

# NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE

## Single Technology Appraisal

### Eribulin for treating locally advanced or metastatic breast cancer after one prior chemotherapy regimen [ID1072]

#### Final scope

##### Final remit/appraisal objective

To appraise the clinical and cost effectiveness of eribulin within its marketing authorisation for the treatment of people with breast cancer who have received one prior chemotherapy regimen for locally advanced or metastatic disease.

##### 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, and may 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.

Over 44,800 people were diagnosed with breast cancer in England in 2013, and there were approximately 9800 deaths from breast cancer in 2012<sup>1,2</sup>. The 5-year survival rate for people with metastatic breast cancer in England is 15%<sup>3</sup>. Approximately 16% of people with invasive breast cancers have locally advanced or metastatic disease when they are diagnosed<sup>4</sup>, and around 35% of people with early or locally advanced disease will progress to metastatic breast cancer<sup>5,6</sup>.

Current treatments for locally advanced or 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 (oestrogen receptor or HER2), the extent of the disease and previous treatments; options include endocrine therapies, biological therapies and chemotherapy. For advanced breast cancer NICE clinical guideline 81 recommends endocrine therapy.

For people having chemotherapy for advanced breast cancer, NICE clinical guideline 81 (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

Eribulin (Halaven, Eisai) is a synthetic analogue of halichondrin.B, which inhibits tubulin polymerisation. The destabilisation of tubulin polymers disrupts the assembly and formation of microtubules, which in turn arrests cancer cell division. It is administered intravenously.

Eribulin has a marketing authorisation in the UK for the treatment of adult patients with locally advanced or metastatic breast cancer who have progressed after at least one chemotherapeutic regimen for advanced disease. Prior therapy should have included an anthracycline and a taxane in either the adjuvant or metastatic setting unless these treatments were not suitable.

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| <b>Intervention</b>      | Eribulin   |
| <b>Population</b>        | Adults with locally advanced or metastatic breast cancer that has progressed after one prior chemotherapeutic regimen for advanced disease (anthracycline and a taxane, unless these treatments were not suitable).  |
| <b>Comparators</b>       | <ul style="list-style-type: none"><li>• vinorelbine</li><li>• capecitabine</li><li>• gemcitabine</li></ul>   |
| <b>Outcomes</b>          | The outcome measures to be considered include: <ul style="list-style-type: none"><li>• overall survival</li><li>• progression free survival</li><li>• response rate</li><li>• adverse effects of treatment</li><li>• health-related quality of life.</li></ul>   |
| <b>Economic analysis</b> | <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> <p>The availability of any patient access schemes for the intervention or comparator technologies will be taken into account.</p> |

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| <p><b>Other considerations</b></p>                           | <p>If the evidence allows, consideration will be given to subgroups according to HER2 status and oestrogen receptor status.</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>   |
| <p><b>Related NICE recommendations and NICE Pathways</b></p> | <p><b>Related Technology Appraisals:</b></p> <p><a href="#">Everolimus in combination with exemestane for treating advanced HER2-negative hormone-receptor-positive breast cancer after endocrine therapy</a> (2013) NICE technology appraisal guidance TA295. Review ongoing [ID965], publication date February 2017</p> <p><a href="#">Trastuzumab emtansine for treating HER2-positive, unresectable locally advanced or metastatic breast cancer after treatment with trastuzumab and a taxane</a> (2015) NICE technology appraisal guidance 371. Review date December 2018</p> <p><a href="#">Fulvestrant for the treatment of locally advanced or metastatic breast cancer</a> (2011) NICE technology appraisal guidance 239. Review date Nov 2014. Review decision, static list</p> <p><a href="#">Gemcitabine for the treatment of metastatic breast cancer</a> (2007) NICE technology appraisal guidance 116. Review date, May 2010. Review decision, static list</p> <p><a href="#">Guidance on the use of trastuzumab for the treatment of advanced breast cancer</a> (2002) NICE technology appraisal guidance 34. Review date TBC</p> <p><b>Suspended appraisals</b></p> <p><a href="#">Lapatinib for breast cancer (for use in women with previously treated advanced or metastatic breast cancer)</a> NICE technology appraisal guidance. Suspended.</p> <p><b>Proposed Technology Appraisals:</b></p> <p>Palbociclib for treating metastatic hormone receptor-positive, HER2-negative breast cancer. Proposed NICE</p> |

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|                                       | <p>technology appraisal [ID915]. Publication date to be confirmed.</p> <p>Etirinotecan pegol (after chemotherapy). Proposed NICE technology appraisal [ID881]. Publication date to be confirmed.</p> <p>Fulvestrant for untreated hormone-receptor positive metastatic breast cancer [ID951]. Publication date to be confirmed.</p> <p><b>Related Guidelines:</b></p> <p><a href="#">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</a> (2013). NICE guideline CG164 Review date: December 2015</p> <p><a href="#">Advanced breast cancer</a> (2009 updated 2014) NICE guideline CG81. Review date December 2015.</p> <p><a href="#">Early and locally advanced breast cancer</a> (2009) NICE guideline CG80. Review date December 2015.</p> <p><b>Related Quality Standards:</b></p> <p><a href="#">Breast cancer quality standard</a> (2011) NICE Quality Standard QS12.</p> <p><b>Related NICE Pathways:</b></p> <p><a href="#">Advanced breast cancer</a> (2015) NICE pathway</p> <p><a href="#">Familial breast cancer</a> (2015) NICE pathway</p> <p><a href="#">Early and locally advanced breast cancer</a> (2014) NICE pathway</p> |
| <p><b>Related National Policy</b></p> | <p>NHS England, Manual for prescribed specialised services 2013/14: Chapter 105. Specialist Cancer services (adults)<br/> <a href="http://www.england.nhs.uk/wp-content/uploads/2014/01/pss-manual.pdf">http://www.england.nhs.uk/wp-content/uploads/2014/01/pss-manual.pdf</a></p> <p>NHS England (November 2015 ) <a href="#">Cancer Drugs Fund list version 6.0</a>. See also: decision documents for <a href="#">previously treated</a> and <a href="#">third line</a> indications (May 2015).</p> <p>Department of Health, Improving Outcomes: A Strategy for Cancer, third annual report, Dec 2013</p>  |

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|  | <p><a href="https://www.gov.uk/government/publications/the-national-cancer-strategy-3rd-annual-report--2">https://www.gov.uk/government/publications/the-national-cancer-strategy-3rd-annual-report--2</a></p> <p>Department of Health, NHS Outcomes Framework 2015-2016, Dec 2014. Domains 1, 2, 4 and 5</p> <p><a href="https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/385749/NHS_Outcomes_Framework.pdf">https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/385749/NHS_Outcomes_Framework.pdf</a></p> |
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## References

1. Office for National Statistics (2015) [Cancer registration statistics, England, 2013](#). Accessed February 2016.
2. Cancer Research UK (2014) [Breast cancer mortality statistics](#). Accessed February 2016.
3. Cancer Research UK (2014) [Breast cancer survival statistics](#). Accessed February 2016.
4. Cancer Research UK (2015) [Breast cancer incidence statistics](#). Accessed February 2016.
5. NICE (2009) [Costing report for clinical guideline 81: advanced breast cancer](#). Accessed February 2016.
6. Dewis R and Gribbin J (2009) [Breast cancer: diagnosis and treatment, an assessment of need](#). Cardiff: National Collaborating Centre for Cancer. Accessed February 2016.