women with locally advanced or metastatic hormone receptor-positive breast cancer who have not previously received any endocrine therapy.

Fulvestrant has a marketing authorisation in the UK (at the time this scope was written) for treating locally advanced or metastatic oestrogen receptor-positive breast cancer in postmenopausal women, whose disease has progressed during, or relapsed during or after, adjuvant anti-oestrogen therapy.

Intervention(s)	Fulvestrant
Population(s)	Post-menopausal people with locally advanced or metastatic hormone receptor-positive breast cancer, who have not received endocrine therapy
Comparators	<ul style="list-style-type: none"> • Aromatase inhibitors (such as anastrozole and letrozole) <p>If aromatase inhibitors are not tolerated or are contraindicated:</p> <ul style="list-style-type: none"> • Tamoxifen
Outcomes	<p>The outcome measures to be considered include:</p> <ul style="list-style-type: none"> • overall survival • progression free survival • response rate • adverse effects of treatment • health-related quality of life.

Economic analysis	<p>The reference case stipulates that the cost effectiveness of treatments should be expressed in terms of incremental cost per quality-adjusted life year.</p> <p>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.</p> <p>Costs will be considered from an NHS and Personal Social Services perspective.</p>
Other considerations	<p>If the evidence allows the following subgroups will be considered: people with visceral disease and people with non-visceral disease.</p> <p>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.</p>
Related NICE recommendations and NICE Pathways	<p>Related Technology Appraisals:</p> <p>Bevacizumab in combination with capecitabine for the first-line treatment of metastatic breast cancer (2012). NICE Technology Appraisal 263. Static list.</p> <p>Bevacizumab in combination with a taxane for the first-line treatment of metastatic breast cancer (2011). NICE Technology Appraisal 214. Static list.</p> <p>Appraisals in development (including suspended appraisals)</p> <p>Pertuzumab in combination with trastuzumab and docetaxel for treating HER2-positive metastatic or locally recurrent unresectable breast cancer. NICE Technology Appraisal guidance [ID523]. Publication date to be confirmed.</p> <p>Palbociclib in combination with an aromatase inhibitor for previously untreated metastatic, hormone receptor-positive, HER2-negative breast cancer. NICE technology appraisal guidance [ID915]. Publication expected June 2017.</p> <p>Sunitinib in combination with capecitabine within its licensed indication for the treatment of advanced and/or metastatic breast cancer. NICE Technology Appraisal guidance [ID319]. Suspended.</p>

	<p>Related Guidelines:</p> <p>Advanced breast cancer: diagnosis and treatment (2009, updated 2014). NICE guideline 81. Update in progress, publication expected April 2017.</p> <p>Early and locally advanced breast cancer: diagnosis and treatment (2009, updated 2014). NICE guideline 80. Update in progress, publication expected July 2018.</p> <p>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 August 2015). NICE guideline 164. Update in progress, publication expected March 2017.</p> <p>Related Quality Standards:</p> <p>Breast Cancer (2011, updated 2016). NICE quality standard 12.</p> <p>Related NICE Pathways:</p> <p>Advanced breast cancer (2015) NICE pathway</p> <p>Familial breast cancer (2015) NICE pathway</p> <p>Early and locally advanced breast cancer (2014) NICE pathway</p>
<p>Related National Policy</p>	<p>NHS England, Manual for prescribed specialised services 2016/17: 105 – Specialist cancer services (adults)</p> <p>https://www.england.nhs.uk/commissioning/wp-content/uploads/sites/12/2016/06/pss-manual-may16.pdf</p> <p>Department of Health, Improving Outcomes: A Strategy for Cancer, third annual report, Dec 2013</p> <p>https://www.gov.uk/government/publications/the-national-cancer-strategy-3rd-annual-report--2</p> <p>Department of Health, NHS Outcomes Framework 2016-2017 (published 2016). Domains 1, 2,4 and 5</p> <p>https://www.gov.uk/government/publications/nhs-outcomes-framework-2016-to-2017</p>

References

- 1 Office for National Statistics (2016) [Cancer registration statistics, England, 2014](#). Accessed December 2016.
- 2 Cancer Research UK (2015) [Breast cancer mortality statistics](#). Accessed December 2016.
- 3 Cancer Research UK (2014) [Breast cancer survival statistics](#). Accessed December 2016.
- 4 Cancer Research UK (2014) [Breast cancer incidence statistics](#). Accessed December 2016.
- 5 NICE (2009) [Costing report for clinical guideline 81: advanced breast cancer](#). Accessed January 2016.
- 6 Dewis R and Gribbin J (2009) [Breast cancer: diagnosis and treatment, an assessment of need](#). Cardiff: National Collaborating Centre for Cancer. Accessed January 2016.